INTEGRATED BIOLOGICAL BEHAVIOURAL SURVEILLANCE SURVEY (IBBS) AMONG FEMALE SEX WORKERS IN MAURITIUS

Ministry of Health and Wellness
2023

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Together, these collective efforts mark an important step toward understanding and addressing the challenges faced by FSWs in Mauritius, ultimately paving the way for more inclusive, effective, and impactful health interventions.

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Anti -Retroviral Therapy
CHL	Central Health Laboratory
FSW	Female Sex Worker
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human Immunodeficiency Virus
HRU	Harm Reduction Unit
IBBS	Integrated Biological & Behavioural Surveillance
MST	Methadone Substitution Therapy
LGBTQIA	Lesbian Gay Bisexual Transgender Queer Intersex Asexual
NAS	National AIDS Secretariat
RDS	Respondent Driven Sampling
PEP	Post Exposure Prophylaxis
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PWID	People Who Inject Drugs
STI	Sexually Transmitted Infection
SPSS	Statistic Package for Social Sciences
TG	Transgender persons
VCT	Voluntary Counselling and Testing

Executive Summary

This report presents the findings of the 2023 Integrated Biological and Behavioural Survey conducted among Female Sex Workers across the island of Mauritius.

The study aimed to assess:

- the prevalence of HIV and other sexually transmitted infections,
- explore behavioural risk factors and
- evaluate effectiveness of ongoing interventions to inform policy and programming for improved health outcomes.

Methodology

The survey with 500 FSWs employs Respondent-Driven Sampling to recruit participants from hard- to- reach populations. Each participant was administered a structured questionnaire to gather behavioral data (e.g., condom use, sexual practices, healthcare access, health seeking behaviours and program utilisation) and provides biological samples for testing (e.g., HIV, STIs). RDS weights are applied during data analysis to adjust for network size and recruitment bias, enabling population-level estimates. The methodology ensures informed consent, confidentiality, and ethical research practices while capturing critical biological and behavioral insights about the FSW population.

Key Findings

- HIV Prevalence: The HIV prevalence among FSWs was 12.6 %, indicating a decrease by 11.9%during the period 2020-2023.
- STI Prevalence: the STIs prevalence has considerably increased by more than 100% over the past 14 years. Syphilis has increased from 15.8 % in 2020 to 20.3% in 2023.
- Behavioural Risk Factors: Though overall use of condom with paying partners amount to 80%, 62.3% report not using condom with non-paying partners.
- Service access: Though knowledge of available services is high, access to these services remain a challenge for marginalised population
- Barriers to care: Challenges include stigma, discrimination and limited access to affordable health care.

General Observations from the survey

The IBBS findings underscore the urgent need for strengthened HIV prevention and care services tailored to the needs of FSWs. Despite progress in some areas, significant gaps remain in ensuring universal access to prevention, testing and treatment services.

Recommendations:

1. Scale-up targeted HIV and STI preventions programmes, including condom distribution and education

2. Expand access to health services, emphasizing stigma-free and confidential care.

3. Strengthen community engagement and Peer-led interventions to enhance programme reach

4. Increase frequency of IBBS surveys to monitor trends and evaluate intervention effectiveness

This report provides critical evidence to guide stakeholders in implementing strategic, evidence-based interventions to improve the health and well-being of FSWs in Mauritius.

1. Country Profile

1.1 Country Demographic, Socio-Economic and Health Profile

1. Demographics

- **Population**: ~1.27 million (2024 estimate)
- **Population Growth Rate**: 0.1% (Low growth)
- **Urbanization**: ~41% of the population lives in urban areas.
- **Population Density**: ~620 people per square kilometer (high density)
- **Ethnic Composition**:
  - Indo-Mauritian: ~68%
  - Creole: ~27%
  - Sino-Mauritian: ~3%
  - Franco-Mauritian: ~2%
- **Language**: The official language is English, but French and Creole are widely spoken. Hindi, Bhojpuri, and Chinese are also used in cultural contexts.
- **Religion**:
  - Hinduism: ~48.5%
  - Christianity: ~32.7% (Roman Catholic majority)
  - Islam: ~17.3%
  - Buddhism and other religions: 1.5%

2. Socio-Economic Indicators

- **GDP (Nominal)**: ~$15 billion (2024 estimate)
- **GDP per Capita (Nominal)**: ~$11,800 (2024 estimate)
- **Economic Sectors**:
  - Services: ~65% of GDP (tourism, financial services)
  - Industry: ~22% of GDP (textiles, food processing, ICT, manufacturing)
  - Agriculture: ~3% of GDP (sugarcane, tea, tobacco)
- **Unemployment Rate**: ~8.5% (2023)
- **Poverty Rate**: 6.1% of the population live below the national poverty line (2023).
- **Human Development Index (HDI)**: 0.802 (high human development, rank: 66 globally as per 2023).
- **Education**:
  - Literacy Rate: ~94% (high)
  - School Enrollment (Primary): ~99%
  - School Enrollment (Secondary): ~89%
  - University Enrollment: ~41%

3. Health Indicators

- **Life Expectancy**:
  - Total: ~75.6 years (2024 estimate)
  - Female: ~78.5 years
  - Male: ~73.2 years
- **Infant Mortality Rate**: 11.3 deaths per 1,000 live births (2023 estimate)
- **Maternal Mortality Rate**: ~50 deaths per 100,000 live births
- **Prevalence of Non-Communicable Diseases (NCDs)**: High incidence of diabetes (about 22% of the adult population), hypertension, and cardiovascular diseases.
- **Health Expenditure**: ~5.6% of GDP (2023)
- **Doctors per 1,000 people**: ~1.7 (relatively low for an upper-middle-income country)

- **HIV/AIDS Prevalence**: ~1.4% in adults aged 15–49 (2023 estimate)
- **Obesity**: 18.9% of adults are obese, contributing to the high burden of NCDs.
- **Access to Healthcare**: Free universal healthcare system; however, there are disparities in quality and availability, especially between urban and rural areas.

4. Key Health Challenges

- **Non-Communicable Diseases**: Mauritius faces a major burden of NCDs, particularly diabetes and cardiovascular diseases, due to lifestyle factors, obesity, and an aging population.
- **Aging Population**: The median age is rising (~37.8 years), and there is an increasing elderly population, which stresses the healthcare and pension systems.
- **Mental Health**: There has been increasing attention to mental health, though services remain underfunded and awareness is still growing.
- **Substance Abuse**: There is an increasing concern over drug use, particularly synthetic drugs, among youth.

5. Social Indicators

- **Gender Equality**:
  - Gender Inequality Index: 0.377 (relatively high for a high-HDI country).
  - Women hold ~23% of parliamentary seats (2023).
  - Female labor force participation: ~44% (lower than male participation at 74%).
- **Child Welfare**:
  - High immunization coverage (above 95% for essential vaccines).
  - Primary school completion rates are near universal, though drop-out rates in secondary school remain a concern, especially among boys.
- **Housing and Infrastructure**: Access to electricity and clean drinking water is almost universal.

6. Environment and Climate

- **Environmental Vulnerabilities**:
  - Mauritius is highly vulnerable to climate change, particularly rising sea levels and natural disasters like cyclones and flash floods.
  - The government has invested in renewable energy and coastal protection but faces ongoing challenges related to deforestation and biodiversity loss.

7. COVID-19 Impact

- **COVID-19** had a significant impact on the Mauritian economy, particularly its tourism sector, which was severely hit by travel restrictions. However, the country managed to maintain relatively low infection and death rates through early lockdowns and robust public health measures. Vaccination coverage is high (over 85% of the eligible population).

Mauritius's health and socio-economic development are strong by regional standards, but challenges such as NCDs, an aging population, and environmental vulnerabilities remain pressing concerns for policymakers.

2. Literature Review

2.1 The HIV epidemic in Mauritius

The HIV Spectrum 2023 Estimates shows that the number of People Living with HIV in Mauritius is around 13,000. The HIV prevalence is 1.4% among the population aged 15 – 49 (HIV Spectrum 2023). The HIV epidemic is concentrated (above 5%) among the key populations who are the drivers of the HIV epidemic Mauritius. The key populations comprise the people who inject drugs, men who have sex with men, transgender persons, female sex workers and prison inmates.

HIV epidemic in the country is dynamic with a change in the mode of transmission from blood-borne through sharing of needles and syringes to heterosexual contact. In the early 2000 more than 80% of the newly diagnosed HIV cases were among people who inject drugs. The peak of the HIV epidemic was reached in 2005 with 92% of new HIV cases detected among the injecting drug users. Subsequently, implementation of harm reduction measures i.e the needle and syringe programme and Methadone Substitution Therapy in 2006, led to a significant decline in the number of new HIV infections among the injecting drug users. While injecting drug use remains the driver of the epidemic, the integrated biological and behavioural surveillance surveys reveal a constant decrease of HIV prevalence from 45% in 2010 to 21% in 2021.

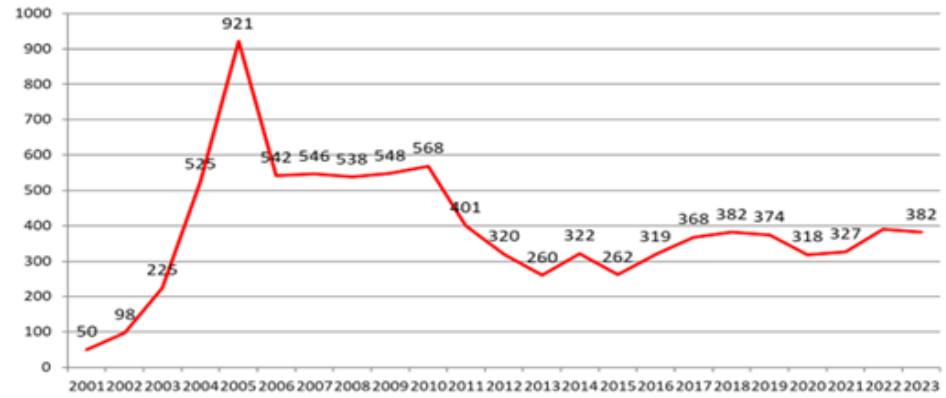
HIV Prevalence among key populations - IBBS

Key Populations	HIV Prevalence										
IBBS Survey	2009	2010	2011	2012	2013	2015	2017	2020	2021	2023	2024
People Who Inject Drugs (11,677) Inj. Drugs National survey among PWUD-2021 (55,000)	44		51.6		44.3		32		21		Awaiting report
Female Sex Worker (6223)		28.9		22.3		15		14.3			Awaiting Report
Men Having Sex with Men (5467)		8.1		20		17			17		
Transgender person (1407)							28			28	
Prison Inmates (2569)								324 12%		236 9.2%	

Know your status

From October 1987 to December 2023, there were 9,213 persons (M- 6,576, F- 2,637)) including 117 children diagnosed with HIV in Mauritius. An average of 358 new infections are being detected annually in the past five years with most of them being diagnosed in health settings.

Trend of Newly Detected Cases



All the children aged 0 – 14 years have been infected through vertical transmission. During the same period, 2,211 AIDS- related deaths including ten (10) deaths among children have been reported. Of the 6,951 people living with HIV who reached the HIV services at some point in time, 5256 (75%) have been registered at the AIDS Unit with 4,369 (83%) on antiretroviral treatment (ART). The treatment adherence rate is 74%.

HIV prevalence among pregnant women has remained at 1.1%. with the prevention of mother to child transmission coverage at 94.5% in 2023. In the last five (5) years the vertical transmission rate witnessed a rise from 7.7% to 11%. Multiple social issues including stigma and self-stigma hinder HIV positive pregnant women access to health/HIV services.

2.2 Overview of the national response to HIV and AIDS in Mauritius

NATIONAL RESPONSE: NAP 2023-2027

- Vision: To achieve zero new HIV infections and zero AIDS related deaths within a setting of an inclusive society free from stigma and discrimination.
- Mission : To provide high quality HIV prevention, testing, treatment and care and support services accessible to all Mauritians
- Goal: The overall goal of the 2023 – 2027 NAP is to reverse the trend of the HIV epidemic towards ending AIDS as a public health threat by 2030.

The whole response is based on the following 5 Strategic Objectives which we believe that if we achieve them, we should be close to attaining the 95-95-95 target that will set us in course to ending AIDS as a public health threat by 2030. These objectives are:

1. Strategic Objective: Reduce by at least 25% new HIV Infections among the key populations, adolescents and young persons, and the general population.

2. Strategic Objective: Reduce by at least 50% the number of AIDS related deaths among persons living with HIV.

3. Strategic Objective: Reduce mother to child transmission of HIV to zero.

4. Strategic Objective: Strengthen Resilient Sustainable Systems for Health (RSSH) and community systems.

5. Strategic Objective: Reduce structural and other barriers that hinder access to HIV and harm reduction services.

2.3 Female Sex Workers, HIV and syphilis in Mauritius

The landscape of sex work in Mauritius is complex and shaped by a mixture of social, legal, and economic factors. While sex work is not legalized, it is prevalent, particularly in urban areas and tourist zones. Here's an overview of the key aspects related to sex work in Mauritius:

Legal Status

- **Sex Work**: Prostitution is **criminalized** in Mauritius. Soliciting in public places, running brothels, pimping, and human trafficking for the purpose of sex work are illegal as per the Criminal Code (Supplementary) Act.
- **Penalties**: Sex workers, their clients, and third parties (such as pimps and brothel operators) are subject to fines and imprisonment. However, enforcement is inconsistent, with sex workers often bearing the brunt of legal action, while clients typically face fewer consequences.
- **Human Trafficking**: Mauritius has laws against human trafficking, but there are reports of trafficked persons, including women and children, being forced into the sex trade.

Demographics of Sex Workers

- **Local and Foreign Workers**:
    - The majority of sex workers in Mauritius are Mauritian women, though there are reports of foreign nationals, particularly from countries like Madagascar, working in the trade.
    - A growing number of transgender sex workers are also present, though they often face heightened stigma and discrimination.
- **Age Group**: Most sex workers are between the ages of 18 and 40, though underage prostitution exists, particularly among vulnerable groups.
- **Urban Concentration**: Sex work is primarily concentrated in urban centers like **Port Louis**, **Curepipe**, and **Flic-en-Flac**, as well as tourist areas, especially near hotels, beaches, and nightclubs.

Factors Driving Sex Work

- **Economic Necessity**: Poverty, unemployment, and lack of educational opportunities are the primary drivers of sex work in Mauritius. Many women, especially single mothers and those from disadvantaged backgrounds, turn to sex work to support their families.
- **Drug Use**: Injecting drug use is common among some sex workers, particularly those in urban centers. The overlap between drug addiction and sex work presents significant public health challenges, particularly with regard to HIV transmission.

- **Tourism Industry**: The tourism sector indirectly supports the demand for sex work. Wealthy tourists, especially from Europe and nearby African nations, contribute to a thriving underground sex market.

Public Health and HIV/AIDS Concerns

- **HIV/AIDS**: Sex workers are considered a high-risk group for HIV transmission in Mauritius. Although many engage in harm reduction strategies such as condom use, inconsistent condom use due to client demands, combined with stigma, increases their vulnerability.
- **Access to Healthcare**: Sex workers often have limited access to healthcare services, and many do not seek medical help due to fear of stigma or legal repercussions. The AIDS Unit of the MOH&W and several NGOs, however, provide services such as HIV testing, condom distribution, and counseling targeted at this population.
- **Prevention Programs**: The Mauritian government, in collaboration with NGOs, has implemented harm reduction programs that provide free condoms, HIV testing, and needle exchange services. Despite these efforts, gaps in healthcare access and social support for sex workers remain a challenge.

Social and Legal Challenges

- **Stigma and Marginalization**: Sex workers face significant social stigma in Mauritius. They are often marginalized and subject to violence, both from clients and law enforcement. Many sex workers report harassment by police, which makes them reluctant to report crimes such as assault or rape.
- **Gender Inequality**: The socio-economic conditions that lead many women into sex work are exacerbated by existing gender inequalities. Women, especially those from lower socio-economic backgrounds, have limited access to education and employment opportunities, making sex work a means of survival.
- **LGBTQ+ Sex Workers**: Transgender individuals involved in sex work face compounded stigma due to both their gender identity and profession. They report higher levels of violence, discrimination, and exclusion from mainstream healthcare services.

Sex Tourism

- **Tourism Influence**: While not officially acknowledged, sex tourism is present in Mauritius, particularly in beach resorts and popular tourist areas. Some tourists specifically seek out sex workers, and this fuels an informal market that caters to visitors, including middle-aged men from Europe and other African nations.
- **Legal Blind Spots**: While the government has made efforts to regulate tourism, including monitoring hotels and tourist zones, sex tourism persists, especially in private or informal settings.

NGOs and Advocacy

- **Support from Civil Society**: A few non-governmental organizations (NGOs) provide support for sex workers, especially in areas of HIV prevention, legal advice, and healthcare access. For example, organizations like Parapli Rouz and **Prévention Information Lutte contre le SIDA (PILS)** focus on providing sexual health services, HIV testing, and harm reduction for at-risk populations, including sex workers.
- The AIDS Unit, under the aegis of the MOH&W has put in place a network system among the FSW to facilitate the provision of a comprehensive package of services as advocate by the WHO.

- **Legal Reform Advocacy**: Some NGOs are pushing for decriminalization or improved legal protections for sex workers, arguing that criminalization drives the industry underground and increases the vulnerability of those involved to violence, exploitation, and HIV.

Current Trends and Challenges

- **Rising Demand**: Despite the legal risks, demand for sex work remains steady, driven largely by tourists and local clients.
- **Drug and Alcohol Dependency**: Drug use, particularly synthetic drugs, is a growing concern among sex workers, and it exacerbates health risks, such as HIV transmission and mental health issues.
- **COVID-19 Impact**: The pandemic severely impacted the income of sex workers, particularly as tourism slowed down. Many sex workers were pushed further into poverty and faced increased violence and exploitation during the lockdown periods.

Key Takeaways

- **Criminalization of sex work** in Mauritius exacerbates the challenges faced by sex workers, including violence, stigma, and limited healthcare access.
- **HIV/AIDS prevention** programs targeted at sex workers by the MOH&W and the NGOs have been somewhat successful but remain insufficient due to legal and social barriers.
- **Economic necessity** and **drug use** are major drivers of sex work, particularly among vulnerable populations such as single mothers and transgender individuals.
- **Sex tourism** remains a hidden issue, largely unregulated but fueled by both local and international demand.

The landscape of sex work in Mauritius reflects broader social and economic issues, including poverty, gender inequality, and public health challenges. Legal reform and better support systems are essential to improving the safety and well-being of sex workers.

2. Rationale and Objectives of the 2023 IBBS Survey among Female Sex Workers

3.1 Specific objectives of the 2023 FSW IBBS were to:

Female sex workers IBBS surveys, combined with HIV sentinel surveillance conducted in antenatal clinics and serial HIV knowledge, attitudes, practices and behavior surveys, provide essential data to track the HIV epidemic trends and to measure the outcomes and impact of the national HIV response. Collectively, these data provide needed information to ensure an effective strategy to guide future HIV program responses to knowledge, attitude, behavior and perception in the general population in Mauritius.

The 2023 FWS IBBS survey specific objectives were to:

- determine the prevalence of HIV, Hepatitis B, Hepatitis C and Syphilis among FSW in Mauritius and to provide a baseline for monitoring trends of these diseases.
- assess sexual and other risk behaviours associated with HIV and sexually transmitted infections among FSW.
- assess health seeking behaviors, including harm reduction, condom access and voluntary counselling and testing (VCT), among FSW.
- describe demographic characteristics of FSW and the nature of their high risk behaviors in Mauritius
- develop capacity in Mauritius to strengthen national HIV/STI surveillance systems for FSW.
- provide information about FSW to policy makers and service providers and thereby assist the Government of Mauritius and stakeholders in HIV and other infections strategic planning.

3. Methodology

4.1 Respondent Driven Sampling (RDS)

Respondent Driven Sampling (RDS) is a popular method used in **Integrated Bio-Behavioral Surveys (IBBS)**, particularly among **hidden or hard-to-reach populations** like those at high risk for HIV (e.g., sex workers, people who inject drugs (PWID), men who have sex with men (MSM), and transgender populations). RDS is a form of chain-referral sampling where participants recruit others from their networks. This method is particularly useful in capturing the behaviors, health indicators, and prevalence of diseases among key populations. Below is a detailed methodology of RDS in IBBS:

4.2 Initial Planning and Ethical Considerations

Before implementing RDS in an IBBS, several preparatory steps are essential:

- **Ethics and Permissions:** Ensure ethical clearance is obtained from local and international review boards, particularly given the sensitive nature of the population being studied.

- **Stakeholder Engagement:** Engage with community-based organizations, local stakeholders, and representatives from key populations to build trust and understanding.
- **Formative Research:** Conduct formative assessments to understand the social and risk networks of the target population, including preferred recruitment methods and venues for the initial "seeds."

4.3 Selection of Seeds

- **What are seeds?** Seeds are the initial participants in RDS who are chosen non-randomly to kickstart the recruitment process.
- **Criteria for Seed Selection:** Seeds are selected from diverse subgroups within the target population to ensure broad coverage (e.g., age groups, geographical areas, sub-cultures). Seeds should be well-connected, respected members of the population, and willing to participate and recruit others.
- **Number of Seeds:** Typically, 5-10 seeds are chosen to ensure recruitment chains form across diverse segments of the population.

4.4 Recruitment Process

RDS relies on a peer-recruitment mechanism:

- **Coupons:** Seeds are given a set number of recruitment coupons (usually 3-5) to distribute to their peers in the population. These coupons are uniquely coded to track recruitment chains and monitor progress.
- **Recruitment Chains:** Recruited individuals participate in the survey, and they are then given a set of coupons to recruit others. This process continues until the desired sample size is reached or recruitment chains are exhausted.
- **Incentives:** Participants typically receive dual incentives — one for participating in the survey and another for successfully recruiting peers.

4.5 Data Collection

The data collection process in an IBBS using RDS involves two main components:

1. **Behavioral Survey:** A structured questionnaire is used to capture information on:
    - Demographic characteristics (age, gender, education, etc.)
    - Sexual behaviors (e.g., number of sexual partners, condom use)
    - Drug use (especially in populations like PWID)
    - Healthcare access and experiences (e.g., HIV testing, access to antiretroviral therapy)
    - Knowledge and attitudes towards HIV/AIDS.
2. **Biological Testing:** Participants may provide biological samples for testing:
    - **HIV Testing:** Rapid tests or laboratory tests are conducted to assess HIV prevalence.
    - **Other STI Testing:** Depending on the objectives, tests for other sexually transmitted infections (e.g., syphilis, hepatitis B, etc.) may be included.
    - **TB or Other Health Markers:** In some IBBS, additional health conditions like TB, hepatitis C, or other comorbidities are tested.

4.6 Tracking and Monitoring Recruitment

- **Coupon Management:** Each coupon has a unique identification number to trace recruitment waves. The number of waves and response rates per wave are monitored

to assess whether the sample reaches equilibrium (i.e., when sample characteristics stabilize).
- **Data Entry and Validation:** Data from recruitment forms, surveys, and biological tests are entered into a database with frequent cross-checks to maintain data integrity.

4.7 Sample Size and Equilibrium

- **Sample Size:** The size of the sample depends on the study's objectives, budget, and population size. RDS allows researchers to generate large samples of hidden populations by utilizing social networks.
- **Equilibrium:** Recruitment continues until the characteristics of the sample (e.g., age distribution, gender, HIV prevalence) stabilize, suggesting that the sample is representative of the population.

4.8 Analysis of Data

Data analysis in RDS is distinct from simple random sampling because participants are not randomly selected. Special statistical techniques are used to account for:

- **Sampling Weights:** Participants who are more socially connected may have a higher chance of being recruited, so weighting adjusts for differences in recruitment probabilities.
- **Network Size:** Participants are asked to report the number of peers they know in the population. These network sizes are used to weight the data.
- **Homophily:** The tendency of participants to recruit others who are similar to themselves (in terms of demographic or risk behaviors) is also accounted for in analysis.

4.9 Reporting Results

- **Behavioral Data:** Information on risk behaviors (e.g., condom use, needle sharing, HIV testing) is analyzed to identify trends and gaps in prevention efforts.
- **Prevalence Estimates:** HIV and STI prevalence rates are calculated, using the weighted data from RDS analysis to account for the non-random nature of recruitment.
- **Network Characteristics:** Findings may also include insights into the social networks and connections within the key populations, helping to inform future public health interventions.

4.10 Challenges and Limitations

- **Dependence on Social Networks:** RDS assumes that participants have large enough social networks to recruit others, which may not always be the case in marginalized populations.
- **Recruitment Biases:** If recruitment coupons are only distributed within certain subgroups, the sample may not fully represent the population.
- **Equilibrium Issues:** Reaching equilibrium can be difficult if recruitment chains break or if certain subgroups are over- or under-represented.
- **Incentive Effects:** The dual-incentive system may introduce biases if participants are overly motivated to recruit peers or recruit in non-random ways.

4.11 Adaptations and Variations

Depending on the population and local context, modifications to the traditional RDS methodology may be necessary, such as:

- **Web-based RDS:** In populations where, online networks are prominent (e.g., MSM), web-based surveys can complement traditional RDS.
- **Mixed Sampling Methods:** In cases where RDS does not generate sufficient participation, it can be combined with venue-based sampling or time-location sampling (TLS) to enhance recruitment.
- For this IBBS, a Mixed Sampling Methods was adopted to be able to reach FSW who will never come towards a survey site or an out- reach session for e.g Massage Parlour, home based activity.

Conclusion

RDS is a powerful and adaptable methodology in IBBS for reaching hidden or hard-to-reach populations. When implemented properly, it provides robust data on key health indicators, HIV/STI prevalence, and risk behaviors, which are critical for informing public health interventions. However, attention to methodological details such as seed selection, recruitment monitoring, and analysis adjustments is crucial for minimizing bias and ensuring the representativeness of the sample.

5. Results and Analysis

RECRUITMENT CRITERIA

- Biological female
- Aged 15 years or older
- Mauritian Nationality
- Received money for sex in the last six months from someone other than main partner
- In possession of a valid peer recruitment coupon.

5.1 RECRUITMENT DIAGNOSIS

- **Survey site and recruitment**

Data was collected during a face-to-face interview at three survey sites located at Port Louis, Beau Bassin and Grand Bay and sites location in different hotspots as from 29 November to 15 December 2023 (See Annex 1). Five seeds (2 at Port Louis and Beau Bassin respectively and 1 at Grand Bay) started the initial recruitments. Each participant was given three recruitment coupons. The final sample size reached was 506. While 51% of the FSW stated that the main reason for participating in the survey was because of the financial incentive, 44% did so in order to know about their status with respect to the tests carried out, namely HIV, Hepatitis B & C and Syphilis. The remaining 5% participated just because of their recruiter.

- **Recruitment performance by survey site and seed**

The highest recruitment rate was registered at Beau Bassin site accounting for 78.4% of the total recruits, followed by Port Louis (17.1%) and Grand Bay (4.5%). The percentage of recruits per seed ranged between a minimum of 8.1% from the seed in Grand Bay to a maximum of 36.2% from a seed in Beau Bassin. The performance of each seed and site is shown in Table 1.

Survey Site	Seed No:	Number of cases recruited	% of recruits by seed	% of recruits by site
Port Louis	1	66	9.8	78.4
	2	70	12.3	
Beau Bassin	3	151	33.6	17.1
	4	173	36.2	
Grand Bay	5	46	8.1	4.5
Survey Sample		**506**	**100.0**	**100.0**

Table 1: Performance of each seed and site

- **Recruits per subject**

Each participant in the survey was initially provided with three recruitment coupons which was gradually reduced to two after wave 4 and one after 6. 102 respondents successfully recruited the three required participants while 70 recruited two only. Five participants did not recruit anyone. The number of recruits by the participants is graphically displayed in Figure 1.

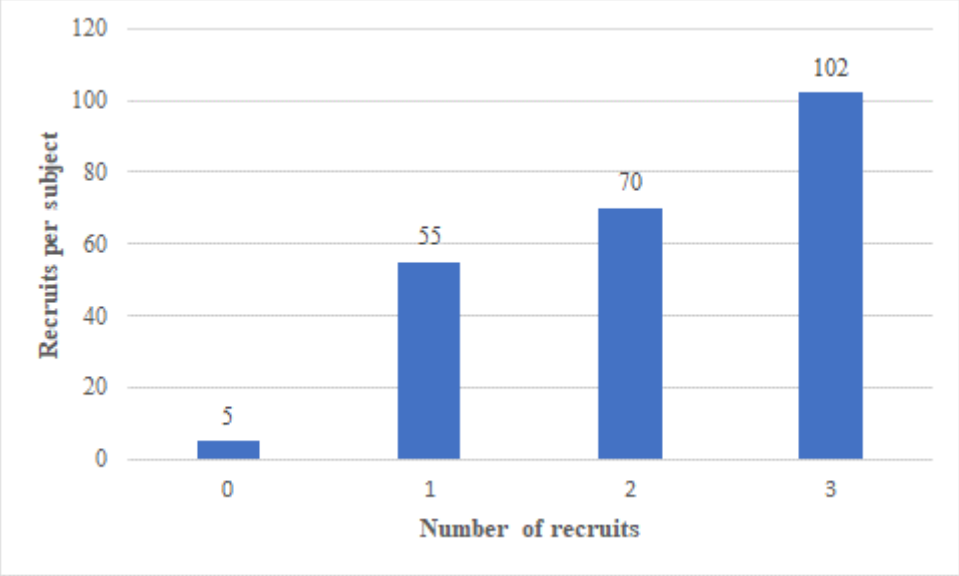


Figure 1: Number of recruits per participant

- **Recruits by wave**

Nine waves were reached in the survey. The number of recruits gradually increased to reach the peak in wave 4 whereby 110 recruitments were made. As from wave 5, the number of recruitments eventually started to decrease till wave 9 when the desired sample size was eventually reached (Figure 2).

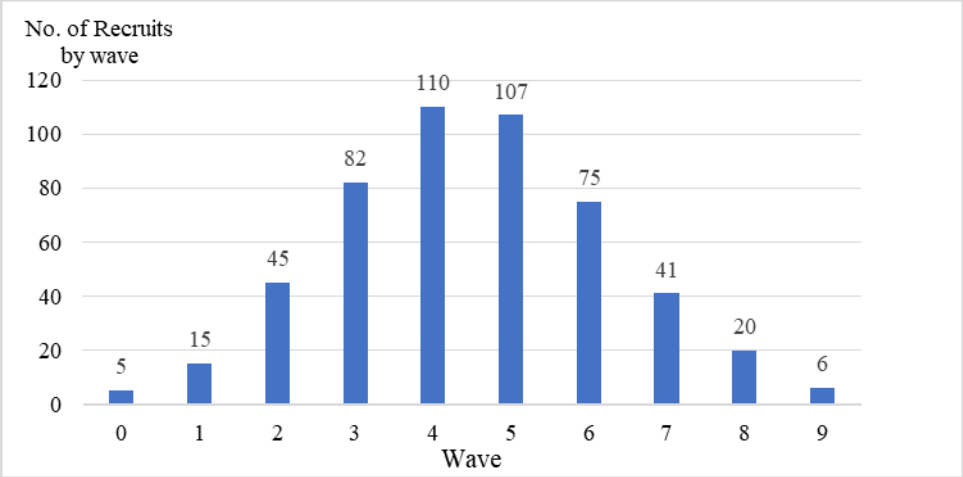


Figure 2: Recruits by wave

- **Recruitment Tree**

The overall recruitment process with the 5 seeds and 9 waves is displayed in the recruitment tree in Figure 3 below.

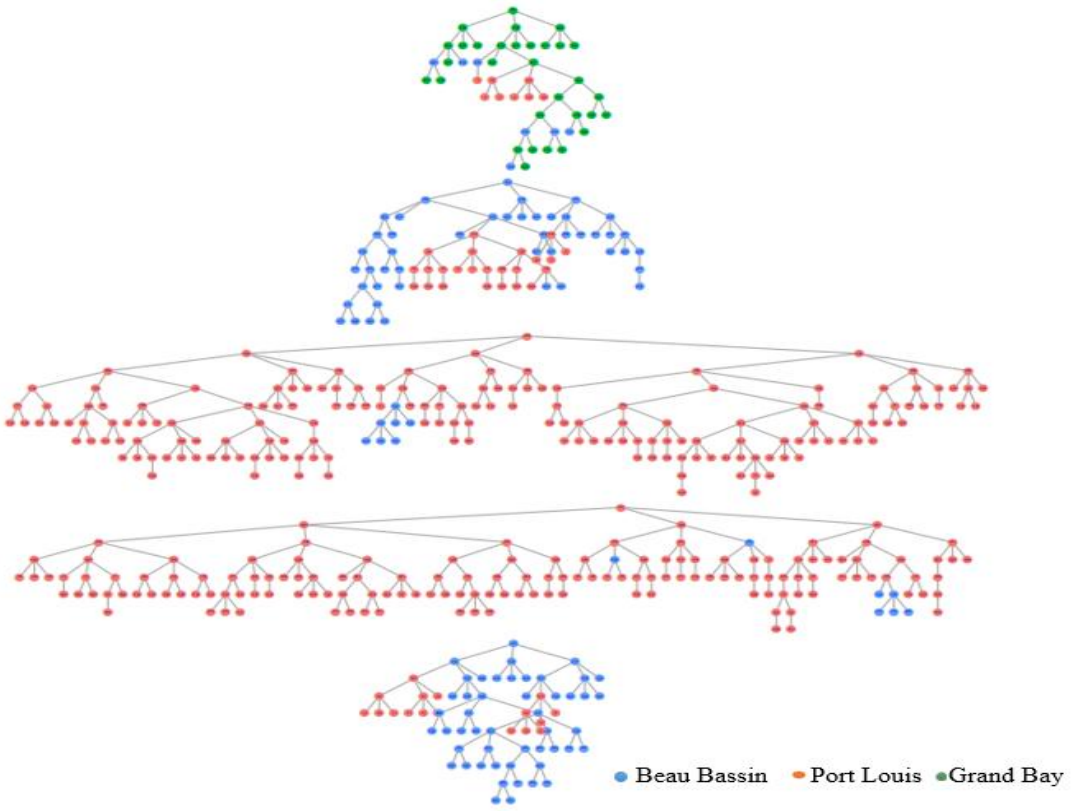


Figure 3: Recruitment graph of the FSW sample (n=506) with 5 recruitment chains. The seeds are at the topmost position of each chain.

- **Profile of the seeds**

The age of the five seeds ranged between a minimum of 25 years to a maximum of 40 years, with a mean and median age of 36.4 and 36.0 years respectively. They had an overall mean network size of 22. In the last three months preceding the survey, they had an average of 19 different male partners with a mean of 17 paying and 1 non-paying partner. Three of the seeds were co-infected with HIV, Hepatitis C and Syphilis while the remaining 2 were infection-free at the time of the survey. These three seeds also reported the use of injecting drugs, namely heroin during the past three months. One of the seeds has ever been subject to group sexual violence attack while two were arrested by the police during the last twelve months preceding the survey.

- **Network Size**

The term network as defined in this survey can be understood as being "biologically females aged 15 years and older who had vaginal, anal or oral sex in the past six months for money or kind being interconnected as a group with visual contact in the last two weeks".

Based on the above definition, it was found that 78.1% of the FSW were part of networks of less than 10 sex workers. 20.6% were in networks of 10-29 sex workers and the remaining (1.3%) in networks of 30 or more as shown in Table 2.

Network Size	Point Estimate (%)	95% CIs	Sample Size
Less than 10	78.1	(74.9, 81.2)	241
10 - 29	20.6	(17.5, 24.0)	228
30 - 49	0.9	(0.6, 1.2)	22
50 - 99	0.3	(0.2, 0.5)	11
100 & above	0.1	(0.04, 0.1)	4
Total	**100.0**		**506**

Table 2: Distribution of network size among FSW

The overall mean and median network size were 7 and 5 female sex workers respectively. Analysis by survey site showed that the mean and median network size at Beau Bassin was 6 and 4 respectively. At Port Louis the mean network size of sex workers was 9 with a median value of 7 while at Grand Bay, the corresponding values for the mean and median was 9 and 8 sex workers respectively (Figure 4).

Grand Bay is a known hotspot for FSW but some violent altercations between Sex workers and clients have degenerated and regular police interventions have impacted on our ability to recruit the expected number of participants for the survey. This environmental factor has created fear, distrust and hesitation among sex workers to engage in the survey because of heightened law enforcement.

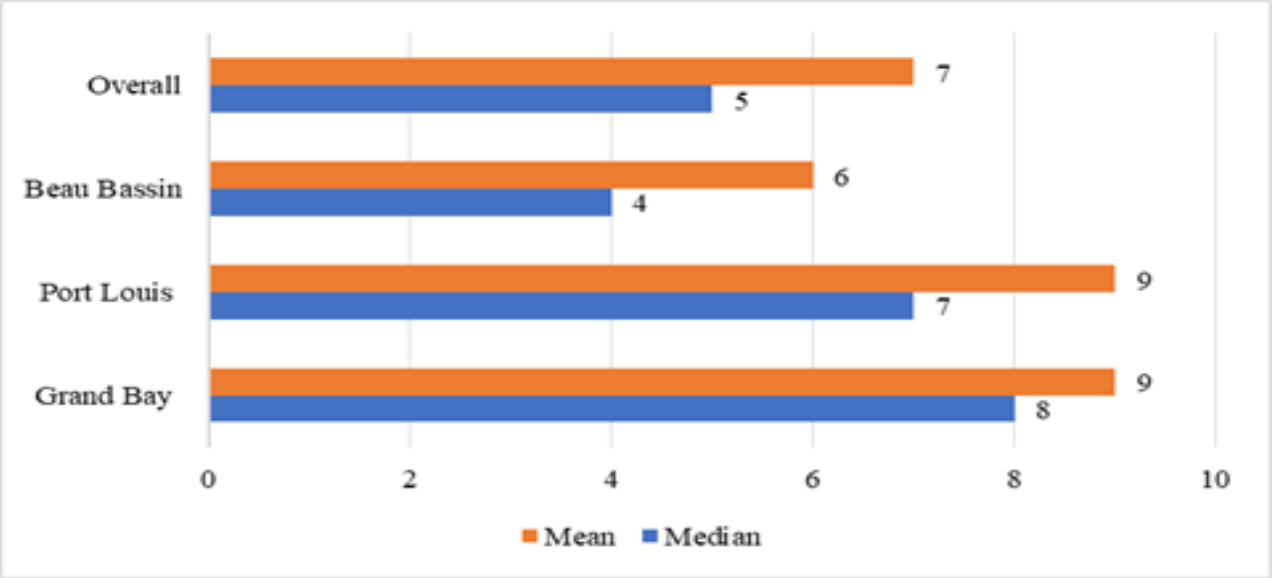


Figure 4: Mean and Median Network size by survey site

5.2 SOCIO DEMOGRAPHIC CHARACTERISTICS

- ***Age***

Female sex workers who participated in the survey were aged between 15 to 69 years with an overall mean and median age of 31.5 and 31.0 years respectively. 18.6% of the respondents were in the age group 25-29 years followed by 17.4% and 17.2% who were in the age group 35-39 and 20-24 years respectively. While 11.2% were under 20 years old, 5.1% were above 50 years old at the time of the survey. Overall, 28.4% of the respondents were under 25 years old against 71.6% who were aged 25 years and above (Table 3).

Age Group	Point Estimate (%)	95% CIs	Sample Size
15-19	11.2	(6.5, 15.9)	40
20–24	17.2	(13.0, 21.4)	82
25–29	18.6	(14.0, 23.3)	97
30-34	14.8	(10.9, 18.7)	88
35-39	17.4	(12.2, 22.6)	82
40-44	10.7	(6.9, 14.5)	65
45-49	5.0	(2.1, 7.8)	24
50 & over	5.1	(2.8, 7.4)	28
Less than 25	28.4	(23.0, 33.7)	122
25 & over	71.6	(66.4, 77.0)	384
Total	**100.0**		**506**

Table 3: Distribution of FSW by age group

- ***District of residence***

As shown in Table 4, most of the FSW participating in the survey were either residing in the district of Plaine Wilhems (31.3%) or Black River (26.9%). While FSW living in the district of Port Louis accounted for 14.5% of the total recruits, 19.5% were from the district of

Pamplemousses. Flacq and Savanne had the lowest number of participants, with 2 participants only followed by Moka with 5 recruits.
The Beau Bassin site accommodated participants from all the districts of Mauritius, with the majority coming from the districts of Plaine Wilhems and Black River respectively. Port Louis site was mainly accessed by residents of Port Louis and Black River while at Grand Bay Site, the highest participation rate was from inhabitants of Plaine Wilhems and Grand Port respectively.

District of residence of FSW	Survey site attended			Total participants by district	
	Beau Bassin	Port Louis	Grand Bay	Point Estimate (%)	Sample Size
Port Louis	10.3%	30.2%	13.1%	14.5%	84
Pamplemousses	16.0%	5.1%	6.1%	19.5%	105
Riviere du Rempart	4.0%	5.7%	5.6%	5.8%	33
Flacq	6.0%	-	-	0.4%	2
Grand Port	3.5%	8.1%	24.9%	0.8%	6
Savanne	6.5%	4.4%	-	0.3%	2
Plaines Wilhems	29.1%	9.4%	25.7%	31.3%	137
Moka	3.0%	7.0%	7.8%	0.5%	5
Black River	21.7%	30.0%	16.7%	26.9%	132
All Survey sites	100.0% (n=359)	100.0% (n=116)	100.0% (n=31)	100.0%	506

Table 4: Distribution of FSW by district of residence and survey sites attendance

- ***Education and Civil Status***

As shown in Table More than 50.0% of the respondents (58.1%) reported having an incomplete secondary education as highest level of education. While 22.6% had completed their primary education, 11.1% had an incomplete primary education. 4.4% were holders of a school certificate against 1.0% who had a Higher School certificate. Only one respondent (0.1%) reported having tertiary education level. 1.3% (9 respondents) of the participants also reported having never attended school compared to 1.9% in 2020 survey and 2.6% in 2015 survey.

Regarding civil status, 35.6% of the FSW were single compared to 30.2% who were either cohabiting or married. Around 30% were either divorced or separated while widower accounted for 4.6% of respondents. Around 41% of the respondents were primarily living with their parents/siblings while 24.2% were living alone.

	Point Estimate (%)	**95% CIs**	**Sample Size**
Highest level of Education			
Incomplete Primary	11.1	(7.2, 14.9)	55
Complete Primary	22.6	(17.4, 27.9)	120
Incomplete Secondary	58.1	(52.2, 64.1)	277
School certificate	4.4	(2.6, 6.3)	29
Complete Secondary (HSC/GCE)	1.0	(0.2, 1.8)	7
Tertiary	0.1	(0.0, 0.2)	1
Vocational/Other training institutions	1.4	(0.2, 2.5)	8
Never attended school	1.3	(0.4, 2.2)	9
Total	**100.0**		**506**

Civil Status			
Single	35.6	(31.6, 39.6)	188
Cohabitation	19.1	(14.0, 24.2)	93
Married	11.1	(6.8, 15.3)	59
Divorced/Separated	29.6	(23.3, 35.9)	136
Widower	4.6	(0.3, 8.9)	29
Total	**100.0**		**505***
Primarily live with:			
Parents/Siblings	40.7	(36.1, 45.1)	214
Alone	24.2	(18.2, 30.3)	118
Male partner	15.3	(10.5, 20.1)	76
Husband	7.8	(4.6, 11.0)	48
Children	9.6	(4.9, 14.3)	38
Friend	2.4	(0.5, 4.3)	11
Total	**100.0**		**505***

**missing response*

Table 5: Distribution of FSW by educational level and civil status

- ***Socio economic situation***

Nearly one third (33.4%) of the respondents reported having other means of earning money apart from sex work out of which 16.2% were in receipt of social aid/pension. Among those who were employed/self-employed, their other job comprised mainly of manual work (73.3%), like maid and cleaner while 12.5% were working as hairdresser/beautician or in massage parlour. Overall, the monthly family income of more than half (53.1%) of the respondents were found to be below Rs 15000. In 53.1% of cases, the respondents contributed of less than Rs 10,000 in the total family income (Table 6).

	Point Estimate (%)	95% CIs	Sample Size
Have Other means to earn money apart from sex work			
Yes	33.4	(27.8, 39.0)	200
No	66.6	(61.0, 72.2)	306
Total	**100.0**		**506**
Other means of income			
Employed	52.7	(44.9, 60.2)	110
Self employed	31.7	(22.6, 41.1)	60
Parents	3.8	(0.0, 10.3)	5
Partner/Husband	4.1	(0.0, 10.0)	7
Social Aid/Pension	16.2	(9.3, 23.0)	42
Other main work			
Drug dealer	1.8	(0.4, 3.10	5
Hair Dresser/Beautician/Massage parlour	12.5	(6.5, 18.7)	18
Hawker	0.8	(0.0, 1.8)	2
Manual worker	73.3	(65.5, 81.4)	113
Office worker	2.1	(0.0, 6.5)	7
Salesgirl	5.1	(1.0, 9.2)	7
Tourism and Hospitality	1.6	(0.0, 3.9)	3
Other	2.8	(0.6, 5.0)	6
Total	**100.0**		**161***
Monthly Family Income			
Less than 10000	28.4	(22.4, 34.3)	114
Rs 10000 - Rs 14999	24.7	(20.5, 28.9)	117

Rs 15000 -Rs 19999	13.9	(9.8, 18.1)	88
Rs 20000 - Rs 24999	10.4	(6.7, 14.2)	65
Rs 25 000 and above	22.6	(17.4, 27.8)	120
Total	**100.0**		**504***
Monthly contribution of FSW to family income			
Less than Rs 10000	53.0	(46.7, 59.4)	232
Rs 10000 - Rs 14999	25.0	(19.7, 30.2)	133
Rs 15000 - Rs 19999	7.0	(4.9, 9.1)	51
Rs 20000 - Rs 24999	7.3	(3.4, 11.2)	34
Rs 25000 and above	7.7	(5.4, 10.0)	56
Total	**100.0**		**506**

**missing response*

Table 6: Distribution of FSW by employment status and monthly income

- ***Financial Support***

More than 75% of the survey respondents reported that they were supporting someone financially at the time of the survey. Among them 52.9% had financial responsibilities towards children aged less than 15 years only while 14.4% were supporting people aged 15 years and over. 32.7% had financial obligations both towards children aged less than 15 years and people aged over 15 years. Among those who were financially supporting children, the number of children ranged between 1 to 10 with a mean and median of 2 children with around 70% having 1-2 children under their responsibility (Table 7).

	Point Estimate (%)	95% CIs	Sample Size
Supporting anyone financially			
Yes	77.0	(71.5, 82.4)	415
No	23.0	(17.6, 28.5)	91
Total	**100.0**		**506**
Financial support to:			
Children aged less than 15 years only(Children)	52.9	(46.1, 59.9)	198
People aged 15 years and above(Adult)	14.4	(9.1, 19.7)	61
Both children and Adult	32.7	(26.2, 39.0)	156
Total	**100.0**		**415**
Number of children financially supporting:			
1-2	69.6	(62.6, 76.6)	244
3-4	23.6	(18.1, 29.1)	92
5 and over	6.8	(1.8, 11.8)	18
Total	**100.0**		**354**

Table 7: Distribution of FSW by financial responsibility

5.3 SEXUAL HISTORY

The age at first sexual intercourse (vaginal or anal) ranged between 6 to 26 years with a mean and median age of 15.4 and 15.0 years, respectively. More than half (62.9%) of the FSW had their first sexual intercourse when they were aged between 15-19 years compared to 0.4% who were aged below 10 years. The mean age at which the FSW first received money/gift/advantages for sex was found to be 19.3 years with a median of 18.0 years. 54.2% of the FSW reported having first received these “incentives” when they were aged between 15-19 years (Table 8).

	Point Estimate (%)	95% CIs	Sample Size
Age at first sexual intercourse (vaginal or anal)			
under 10	0.4	(0.0, 1.1)	2
10-14	33.9	(28.4 39.4)	186
15-19	62.9	(57.3, 68.5)	301
20 & over	2.8	(1.3, 4.1)	15
Total	**100.0**		**504***
Age first received money/gift/advantages for sex			
10-14	11.3	(7.7, 14.9)	57
15-19	54.2	(48.3, 60.0)	265
20 & over	34.5	(29.2, 39.9)	183
Total	**100.0**		**505***

**missing response*

Table 8: Age of FSW at first sexual intercourse and first received "incentives" for sex

Apart from one FSW who reported selling sex at any place convenient to the client, 40.5% stated that they operated at 3 to 5 distinct places compared to 59.3% who were selling sex at 1 to 2 different locations. The most common places where the commercial sex work took place during the last three months preceding the survey included mainly hotel/rented apartment/Guest House (71.4%) and the streets (29.3%). The majority of the FSW (87.9%) of the FSW contacted their clients by telephone while 24.2% reported establishing contacts in public areas including on the streets. 1.1% of the respondents reported that everyone in their immediate environment was aware of their involvement in commercial sex work compared to 7.8% who stated that no one was aware of their involvement in sex work. The remaining 91.1% reported that there were some people who knew about their sex work and among them, there were mainly friends (60.1%), family (54.2%) and acquaintances (9.6%) (Table 9).

What was evident during the survey was that the main partner is fully aware of her sex work activity but turn a blind eye as she is bringing in money for household expenses and sometime even for drugs and alcohol consumption.

	Point Estimate (%)	95% CIs	Sample Size
Number of places for commercial sex work			
1 place	29.2	(23.6, 34.9)	139
2 places	30.0	(25.0, 34.9)	166
3-5 places	40.4	(34.3, 46.6)	188
More than 5 places	0.2	(0.0, 0.4)	2
Any place	0.2	(0.0, 1.2)	1
Total	**100.0**		**496***
Places where commercial sex took place in the past three months			
FSW's place	6.1	(3.8, 8.3)	40
Partner's place	11.9	(8.6, 15.1)	67
Hotel/rented apartment/ guest house	71.4	66.1, 76.8)	344
Bar/Clubs	5.3	(2.9, 7.6)	34
Sauna/Massage parlour	10.0	(6.5, 13.6)	58
Street	29.3	(23.2, 35.5)	156
Rented room (pensionnat)	4.6	(2.4, 6.9)	23
Car	2.6	(0.7, 4.6)	12
Seaside	2.0	(0.3, 3.6)	10
Means of contact for client			
Internet	6.1	(3.3, 8.9)	33

Bars/Clubs	3.0	(1.3, 4.7)	19
Private parties	1.4	(0.4, 2.3)	10
Public areas, streets	24.2	(18.9, 29.5)	153
Social media	20.1	(15.2, 24.9)	91
Telephone	87.9	(84.7, 91.2)	427
Salon de massage	8.6	(5.3, 11.8)	52
Pensionat	7.3	(4.6, 10.2)	43
Who are aware of the FSW's involvement in commercial sex work			
Everyone	1.1	(0.1, 2.1)	6
No one	7.8	(5.1, 10.5)	41
Some People	91.1	(88.3, 94.0)	459
Total	**100.0**		**506**
People aware of FSW's involvement in commercial sex work			
Family	54.2	(48.3, 60.2)	266
Friend	60.1	(54.8, 65.6)	266
Co-workers	5.4	(0.5, 10.3)	37
Acquaintance	9.6	(3.9, 15.4)	47
Neighbours	4.5	(0.0, 9.2)	30

**missing response*

Table 9: Place of activity, contact means and awareness of FSW's commercial activity in immediate environment

TYPES OF SEXUAL PARTNERS

In the last three months preceding the survey, FSW reported having had sex with an average of 32male partners (including both paying and non-paying), and a corresponding median of 12 partners; that is half had paid or unpaid sex with 12 or less partners against the other half who had 12 or more partners. The number of total reported partners ranged between a minimum of 1 to a maximum of 300.

Non-paying Partners

Regarding non-paying male partners, 29.8% of the FSW reported not having such type of partners during the three months period. Among those who had non-paying partners, the number of partners ranged between 0 and 20 with a mean and median number of partners being equal to one. These non-paying partners were mostly the FSW's living-in partners (62.6%) or their husband (20.8%). On average, the number of times the FSW had anal or vaginal sex with these partners during this three-month period was found to be equal to 8 times with a corresponding median value of 3. More than 50% of the FSW reported having sex 1 to 5 times with a non-paying partner during the last three months preceding the survey (Table 10).

	Point Estimate (%)	**95% CIs**	**Sample Size**
Types of partners			
Paying partners only	29.8	(24.4, 35.1)	178
Both paying and non-paying partners	70.2	(64.9, 75.6)	328
Total	**100.0**		**506**
Non paying partners :			
Husband	20.8	(14.0, 27.6)	71

Living-in partners (Concubin)	62.6	(55.1, 70.2)	207
Pimps	0.1	(0.02, 0.2)	1
Friends	14.4	(7.3, 21.5)	38
Number of times had sex with non paying partners in last three months			
1-5	54.3	(46.4, 62.4)	154
6-10	12.1	(7.6, 17.2)	49
More than 10	33.3	(25.9, 40.4)	125
Total	**100.0**		**328**

Table 10: Distribution of type of non-paying partners

Paying partners

The respondents reported having an average of 31 male paying partners in the last three months preceding the survey with a corresponding median value of 10 partners; that is half of them had sex with 10 or more clients while the other half had 10 or more clients during this three-month period. The number of paying partners during this same time frame ranged between a minimum of 1 to a maximum of 300 clients with more than 75% of the respondents having 5 or more clients on a particular day as shown in Table 11. Respondents reported having an average of 3 paying clients per day the last time they had commercial sex; the number of clients per day varied between 1 and 9. More than 50% of the respondents reported having had paid sex on the day they attended the survey or on the eve compared to 1.4% who did so 2-6 months ago.

	Point Estimate (%)	**95% CIs**	**Sample Size**
Number of paying partners in last three months			
1 only	4.1	(1.1, 7.3)	14
2-4	19.9	(14.5, 25.3)	73
5-9	19.5	(14.7, 24.2)	89
10-19	20.7	(16.2, 25.3)	109
20 or more	35.8	(29.6, 42.0)	221
Total	**100.0**		**506**
Number of paying clients on a particular day			
1 only	20.3	(15.7, 25.0)	103
2-5	74.2	(69.5, 79.0)	366
more than 5	5.5	(3.4, 7.4)	34
Total	**100.0**		503*
When last had paid sex			
Today (on the day attending the survey)	5.3	(0.9, 9.7)	34
Yesterday (eve of attending the survey)	46.7	(41.0, 52.2)	248
One week ago (before the survey)	39.5	(34.5, 44.7)	182
One month ago (before the survey)	7.1	(4.7, 9.5)	31
2-6 months ago (before the survey)	1.4	(0.0, 2.8)	8
Total	**100.0**		**503***

**missing response* Table 11: Distribution of paying partners +

5.4 CONDOM USE

- ***Male Condom***

Compared to the 2020 IBBS Survey where 85.6% of the FSW reported knowing places or persons from where they can obtain male condoms, the corresponding figure in the 2023 IBBS increased to 90.8%. The most common places cited by the respondents can obtain

condoms were: caravan from NGOs (51.2%) followed by private pharmacies (50.7%) and government health facilities (32.3%). 83.5% of the participants had received male condoms for free in the last twelve months preceding the survey (Table 12).

	Point Estimate (%)	95% CIs	Sample Size
Know places or persons from where male condoms can be obtained			
Yes	90.8	(87.6, 94.1)	465
No	9.2	(5.9, 12.4)	41
Total	**100.0**		**506**
Places where male condoms can be obtained			
Caravan NGOs	51.2	(45.2, 57.3)	255
Pharmacy	50.7	(44.4, 56.9)	255
Public health facilities	32.3	(26.5, 38.1)	144
NGOs	29.5	(23.3, 35.7)	161
friend/other sex worker	25.6	(19.7, 31.7)	120
Shop/Supermarket	18.5	(12.8, 24.2)	107
Caravan-AIDS unit	14.9	(9.7, 20.0)	99
Caravan-NEP	13.9	(7.8, 20.1)	79
Client	11.7	(5.9, 17.5)	66
Peer educator	10.8	(4.8, 16.8)	53
Aids Unit/NDCCI	10.1	(3.7, 16.4)	59
Bar/guest house/hotel	5.6	(0.0, 12.7)	31
Received male condoms for free in last twelve months			
Yes	83.5	(77.2, 89.8)	396
No	16.5	(10.2, 22.8)	61
Total	**100.0**		**457***

**missing response*

Table 12: Condom use among FSW

- **Female condoms**

With regards to female condoms, 85.9% of the respondents knew places/persons from where they can get these condoms. The most popular places cited by them included public health facilities (40.7%), NGO (36.4%) and Caravan from NGOs (24.9%). 57.6% of the respondents stated having received female condoms for free in the last twelve months preceding the survey. Only 35.4% of them reported having ever used female condoms and the main reasons given for using this type of condoms was that it provides protection from HIV/STIs (68.8%) or from pregnancy (31.8%) (Table 13).

	Point Estimate (%)	95% CIs	Sample Size
Know places or persons from where female condoms can be obtained			
Yes	85.9	(82.5, 89.2)	445
No	14.1	(10..8, 17.6)	59
Total	**100.0**		**504***
Places where female condoms can be obtained			
Public health facilities	40.7	(34.7, 46.6)	184
NGO	36.4	(30.5, 42.3)	159
Caravan-NGO	24.9	(18.8, 30.9)	132
Friends/Other sex workers	19	(13.3, 24.8)	85
Caravan-AIDS unit	13.8	(7.4, 20.2)	64
Peer-Educator	11.3	(5.4, 17.3)	52

Pharmacy	10.7	(4.6, 16.7)	48
Aids Unit/NDCCI	9.81	(3.2, 16.4)	48
Guest house	4.78	(0.0, 11.2)	22
Client	2.3	(0.0, 5.0)	15
Caravan-NEP	1.38	(0.0, 2.9)	10
Received female condoms for free in last twelve months			
Yes	57.6	(51.4, 63.7)	310
No	42.4	(36.3, 48.6)	196
Total	**100.0**		**506**
Ever used female condoms			
Yes	35.4	(30.0, 40.9)	195
No	64.6	(59.1, 70.0)	311
Total	**100.0**		**506**
Reasons for using female condoms			
Protection from HIV/STIs	68.8	(60.2, 77.9)	124
Protection from pregnancy	31.8	(23.8, 40.0)	63
Available free	4.6	(0.0, 9.1)	16
Partner requested respondent to use it	3.7	(0.0, 9.2)	9
Female condoms give more control than male condoms	1.6	(0.0, 4.7)	6

**missing response*

Table 13: Female condoms use among FSW

Regarding negotiations on the use of any type of condoms with a partner before having anal or vaginal sex use, 77.5% of the respondents reported that they are always able to negotiate same. Nearly two thirds of the FSW further stated that they would refuse at all cost to have any sexual relationship with a partner who refuses to use a condom. Overall, 76.2% of the respondents made use of a condom (any type) the last time they had sex with any type of client (paying/non-paying) (Table 14).

Frequency of negotiations of condom use before sex			
Always	77.5	(73.8, 81.0)	365
Never	3.6	(2.1, 5.2)	18
Occasionally	18.9	(15.9, 22.0)	118
Total			**501***
FSW's reaction if partner refused to use condom			
Accept on additional payment	8.7	(4.8, 12.5)	56
Accept readily	16.4	(10.4, 22.5)	65
Accept with insistence	8.1	(4.0, 12.3)	47
Refuses at all cost	66.8	(61.6, 72.0)	334
Condom use (male or female) last time had sex with paying/non paying partner			
Yes	76.2	(70.7, 81.8)	**392**
No	23.8	(18.2, 29.3)	**114**
Total	**100.0**		**506**

**missing response*

Table 14: Negotiations, reactions and use of condoms among FSW

CONDOM USE PRACTICES BY TYPES OF PARTNERS

- ***Paying Partners***

More than 80% of the respondents reported the use of a condom the last time they had sex with a male paying partner and it was mostly the decision of the respondent (76.9%) to suggest the use of condom at that time. In only 10.9% of cases, the use of condom was proposed by the client. However, during the last month preceding the survey, 29.0% of the respondents stated that they did not always use of a condom during sexual intercourse. The

main reason for not always using condom was that it was not pleasurable for the clients (53.9%). The same main reason (59.9%) was given by the 16.6% of the respondents who did not make use of a condom the last time they had sexual intercourse with a male paying partner.

	Point Estimate (%)	95% CIs	Sample Size
Condom used last time had sex with a male paying partner			
Yes	83.4	(79.5, 87.2)	426
No	16.6	(12.8, 20.5)	77
Total	**100.0**		**503***
Condom use suggested by:			
Respondent	76.9	(71.2, 82.7)	329
Paying partner	10.9	(5.9, 15.9)	37
Joint decision (respondent & partner)	12.2	(8.5, 15.8)	58
Total	**100.0**		**424***
Frequency of condom use in last month			
Always	71.0	(65.4, 76.6)	357
Most times	13.9	(9.1, 18.6)	67
Never	3.8	(2.4, 5.2)	20
Occasionally	11.3	(8.1, 14.6)	59
Total	**100.0**		**503***
Main reason for not always using condom in last month			
Client does not want to use/choice	3.2	(0.3, 6.0)	7
Fear of law enforcement	0.8	(0.0, 1.8)	2
Get more money if not use a condom	5.1	(1.9, 7.9)	12
Never thought about using a condom	1.6	(0.0, 8.5)	3
Not available	11.6	(6.1, 16.8)	17
Not pleasurable for client	53.9	(42.3, 66.3)	62
Partner has no sexual infections	0.6	(0.0, 2.2)	1
Too expensive	8.1	(3.9, 12.3)	12
Trust partner	3.3	(0.9, 5.7)	6
Other	11.8		13
Total	**100.0**		**135**
Main reason for not using condom last time had sexual intercourse with a male paying partner			
Get more money if not use a condom	3.8	(2.2, 5.2)	5
Never thought about using a condom	4.3	(0.0, 22.9)	2
Not available	19.7	(11.2, 28.5)	14
Not pleasurable for client	59.9	(43.9, 76.0)	42
Other	9.1	(2.1, 15.8)	8
Too high or drunk	0.5	(0.0, 1.1)	1
Trust partner	2.7	(2.5, 2.9)	4
Total	**100.0**		**76***

**missing response*

Table 15: Condom use by FSW with paying clients

- ***Non Paying partners***

Regarding non-paying male sexual partners, only 46.4% of the respondents reported that they used a condom the last time they had sex with a male non-paying partner and in 79.0%, it was on the suggestion of the respondent that a condom was used. Additionally, in the last three months preceding the survey, only 41.8% of the FSW stated that they always made use of a condom with a non- paying partner. In most cases (62.3%), the reason for not always using a condom was that they trusted their partner. The same reason was provided by 63.2% of the respondents who did not use a condom the last time they had sex with a non- paying partner (Table 16).

	Point Estimate (%)	95% CIs	Sample Size
Condom used last time had sex with a male non-paying partner			
Yes	46.4	(38.6, 54.4)	139
No	53.6	(45.6, 61.4)	189
Total	**100.0**		**328**
Condom use suggested by:			
Respondent	79.0	(68.5, 90.0)	101
Non-Paying partner	4.3	(0.0, 13.7)	5
Joint decision (respondent & partner)	16.7	(10.5, 22.6)	29
Total	**100.0**		**135***
Frequency of condom use in last three months			
Always	41.8	(33.2, 50.6)	121
Most times	8.6	(5.1, 12.1)	24
Never	38.1	(30.0, 46.1)	136
Occasionally	11.5	(6.3, 16.6)	42
Total	**100.0**		**323***
Main reason for not always using condom in last three month			
Allergic to condom	0.4	(0.0, 1.0)	1
Never thought about using a condom	2.6	(0.0, 15.8)	5
Not available	3.5	(1.1, 5.8)	6
Not pleasurable for client	27.0	(19.7, 34.1)	51
Partner has no sexual infections	0.7	(0.0, 2.0)	2
Too high or drunk	1.3	(1.1, 1.5)	2
Trust partner	62.3	(51.4, 73.5)	107
Other	2.12	(0.0, 6.4)	5
Total	**100.0**		**179***
Main reason for not using condom last time had sexual intercourse with a male non-paying partner			
Never thought about using a condom	2.7	(0.0, 14.9)	6
Not available	3.6	(0.7, 6.5)	6
Not pleasurable for client	27.5	(20.4, 34.5)	53
Partner has no sexual infections	0.5	(0.0, 2.1)	1
Trust partner	63.2	(52.8, 73.7)	113
Other	2.5	(0.0, 6.4)	6
Total	**100.0**		**76***

**missing response*

Table 16: Condom use by FSW with non-paying clients

5.5 SEXUALLY TRANSMITTED INFECTIONS (STIs)

Nearly 95% of the respondents stated that they have ever heard of diseases that can be transmitted through sexual intercourse. However, only 72.5% and 72.8% were able to describe any signs and symptoms of STIs in men and women respectively. The most common signs and symptoms described were in terms of genital discharge for both men (78.9%) and women (71.5%). 40.7% of the respondents also reported having had genital/anal/sore/ulcer in the last twelve months. While 21.0% of them did not seek any treatment, the remaining mostly attended a public health facility for treatment (76.7%) (Table 17).

	Point Estimate (%)	95% CIs	Sample Size
Ever heard of STIs			
Yes	94.7	(91.4, 98.0)	490
No	5.3	(2.0, 8.6)	16
Total	**100.0**		**506**
Describe signs and symptoms of STIs in men			
Yes	72.5	(68.1, 76.9)	357
No	27.5	(23.1, 32.0)	133
Total	**100.0**		**490**
Describe signs and symptoms of STIs in women			
Yes	72.8	(67.9, 77.7)	360
No	27.2	(22.3, 32.1)	130
Total	**100.0**		490
Signs and symptoms of STIs in men			
Genital discharge	78.9	(72.4, 85.3)	291
Burning on urination	54.8	(48.2, 61.7)	182
Genital ulcers	63.8	(57.3, 70.5)	221
Swelling in groin area	28.9	(21.7, 36.2)	110
Signs and symptoms of STIs in women			
Abdominal pain	36.6	(28.9, 44.2)	147
Genital discharge	71.5	(65.2, 77.7)	246
Burning on urination	62.2	(54.9, 69.7)	204
Genital ulcers	50.3	(43.0, 57.6)	188
Swelling in groin area	14.7	(9.1, 20.3)	71
Had genital/anal discharge, sore, ulcer in last 12 months			
Yes	40.7	(34.7, 46.9)	315
No	59.3	(53.2, 65.3)	191
Total	**100.0**		**506**
Treatment undertaken for genital/anal discharge, sore or ulcer in last 12 months			
Did not do anything	21.0	(11.7, 30.4)	37
Went to public health facility	76.7	(67.2, 85.9)	120
Went to private health facility	5.54	(-2.0, 13.2)	8
Bought drugs at pharmacy	13.4	(3.5, 23.3)	20
Went to traditional healer	4.2	(-8.5, 17.1)	3
Treated at home	11.6	(0.0, 23.7)	13
Told sexual partner	0.5	(-1.5, 2.5)	2
Stopped having sexual intercourse	6.1	(-5.4, 17.7)	5
Used condoms during sexual intercourse	5.2	(-5.7, 16.1)	3

Table17: STIs among the FSW(knowledge and treatment)

- ***STIs tests, vaccinations and other measures taken to prevent STIs.***

Respondents were also requested to state whether they have been tested positive for some selected STIs. As shown in Table 18, 10.6% of the FSW reported that they have been tested positive for Syphilis and 9.3% for Hepatitis C. For the other STIs, namely Hepatitis A and B, Gonorrhea, Genital Herpes, Condylomas and Chlamydia, the percentage of reported positive cases was less than 3% among the respondents. As regards to vaccinations against Hepatitis A and B, only around 4% of the respondents stated that they have been vaccinated.

	Point Estimate (%)	95% CIs	Sample Size
FSW tested positive for:			
Hepatitis A	2.3	(0.0, 4.7)	8
Hepatitis B	2.9	(0.3, 5.5)	14
Hepatitis C	9.3	(5.4, 13.1)	61
Gonorrhea	2.3	(0.7, 3.9)	13
Chlamydia	0.3	(0.0, 0.7)	2
Syphilis	10.6	(6.7, 14.5)	55
Genital Herpes	0.9	(0.0, 2.3)	5
Condylomas	0.4	(0.1, 0.7)	4
Vaccinated against:			
Hepatitis A	4.1	(1.2, 7.0)	11
Hepatitis B	4.4	(1.4, 7.4)	15

Table 18: Test and vaccinations of some selected STIs among FSW

5.6 HIV/AIDS

- ***Knowledge, opinions and attitudes on HIV/AIDS***

The majority of the FSW enrolled for the survey (97.1%, with a CI: 95.1%, 99.1%) have ever heard about HIV, the virus that cause AIDS. Among them, 96.4% were aware of the risk of getting HIV by using injections with a needle already used by someone else. 95% knew about the mother-to-child transmission of HIV while 92.7% stated that the correct use of condom every time can protect someone from getting HIV. However, 13.4% still opined that mosquitoes can transmit HIV. As shown in Figure 5.

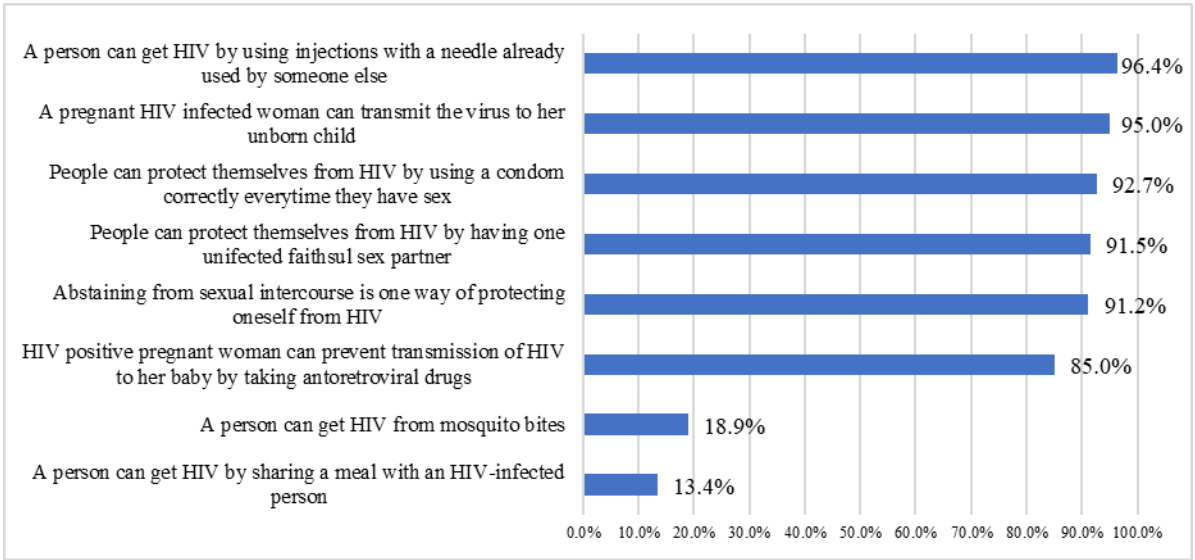


Figure 5: Knowledge, opinions and attitudes on HIV/AIDS among FSW

- ***Access to care and treatment***

Among the 494 (97.1%) respondents who have ever heard of HIV, 84.3% have ever had an HIV test. The most popular places where they were tested included hospitals (49.7%) followed by caravans (33.7%). 48.2% of those who have been tested have done so one year or more prior to the survey compared to 18.8% who were tested less than 3 months before the survey. 93.4% of the tested respondents found the outcome of the tests among whom 4.2% were positive. The main reasons by those who did not find out about the results of their test was that they either did not have time to go back for the results (39.4%) or they were still waiting for the results (31.5%) (Table 19).

	Point Estimate (%)	**95% CIs**	**Sample Size**
Ever had HIV test			
Yes	84.3	(79.0, 89.7)	429
No	15.7	(10.3, 21.0)	65
Total	**100.0**		**494**
Places where tests were done			
Hospitals	49.7	(43.3, 56.2)	222
Health Centres	17.9	(12.5, 23.5)	72
AIDS units	16.8	(11.0, 22.6)	85
Caravan	33.7	(27.1, 40.1)	166
NGO	19.2	(13.2, 25.3)	74
Outreach services	9.4	(3.2, 15.6)	47
Private labs/clinics	4.8	(0.0, 10.2)	18
Interval of time since last HIV test was done			
Less than 3 months ago	18.8	(13.0, 24.7)	87
3-5 months ago	15.8	(11.0, 20.7)	61
6-11 months ago	17.2	(11.5, 22.8)	76
One year or more	48.2	(41.3, 55.1)	201
Total	**100.0**		**425***
Found results of last test			
Yes	93.4	(89.5, 98.5)	394
No	6.1	(1.6, 10.5)	33
Total			**427**
Outcome of last test			
Positive	4.2	(2.7, 5.6)	30
Negative	95.4	(93.7, 96.9)	362
Not willing to share result	0.4	(0.0, 1.1)	2
Total	**100.0**		**394**
Reasons why did not find outcome of last test			
Did not have time to go back for results	39.4	(16.3, 62.9)	7
Fear of knowing status	21.1	(4.3, 37.1)	5
Result lost	4.0	(0.0, 32.4)	1
Still waiting for results	31.5	(10.9, 53.0)	5
was in jail when test done	4.0	(0.0, 9.9)	1
Total	**100.0**		**19***

**missing response*

Table 19: HIV tests among FSW

Among those who were HIV positive, 73.4% were still on medical treatment (they were all on ARV) compared to 12.7% who never had any medical follow up while 14.0% had stopped any medical follow up. The main reasons given for not having any medical follow up included stigmatisation (fear of people seeing them at the clinic) (51.9%), inconvenient place (7.8%) and time (7.8%) for treatment and lack of money (7.8%) for transport to attend treatment clinics (Table 20).

	Point Estimate (%)	95% CIs	Sample Size
Medical follow up among HIV positive respondents			
Still on medical treatment	73.4	(48.7, 97.9)	22
Started but stopped medical follow up	14.0	(0.0, 59.2)	5
Never had any medical follow up	12.6	(0.0, 45.8)	3
Total	**100.0**		**30**
Reasons for stopping/not having medical follow up			
Stigmatisation (afraid someone will see)	51.9	(20.4, 88.6)	2
Place not convenient	7.8	(0.0, 19.5)	1
Time not convenient	7.8	(0.0, 18.6)	1
Don't have money for transport	7.9	(0.0, 158.3)	1

Table 20: Medical treatment of HIV among HIV positive FSW

Regarding those who never had an HIV test, the main reason stated was because they don't feel at risk as they always use a condom (33.7%). The other reasons are as shown in Figure 6.

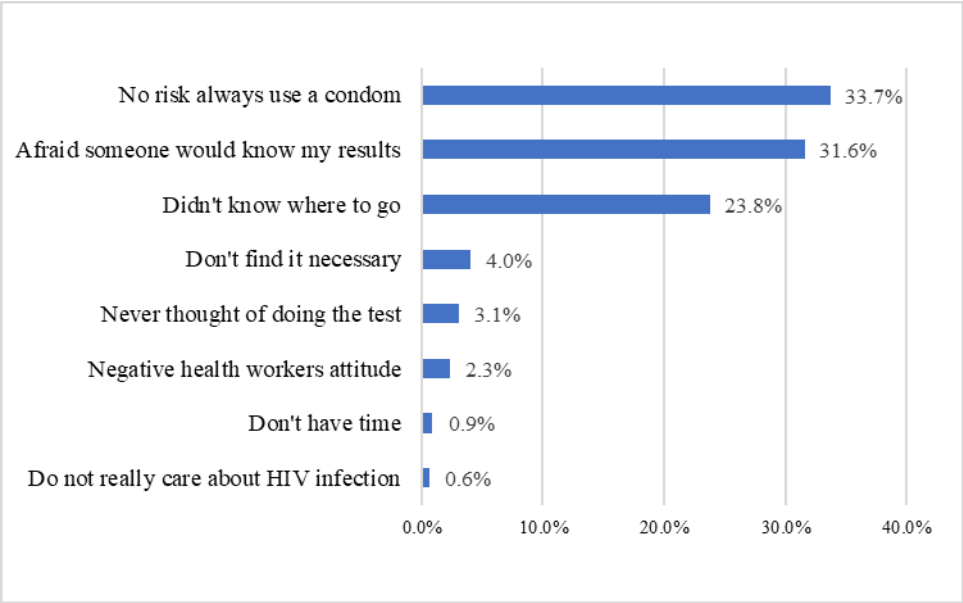


Figure :6 Reasons for NEVER having had an HIV test

RAPID SELF-TEST KIT FOR HIV

Only 38.8% of the respondents were aware of the availability of the rapid self-test kit for HIV before the survey. However, after made aware of the existence of such a kit, 90.5% of the respondents were agreeable to use it, with 72.0% preferring to use the directly assisted self-testing against 28.0% who had a preference for the HIV self-testing without help or counselling. 99% of the respondents further affirmed that they would like to confirm their result in case of a reactive self-test/directly assisted self-test (Table 21).

	Point Estimate (%)	95% CIs	Sample Size
Aware of the availability of a rapid self-test kit for HIV			
Yes	38.8	(33.5, 44.2)	165
No	61.2	(55.8, 66.5)	290
Total	**100.0**		**455***
Agreeable to use the self-test kit			
Yes	90.5	(86.2, 94.8)	402
No	9.5	(5.2, 13.8)	55
Total	**100.0**		**457***
Types of self-test kit preferred			
HIV self-testing (*without help/counselling*)	28.0	(22.0, 34.0)	119
Directly assisted Self testing (*with help/counselling*)	72.0	(66.0, 78.1)	281
Total	**100.0**		**400***
Confirm reactive self-test			
Yes	98.9	(97.6, 100.2)	396
No	1.1	(0.0, 2.4)	6
Total	**100.0**		**402***

**missing response*

Table 21: Rapid Self-test kit – knowledge and willingness to use

The most popular places for accessing the self-test kit and also confirming the test in case the latter was reactive were hospitals and the NDCCI/DCCI/AIDS unit as shown in Figure 7.

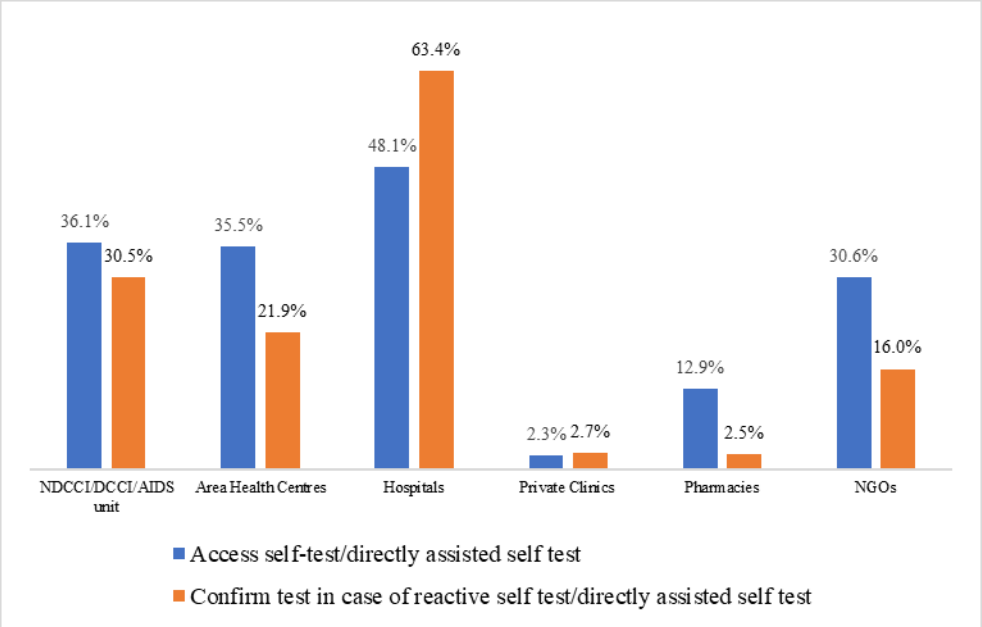


Figure 7: Most preferred place to access HIV kit and confirm the result in case test is reactive

- ***Post exposure Prophylaxis (PEP)***

Nearly 20%(CI: 14.2, 25.0) of the FSW had ever heard about Post exposure Prophylaxis (PEP), an emergency treatment taken after suspected exposure to HIV. Among those, only 11.4 % (CI: 2.1, 21.1) had ever used PEP (Figure 8). The main sources from which they heard about PEP were NGO (44.6%) and AIDS Unit/NDDCI (28.4%) (Figure 9). Reasons provided

by the FSW for having never used PEP included “never felt the need to”(34.3%), “fear of going to the hospital to ask for it”(8.5%) and “it was too late, beyond 72 hours (4.9%) .

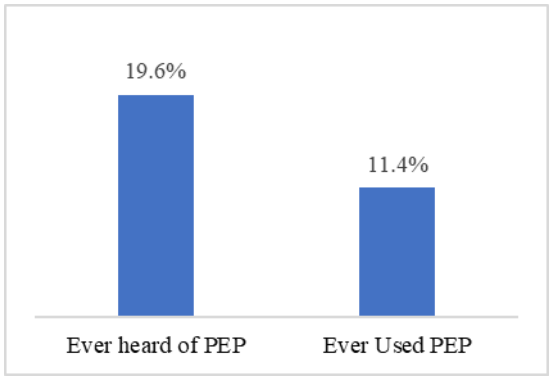


Figure 8: Distribution of FSW who ever heard or used PEP

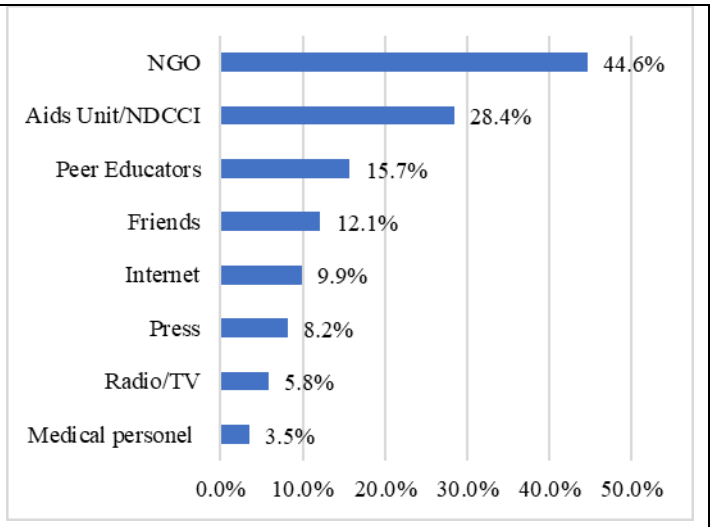


Figure 9: Places where FSW heard about PEP

- **Pre-exposure prophylaxis (PrEP)**

Roughly around 20% (CI: 15.0, 26.1) of the FSW had ever heard about PrEP, which can be taken by an HIV negative person before potential HIV exposure; however, only 1.0% (CI: -2.3, 4.2) were using it at the time of the survey (Figure 10). The main source from which FSW heard about PrEP was from NGO (42.9%) and friends (33.6%) (Figure 11).

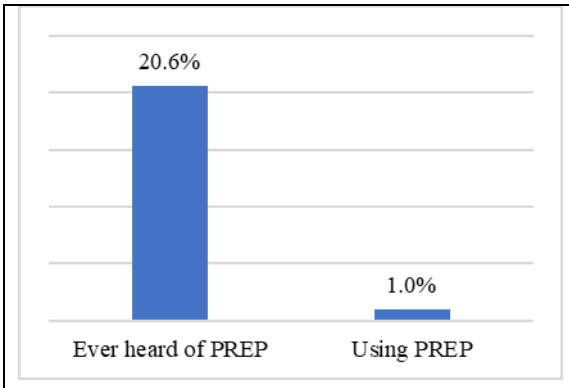


Figure 10: Distribution of FSW who ever heard or using PREP

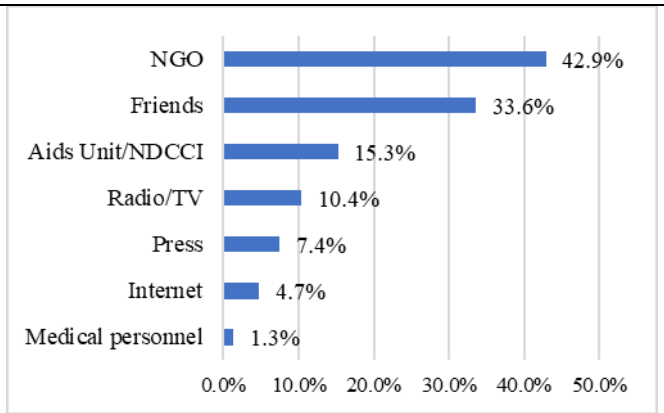


Figure 11: Places where FSW heard about PREP

- ***Preference for PREP***

77.6% (CI: 68.9, 86.5) of the FSW preferred PREP in the form of pills to that of injections (Figure 12) and most of them (38.4%) would prefer to access this service at the NDCCI/AIDS unit (Figure 13).

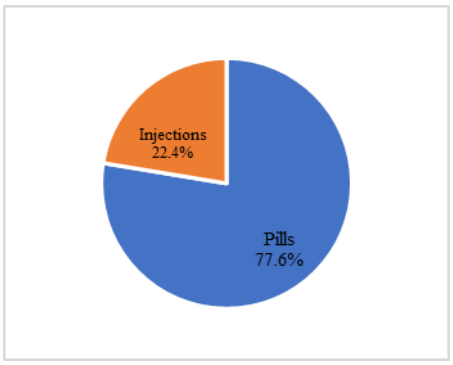


Figure 12: Types of PrEP preferred

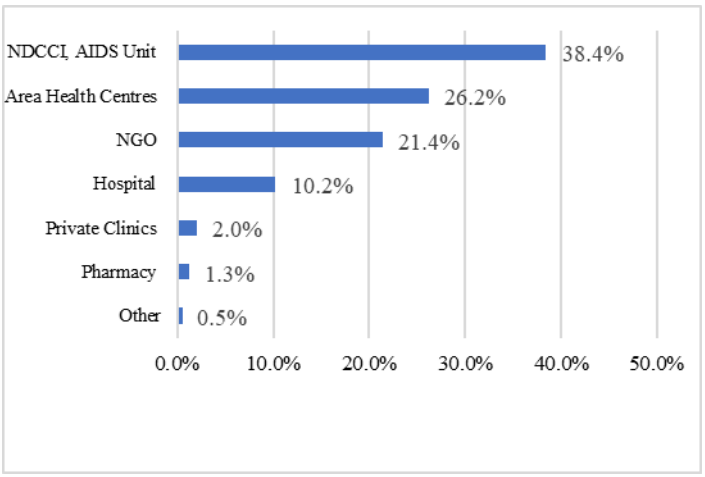


Figure 13: Preferred places to access PrEP

5.7 ALCOHOL CONSUMPTION AMONG FSW IN THE LAST 12 MONTHS

Nearly 60% of the FSW consumed alcohol in the past year, among whom 24.3% had 2 to 3 drinks in a week. 41.9% of the FSW who consumed alcoholic drink, usually had one or two drinks on a typical day compared to 11.2% who reported having 10 or more drinks. Among those having six or more drinks on one occasion, 27.0% did so on a weekly basis (Table 22).

	Point Estimate (%)	95% CIs	Sample Size
Consumed alcohol in past year			
Yes	59.8	(55.7, 63.8)	293
No	40.2	(36.2, 44.3)	210
Total	**100.0**		**503***
Frequency of alcoholic drink consumption			
2 to 3 times a week	24.3	(16.9, 31.7)	66
2 to 4 times a month	23.5	(16.9, 30.2)	76
4 or more times a week	17.0	(10.2, 23.9)	44
Monthly or less	35.2	(27.6, 42.8)	107
Total	**100.0**		**293**
Frequency of alcoholic drink consumption on a typical day			
1 or 2	41.9	(32.3, 51.8)	100
3 or 4	24.5	(17.6, 31.3)	64
5 or 6	16.9	(9.0, 25.0)	37
7, 8 or 9	5.5	(2.5, 8.2)	18
10 or more	11.2	(7.1, 15.3)	33
Total	**100.0**		**252***
Frequency of having six or more drinks on one occasion			
Daily or almost daily	2.5	(0.9, 4.0)	13
Less than once monthly	28.2	(20.6, 35.9)	80
Monthly	26.8	(19.8, 33.9)	76
Never	15.6	(7.8, 23.2)	50
Weekly	27.0	(20.4, 33.7)	66
Total	**100.0**		**285***

**missing response*

Table 22: Alcohol consumption pattern of the FSW during the past year.

- ***Effects of alcohol in daily activities***

Most of the FSW reported that alcohol consumption never impacted their daily activities. On a daily or almost daily basis, 3.0% reported that they cannot stop drinking once started, 2.4% failed to do their expected normal activities while 1.2% needed a drink to in the morning "to get going" after a heavy drinking session. Similarly, 3.2% reported that they felt guilty/remorseful after drinking while 2.1% were unable to remember what happened the night before because of drinking, and this occurred daily or almost daily (Table 23).

	Point Estimate (%)	95% CIs	Sample Size
Not able to stop once started drinking in the last year			
Never	66.2	(57.9, 74.4)	198
Less than monthly	14.2	(8.2, 20.3)	35
Monthly	10.2	(5.8, 14.7)	25
Weekly	6.4	(0.8, 11.9)	19
Daily or almost daily	3.0	(1.1, 4.9)	10
Total	**100.0**		**287***
Failed to do normally expected activities because of drinking in last year			
Never	63.5	(55.2, 71.4)	206
Less than once monthly	14.3	(8.0, 20.8)	24
Monthly	10.8	(6.5, 15.2)	28
Weekly	9.0	(1.3, 16.8)	20
Daily or almost daily	2.4	(0.8, 3.9)	9
Total	**100.0**		**287***
Needed a drink in the morning to get going after a heavy drinking session in last year			
Never	80.3	(72.1, 88.3)	239
Less than once monthly	6.0	(2.1, 9.8)	14
Monthly	3.2	(0.7, 5.6)	8
Weekly	9.4	(1.5, 17.4)	20
Daily or almost daily	1.2	(0.4, 2.0)	6
Total	**100.0**		**287***
Feeling of guilt or remorse after drinking in last year			
Never	69.6	(61.7, 77.3)	208
Less than once monthly	9.9	(4.6, 15.1)	24
Monthly	5.3	(2.6, 8.0)	17
Weekly	12.1	(4.8, 19.5)	24
Daily or almost daily	3.2	(1.3, 5.1)	11
Total	**100.0**		**284***
Unable to remember what happened the night before because of drinking in last year			
Never	73.2	(64.0, 82.3)	211
Less than once monthly	9.2	(4.8, 13.6)	29
Monthly	7.1	(3.7, 10.5)	18
Weekly	8.4	(0.2, 16.8)	19
Daily or almost daily	2.1	(0.9, 3.3)	10
Total	**100.0**		**287***

**missing response*

Table 23: Frequency of effects of alcohol on FSW's daily activities

While nearly 20% of the respondents reported that they had injured someone because of their consumption of alcoholic drinks, 26.0 % had a relative, friend, or health professional/worker who felt concerned about their drinking behavior (Figure14).

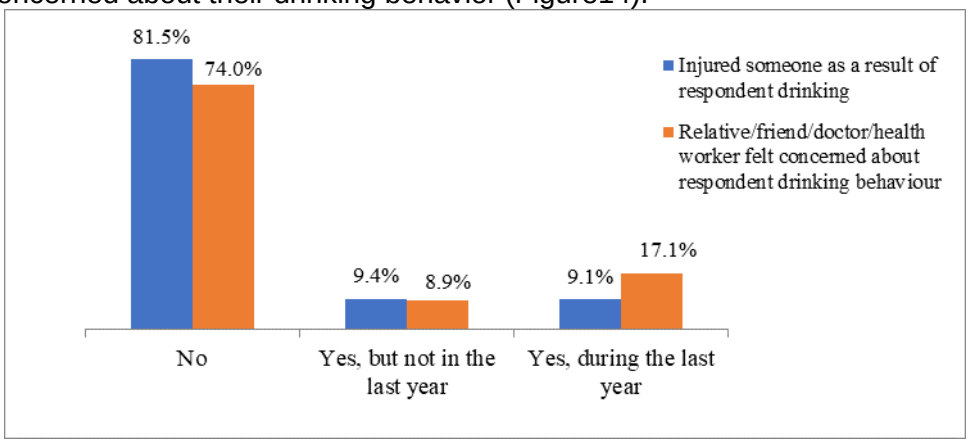


Figure 14: Behavioural problems associated with alcohol among FSW

- ***Alcohol Use Disorders Identification Test***

Questions about alcohol consumption were from the Alcohol Use Disorders Identification Test (AUDIT)[1], a screening tool developed by the World Health Organization (WHO) to assess alcohol consumption, drinking behaviours and alcohol related problems. **Possible scores range from 0 to 40** where 0 indicates an abstainer who has never had any problems from alcohol. A score of **1 to 7** suggests low-risk consumption according to WHO guidelines. Scores from **8 to 14** suggest hazardous or harmful alcohol consumption and a score of **15 or more** indicates the likelihood of alcohol dependence (moderate-severe alcohol use disorder)[2]

When grouped according to the AUDIT score, it was found that among those enrolled in the survey, overall, 40.2% were abstainers, 15.5% showed hazardous or harmful alcohol consumption patterns while 15.7% showed the likelihood of alcohol dependence (Figure 15).

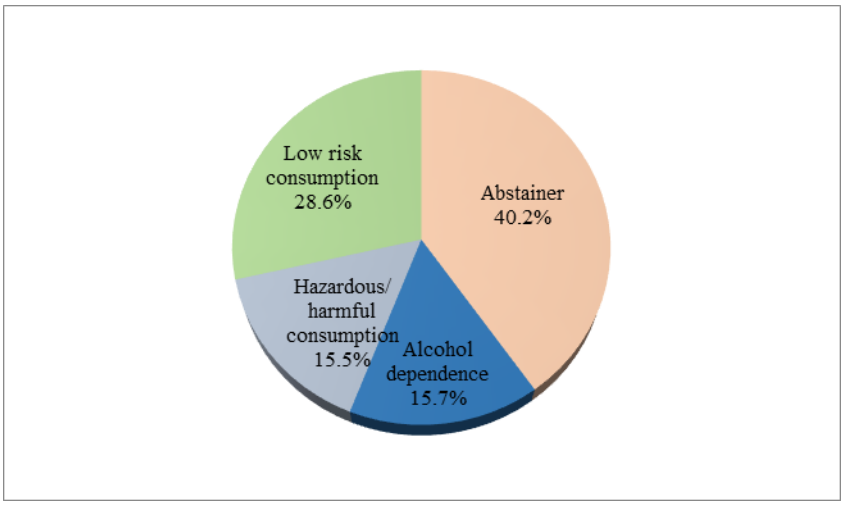


Figure 15: Distribution of all FSW by AUDIT score

Analysis among the non-abstainers of alcohol drinks, revealed that 26.0% of the consumers showed hazardous or harmful alcohol consumption patterns while 26.2% showed the likelihood of alcohol dependence (Figure 16).

[1] https://nida.nih.gov/sites/default/files/files/AUDIT.pdf
[2](https://auditscreen.org/about/scoring-audit#:~:text=A%20score%20of%201%20to,%2Dsevere%20alcohol%20use%20disorder).

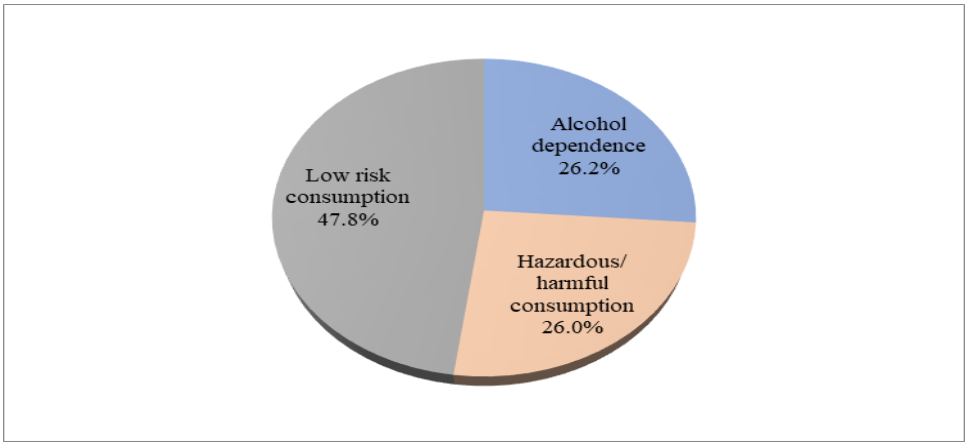


Figure 16: Distribution of FSW (who consumed alcohol) by AUDIT score

DRUGS

- ***Non-injecting drug use***

52.2% of the FSW had ever used illegal/non-injecting drugs among whom, 76.6% had used these drugs in the last three months preceding the survey. The most common drugs consumed were Marijuana (53.1%) and synthetic drugs (19.3%) as shown in Table 24.

	Point Estimate (%)	95% CIs	Sample Size
Ever used illegal/non injecting drugs			
Yes	52.2	(46.1, 58.5)	287
No	47.8	(41.5, 53.9)	219
Total	**100.0**		**506**
Used illegal/non injecting drugs in last 3 months			
Yes	76.6	(69.6, 83.4)	229
No	23.4	(16.6, 30.4)	58
Total	**100.0**		**287**
Illegal/non-injecting drugs used in past 3 months			
Marijuana	53.1	(43.9, 62.2)	124
Synthetic	19.3	(11.4, 27.2)	55
Tranquilizers	13.1	(5.1, 20.8)	38
Brown Sugar	12.5	(5.8, 19.2)	35
Methadone	10.6	(1.8, 19.2)	27
Heroin	8.8	(1.2, 16.5)	20
Codein	7.4	(0.0, 17.1)	15
Cough mixture	4.5	(0.0, 9.7)	11
Sniffing glue	1.5	(0.0, 5.4)	5
Tramal	1.3	(0.0, 4.9)	4

Table 24: Distribution of the use of non-injecting drugs among FSW in past three months

- ***Injecting drug use***

Compared to the 2020 FSW IBBS when 17.6% of the respondents reported having ever used illegal injecting drugs, this figure went up to 23.5% in the 2023 IBBS. Among those 23.5% of injecting drug users, 89.3% had injected drugs in the last three months preceding the survey. Heroin was the main used and most often used drug during this past three months. 77.1% of

the injecting drug users reported the use of drugs on a daily basis and 15.7% shared needle/syringes the last time they injected drugs (Table 25).

	Point Estimate (%)	95% CIs	Sample Size
Ever used illegal/ injecting drugs			
Yes	23.5	(17.7, 29.4)	134
No	76.5	(70.1, 82.3)	372
Total	**100.0**		**506**
Used illegal injecting drugs in last 3 months			
Yes	89.3	(76.8, 101.8)	117
No	10.7	(0.0, 23.2)	17
Total	**100.0**		**134**
Illegal/-injecting drugs used in past 3 months			
Heroin	99.3	(95.1, 103.7)	115
Lablanche	1.7	(0.0, 6.3)	3
Rivotril	1.4	(0.0, 5.4)	3
Cocaine	0.3	(0.0, 1.4)	1
Drug used most often in past 3 months			
Heroin	99.7	(99.6, 99.9)	116
Cocaine	0.3	(0.1, 0.3)	1
Total	**100.0**		**117**
Frequency of drug use in past 3 months			
Daily	77.2	(64.4, 89.5)	94
4-6 days weekly	5.4	(0.1, 10.9)	5
2-3 days weekly	11.7	(1.9, 22.2)	7
One day per week	1.4	(-1.2, 3.9)	2
One day per 15 days	3.1	(0.4, 5.6)	5
One day every 2 months	0.6	(-5.1, 6.3)	1
One day in the last 3 months	0.7	(0.0, 1.3)	2
Total	**100.0**		**116***
Shared needle/syringe last time you injected drugs			
Yes	15.7	(8.4, 22.5)	29
No	84.3	(77.5, 91.7)	87
Total	**100.0**		**116***

**missing response*

Table 25: Distribution of the use of injecting drugs among FSW in past three months

- ***Treatment/Services available to people who inject drugs***

83.8% of the respondents who injected drugs were aware of the services available to people who inject drugs. However, 44.8% was not availing of any services at the time of the survey. Among those who were benefitting of the available services, 24.4% were on Needle Exchange Programme, 26.0% were on rehabilitative care and 71.6% were on methadone substitution therapy (Table 26).

	Point Estimate (%)	95% CIs	Sample Size
Aware of services available to people who inject drugs			
Yes	83.8	(69.7, 97.6)	117
No	16.2	(2.4, 30.3)	17
Total	**100.0**		**134**
Currently availing of services available to people who inject drugs			
Yes	55.2	(40.8, 68.8)	83
No	44.8	(31.3, 59.2)	51
Total	**100.0**		**134**
Services currently available			
Needle Exchange Programme	24.4	(15.3, 32.3)	34
Methadone Substitution Therapy	71.6	(57.2, 85.5)	63
Rehabilitation Centre	26.0	(8.1, 44.9)	11

Table 26 : Treatment/Services available to People who inject drugs

- ***Chemical Sex***

39.6% of the respondents were aware of chemical sex; among whom 73.8% reported having ever used substances to increase libido. The main substances used included marijuana (47.9%), brown sugar (16.7%), heroin (13.6%), synthetic drugs (9.3%) and tranquilisers (3.3%). Overall, nearly 20% of the FSW reported that they have ever been proposed the use of a substance during sexual intercourse in return of more money (Table 27).

	Point Estimate (%)	95% CIs	Sample Size
Aware of chemical sex			
Yes	39.6	(34.2, 45.1)	205
No	60.4	(54.9, 65.8)	277
Total	**100.0**		**482***
Ever used any substance to increase libido			
Yes	73.8	(65.3, 82.4)	147
No	26.2	(17.6, 34.7)	58
Total	**100.0**		**205***
Substances used to increase libido			
Marijuana	47.9	(35.2, 60.8)	52
Synthetic Drugs	9.3	(0.0, 22.6)	8
Brown sugar	16.7	(5.3, 28.1)	21
Heroin	13.6	(4.9, 22.1)	21
Tranquilisers	3.3	(0.0, 7.1)	7
Ever been proposed the use of a substance by client to in return of more money			
Yes	19.9	(14.8, 25.1)	121
No	80.1	(74.9, 85.2)	358
Total	**100.0**		**479***

**missing response*

Table 27: Chemical sex practice among FSW

5.8 STIGMA, DISCRIMINATION, VIOLENCE AND ARREST

Around 63% of the FSW reported that they faced some problems of stigmatisation because of the nature of their work. In the majority of cases, they were verbally assaulted (87.2%) as shown in Table 28.

	Point Estimate (%)	95% CIs	Sample Size
Faced problems because of nature of work doing			
Yes	62.4	(56.6, 68.2)	327
No	37.6	(31.8, 43.4)	179
Total	**100.0**		**506**
Types of problems faced			
Verbal assault	87.2	(80.0, 94.5)	279
Discriminated at events	29.8	(23.0, 36.5)	120
Refused job	20.8	(13.7, 27.6)	83
Physical assault	14.6	(8.3, 21.0)	58
Refused police assistance	8.0	(2.0, 13.8)	34
Refused health/public services	3.8	(-1.6, 9.1)	17

Table 28: Problems faced by FSW perceived to be because of their involvement in sex wok

Additionally, 20.4% of the respondents reported having been forced to have sexual intercourse in the last twelve months preceding the survey, mainly by clients (48.3%) and sexual partner (16.2%). 22.6% of them have also been subject to group attack (sexual attack). 19.4% of the respondents were arrested during the last twelve months for offences mainly related to prostitution (49.6.4%) (Table 29).

	Point Estimate (%)	95% CIs	Sample Size
Forced to have sex in last 12 months			
Yes	20.4	(15.5, 25.2)	110
No	79.6	(74.8, 84.5)	396
Total	**100.0**		**506**
Sexually abused by:			
Client	48.3	(38.2, 58.5)	60
Sexual Partner	16.2	(7.0, 25.5)	11
Friend	13.0	(2.2, 23.8)	9
Do not know the person	9.1	(1.3, 16.6)	7
Social acquaintance	7.0	(3.2, 10.9)	10
Family	3.1	(0.0, 6.4)	3
Other : Ex Concubin / Neighbour	3.0	(0.0, 14.0)	3
Co-worker	0.3	(0.3, 0.4)	1
Total	**100.0**		**104***
Ever been subject to group attack (sexual violence)			
Yes	22.6	(17.0, 28.1)	109
No	77.4	(71.9, 83.0)	376
Total	**100.0**		**485***
Arrested in last 12 months			
Yes	19.4	(13.1, 25.6)	104
No	80.6	(74.4, 86.9)	394

Total	**100.0**		**498***
Reason of arrest			
Prostitution	49.6	(34.8, 64.9)	43
Drug problem	18.7	(7.2, 30.1)	21
Larceny	11.3	(5.8, 16.2)	17
Violence	11.2	(1.4, 21.1)	9
Other	9.3	(0.0, 22.6)	10
Total	100.0		100

**missing response*

Table 29: Sexual abuse faced by FSW and arrest

5.9 STATUS OF INFECTIOUS DISEASES AMONG FEMALE SEX WORKERS

- ***(HIV, Hepatitis B & C and syphilis)***

One of the eligibility criteria to participate in the survey and receive the incentive was that the respondent provides a blood sample for HIV, Hepatitis B & C and Syphilis tests. Consequently, all the respondents were tested for the four mentioned infections. Based on the complete results obtained from the laboratory (some tests were indeterminate and the test had to be repeated after) for all tests, 64.0% (CI: 58.4, 69.6) were found to be free from any of the four listed infections against 36% who were infected with one or more of these four pathogens as shown in Figure 17.

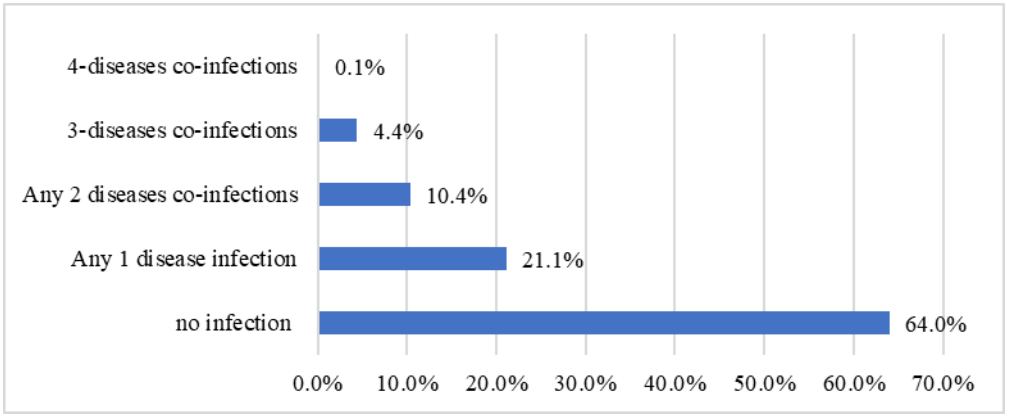


Figure 17: Distribution of FSW by number of infections (among those who had complete results)

While 4.3% of the respondents for whom complete results were available were found to be HIV, HCV and Syphilis positive, 4.8% were infected with HCV and Syphilis and 9.9% had HCV only as shown in Table 30.

		Point Estimate(%)	95% CIs	Sample size
Number of infections	**Infections**			
4-diseases co-infections	HIV, HBV, HCV, Syphilis	0.1	(0.1, 0.1)	1
3-diseases co-infections	HIV, HCV, Syphilis	4.3	(0.7, 7.9)	22
	HBV, HCV, Syphilis	0.1	(0.0, 0.4)	1
2-diseases co-infections	HCV and Syphilis	4.8	(0.8, 8.9)	25

	HIV and HCB	0.4	(0.0, 1.4)	1
	HIV and Syphilis	0.9	(0.0, 2.3)	3
	HIV and HCV	4.2	(0.6, 7.9)	30
1-disease infection	HCV only	9.9	(5.0, 15.0)	48
	HIV only	2.5	(0.9, 4.1)	19
	Syphilis only	8.8	(5.3, 12.1)	42
No infections		64.0	(57.0, 70.9)	296
	Total	**100.0**		**488**

Table 30: Distribution of FSW by types of infections

PREVALENCE OF INFECTIOUS DISEASES AMONG RESPONDENTS

Overall, the prevalence of HIV, Syphilis Hepatitis C and Hepatitis B was found to be 12.6% (CI: 8.6, 16.5), 20.3%(CI: 15.2, 25.5), 23.4% (CI: 17.6, 29.3) and 0.6% (CI: -0.3, 1.4) respectively as shown in Table 31.

Year of IBBS	***Prevalence of diseases (%)***			
	HIV	**Syphilis**	**Hepatitis C**	**Hepatitis B**
2010	28.9	5.1	43.8	0.0
2015	15.0	6.4	24.6	1.0
2020	14.3	15.8	19.9	0.0
2023	12.6	20.3	23.4	0.6
% change (2020-2023)	-11.9%	+28.5%	+17.6%	-
% change (2015-2023)	+16.0%	+217.2%	-4.9%	-40.0%
% change (2010-2023)	-56.4%	+298.0%	-46.6%	-

Table 31: Prevalence of infectious diseases and % change in prevalence over the years

The prevalence of HIV had witnessed a decrease of 11.9% during the period 2020-2023 from 14.3% to 12.6%, the prevalence of the syphilis and Hepatitis C witnessed an increase during the same period as shown in Figure 18. For syphilis, the figure increased from 15.8% in 2020 to 20.3% in 2023 representing an increase of 28.5%, for Hepatitis C, it rose from 19.9% in 2020 to reach 23.4% in 2023 representing an increase of 17.6%. Hepatitis B prevalence also increased from no reported cases in 2020 to 0.6% in 2023.

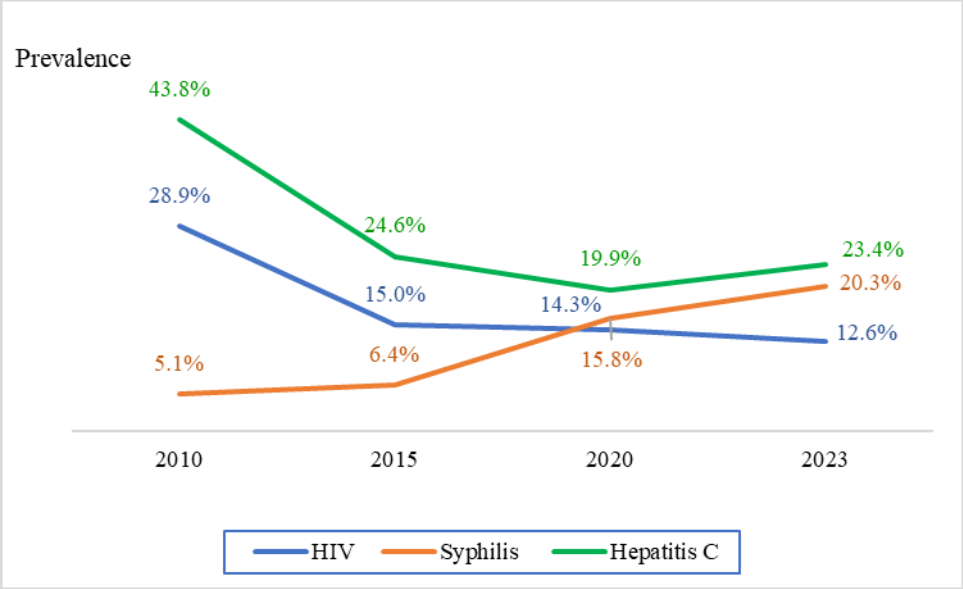


Figure 18: Trend in some infectious diseases (2010-2023) among FSW

TREND IN INFECTIOUS DISEASES AMONG FSW SINCE 2010

Results from the different IBBS among FSW since 2010 showed that HIV infection among FSW has continuously considerably decreased as shown in Figure 19. During the period 2010 to 2023, a decrease of 56% in terms of prevalence was observed, while during the periods 2015-2023 and 2020-2023, the corresponding decrease was 16.0% and 11.9% respectively.

For Syphilis on the other hand, the prevalence had increased by more than 100% over the past 14 years with an increase of 298.0% and 217.2% noted during the periods 2010-2023 and 2015-2023 respectively. Over the past 4 years, the prevalence increased by 28.5% (from 2020-.2023).

Regarding Hepatitis, compared to 2010, a considerable decrease of 46.6% has been noted in its prevalence among FSW in 2023. However, during the period 2015-2023, a decrease of around 5% was observed and from 2020-2023, the prevalence increased by 17.6% among the FSW.

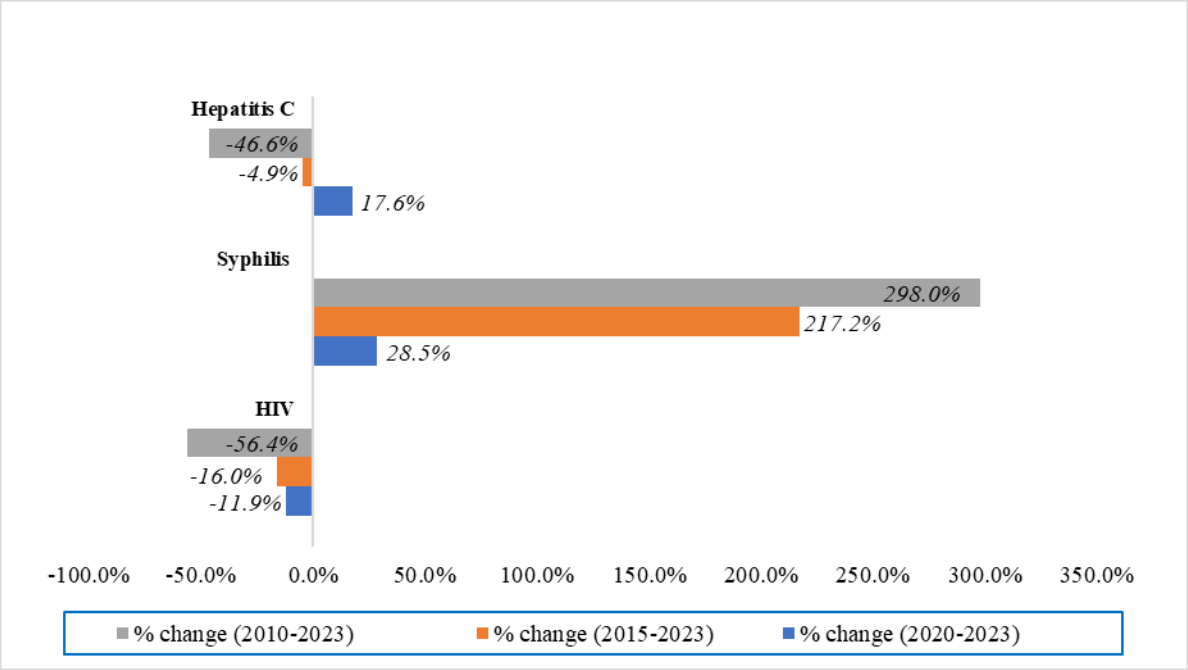


Figure 19: Percentage change in trend prevalence of some selected infectious diseases among FSW (2010-2023)

ANALYSIS OF HIV INFECTIONS

- **Number of paying partners and HIV**

The IBBS 2023 showed that the prevalence of HIV was nearly twice among FSW who had more than 5 paying clients over the last three months preceding the survey compared to those who had 5 or more paying clients with a corresponding of figures of 14.3% and 7.5% respectively as shown in Table 32.

	Point Estimate (%)	95% CIs	Sample Size
No. of paid partners			
Less than 5	7.5	(2.3, 12.5)	13
5 or more	14.3	(9.3, 19.4)	66
Total	**100.0**		**79**
1 only	13.2	(-5.4, 31.5)	4
2 - 4	6.2	(1.3, 11.1)	9
5 - 9	13.3	(2.1, 24.0)	8
10 - 19	15.4	(4.1, 26.9)	14
20 or more	14.3	(8.5, 20.0)	44
Total	**100.0**		**79**

Table 32: Prevalence of HIV by number of paid partners in last three months

Compared to the IBBS 2020 survey, the prevalence of HIV among those having 1 partner only decreased from 46.2% to 13.2% in 2023. While those who had 10-19 partners, the prevalence increased from 12.4% in 2020 to 24.4% in 2023

Among the HIV positive respondents, it was observed that the percentage of infected respondents increased with the number of partners as shown in Table 33.

(Among HIV positive FSW)	Point Estimate (%)	95% CIs	Sample Size
No. of paid partners			
1 only	4.5	(1.5, 10.5)	4
2 - 4	10.0	(2.0, 18.0)	9
5 - 9	20.4	(3.2, 37.3)	8
10 - 19	24.4	(8.6, 40.3)	14
20 or more	40.7	(24.6, 57.1)	44
	100.0		**79**

Table 33: HIV infection among FSW by number of paying partners

- **Injecting drug use and HIV**

Among those who had ever injected drugs, the prevalence of HIV was found to be 31.3% compared to 6.8% among those who never injected drugs. The corresponding figure in the 2020 IBBS was 30.9% and 10.6% respectively. While the prevalence among FSW using injecting drugs increased by 1.3%, the prevalence among those not injecting drugs decreased by 35.8% during this 3-year period.

Among the HIV positive patients, 58.8% of cases were reported among FSW who had ever used drugs compared to 41.2% who had never injected drugs.

- **Condom use and HIV**

No difference was found in terms of prevalence of HIV among those who used a condom the last time they had sex with a male paying partner and those who did not use it with corresponding equal prevalence of 12.7% among both groups.

- **Network size and HIV**

The 2023 IBBS showed that that HIV infections were more prevalent in FSW associated with larger network size. For instance, the prevalence of HIV among those forming part of network of size less than 10, was found to be the lowest with a figure of 9.9% and this figure increased gradually with an increase in network size as highlighted in Figure 20.

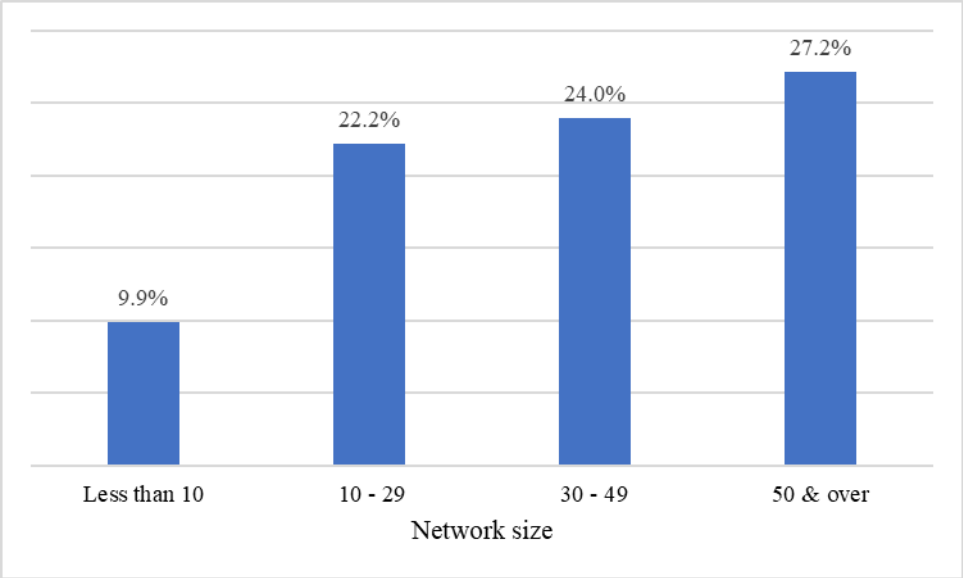


Figure 20: HIV prevalence by network size of FSW

- **Age Group and HIV**

As depicted in Figure 21, HIV prevalence was found to be highest among FSW aged 45-49 years with a prevalence of 31.0% followed by those aged 35-49 with a prevalence of 20.2%. The lowest prevalence was recorded among those aged less than 25 years with a prevalence of 2.5% among those aged between 15-19 years and 3.5% for those in the age group 20-24 years. It is to be noted that the prevalence among the teenagers , went down from 3.0% in 2020 to 2.5% in 2023.

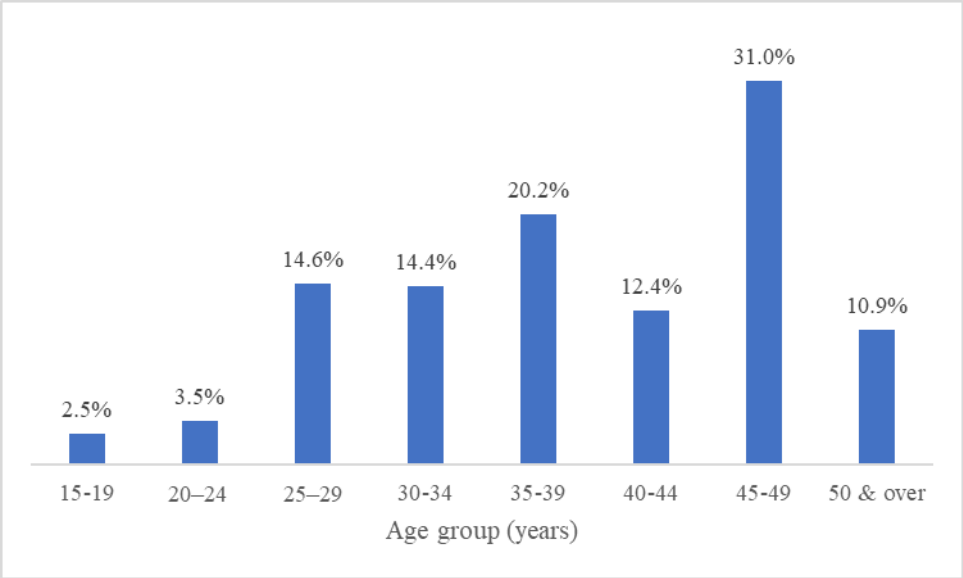


Figure 21: Prevalence of HIV by age group of FSW

- **Hepatitis C and Drug Use**

Similar to what was observed in previous IBBS among FSW, the prevalence of Hepatitis C is higher among FSW injecting drugs. Compared to 2020 when the prevalence was 81.1%, the figure went up to 84.5% in 2023. Among non-injecting FSW, the prevalence decreased from 6.6% in 2020 to 4.6% in 2023 (Table 34).

	Point Estimate (%)	95% CIs	Sample Size
Positive HCV test			
Injecting drug users	85.1	(77.7, 92.7)	110
Non injecting drug users	14.9	(7.3, 22.4)	25
Total	**100**		**135**
Prevalence of HCV among:			
Injecting drug users	84.5	(77.0, 91.8)	110
Non-injecting drug users	4.6	(2.2, 6.9)	25

Table 34: HCV infection among FSW by number of paying partners

5.10 Successive Sampling Population Size Estimation (SS-PSE)

The population size of female sex workers (FSW) was estimated using the Successive Sampling Population Size Estimation (SS-PSE) method, which is well-suited for surveys utilizing respondent-driven sampling (RDS). SS-PSE operates on the assumption that the network size distribution in successive waves reflects population depletion. It leverages each participant's reported social network size from the RDS survey to estimate the population size. The method incorporates prior knowledge or "guess" about the population size within a Bayesian framework, comparing known quantities to measure uncertainty about unknown values. SS-PSE uses social network size data, enrollment dates, past population estimates, and coupon data (tracking who recruited whom) to model population size. Final estimates are determined using mean or median probabilities and their associated probability intervals. This approach has been widely applied to estimate the sizes of hard-to-reach populations globally[3], including in the 2021 national survey of people who use drugs[4].

The SS-PSE for FSW in this survey resulted in a mean and median population size of around 13400 and 9100 with 25% probability bounds of 4281 and 90% probability bounds of 31711.

	Mean	Median	Mode	25%	75%	90%	2.5%	97.5%
Prior	9683	6202	2724	3496	12190	22724	1573	37790
Posterior	13365	9060	3612	4281	19238	31711	1127	44900

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6. General Observations

Age range and distribution among participants

Participants were categorized into specific age groups for analysis.

The category **18-24 yrs** or even less than 18 yrs represent younger FSW, often new to the profession. Most of them has a child and are forced to look for a mean of subsistence. The possibility to have a well- paid job is inexistent as their level of education and skills are low.

The majority of FSW fall within the **25-34 age group**, suggesting a peak period of activity.

The presence of older sex workers (45+) form part of an important segment, reflecting longer term engagement in the field. Most of them have regular client who contact them personally.

Health Indicators

To address the health challenges faced by female sex workers (FSWs) in Mauritius, it is essential to implement targeted and inclusive interventions. Beyond the pervasive social stigma and discrimination, they encounter, many FSWs also experience self-stigma, which

[3] Johnston LG, McLaughlin KR, Rhilani HE, Latifi A, Toufik A, Bennani A, et al. Estimating the size of hidden populations using respondent-driven sampling data: Case examples from Morocco. Epidemiology. 2015;26(6); Johnston LG, McLaughlin KR, Rouhani SA, Bartels SA. Measuring a hidden population: A novel technique to estimate the population size of women with sexual violencerelated pregnancies in South Kivu Province, Democratic Republic of Congo. J Epidemiol Glob Health. 2017;7(1); Wesson P, Handcock MS, McFarland W, Raymond HF. If You Are Not Counted, You Don't Count: Estimating the Number of African-American Men Who Have Sex with Men in San Francisco Using a Novel Bayesian Approach. J Urban Heal. 2015;92(6):1052–64.
Available from: http://link.springer.com/10.1007/s11524-015-9981-0.

[4] National survey among people who use drugs, National Drugs Secretariat, Prime Minister's Office, 2021. Available from: https://mroiti.govmu.org/Communique/National%20survey%20among%20people%20who%20use%20drugs.pdf

further exacerbates barriers to accessing healthcare services. Addressing both external and internal stigma is critical to ensuring equitable access to health services and improving their overall well-being.

Behavioural Trends

Understanding the behavioral trends among FSWs is critical for designing effective interventions. Below are key trends highlighted in the IBBS Survey:

- Condom usage with Clients and regular partners
- Awareness and usage of PrEP
- Substance abuse (Alchohol/ drugs)

Legal and policy environments

The legal and policy framework significantly influences the health, safety, and rights of FSWs. An analysis of the common legal and policy issues affecting FSWs, along with their implications will have an impact on type of services that need to be provided to this target group.

Recommendations

1. **Health Interventions**

- Strengthen STI and HIV prevention efforts, including wider PrEP access
- Develop regular health Screening program tailored to their needs with the introduction of a health card, so as to ensure regular health contact with the FSWs
- Enhance education on Safe Practices and Sexual and Reproductive Health.
- Provider -initiated interventions

2. **Social support systems**

- Establish Peer-led support groups to reduce Stigma and Discrimination
- Promote alternative income-generating activities
- To train FSWs as community Peer educators to disseminate information within their networks

3. **Policy and advocacy**

- Advocate for decriminalisation, so as to improve safety and health- seeking behaviour
- Collaborate with law enforcement to ensure respectful treatment.
- Removing punitive laws allowing FSWs to operate without fear of arrest, improving access to health and social services. It also reduces stigma and enhances legal protection

Way forward

1. Short- Term Actions (Next 6-12 months)

- Develop a task force to address immediate health and legal concerns
- Pilot community outreach program focussed on education and health access.
- Work on Motivational strategy to attract FSW to the program (Produit d'appel, voucher)
- Sensitisation of Health Care Providers to provide stigma-free and respectful care

3. Medium – Term Goals (1-3 yrs)

- Scaling -up of successful interventions across the country.
- Establish formal partnership with community organisations and NGOs.
- Work with the Health Ministries and organisations to ensure inclusive healthcare policies.

4. Long-Term Vision (Beyond 3 years)

- Integrate Sex workers' need into National Health and Societal policies
- Forster an inclusive environment where Female Sex Workers are empowered and have equitable access to services

5. Monitoring and Evaluation

- **Health data collection:** Regularly collect data on the health outcomes of FSWs to access intervention impact
- **Feedback Mechanism:** Enable FSWs to share feedback on services to improve quality and accessibility