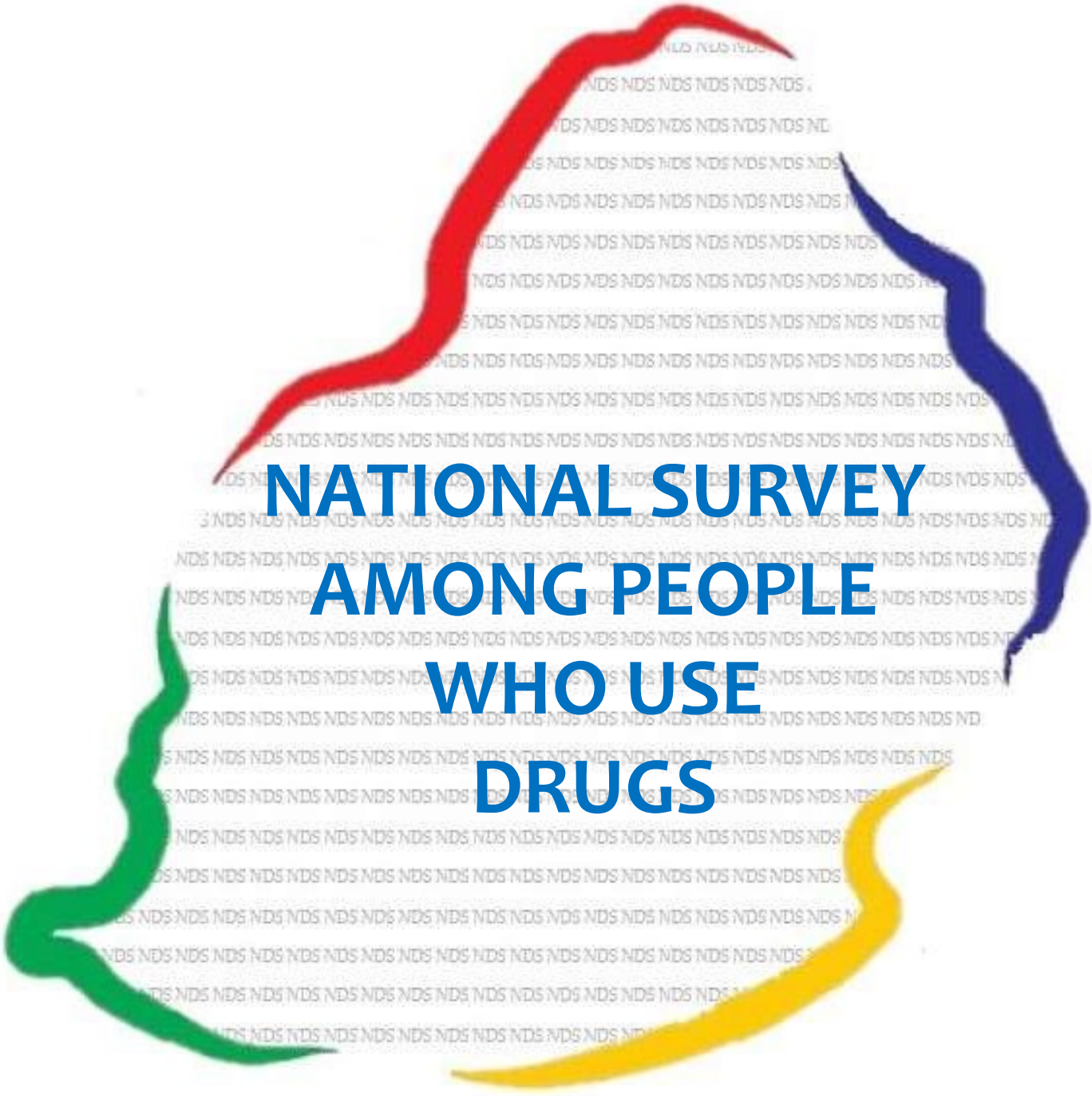




REPUBLIC OF MAURITIUS



NATIONAL SURVEY AMONG PEOPLE WHO USE DRUGS

National Drug Secretariat

Prime Minister's Office

December 2021



Prime Minister
Republic of Mauritius

FOREWORD

The National Survey among people who use drugs, conducted last September by the National Drug Secretariat, is the first of its kind in Mauritius.

Its findings will provide policymakers, programme managers and practitioners with a wealth of data about the drug situation in our country.

The results of this study will also raise awareness of the public about the major challenge that illicit drugs represent to our society as a whole.

The information collected will improve our understanding of the causes of drug abuse. It is my sincere hope that this knowledge can delay or prevent initiation of substance use and reduce harms related to drugs.

This Report presents key results that will be of prime importance to enable policy and decision making that support our relentless war against illegal drugs.

Our drug control policy is comprehensive and encompasses both drug supply and demand reduction. Government has not only enacted and enforced hard-hitting laws against drug trafficking and associated illicit activities but has also implemented effective pharmaco-psycho-social therapy together with long-term rehabilitation and aftercare programmes.

Cannabis and Opioids continue to be of concern in many countries but new psychoactive substances now represent a serious challenge as well. In Mauritius, data show that the three main substances being consumed are Heroin, Cannabis, and synthetic drugs.

The scale of the problem makes it essential for all stakeholders to engage in collaborative platforms to ensure that policies and strategies remain responsive and relevant.

I, therefore, urge all our partners to make the best use of this Report to strengthen our fight against drug, hence fostering a better and brighter future for our children.

A handwritten signature in black ink, appearing to read 'Pravind Kumar Jugnauth'.

Pravind Kumar Jugnauth
Prime Minister

10 January 2022

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ACKNOWLEDGEMENTS

We would like to thank all those who participated in the survey and those who provided us information through the focus groups. We would also like to thank those who participated in the key informant interviews and their affiliations, including the Ministry of Education, Tertiary Education, Science and Technology, the Forensic Science Laboratory of the Prime Minister's Office, the Anti Drug and Smuggling Unit of the Mauritius Police Force, the Harm Reduction Unit of the Ministry of Health and Wellness, NGO Chrysalide and NGO Dr. Idrice Goomany Centre.

FUNDING AND INSTITUTIONAL INVOLVEMENT

The project was partly funded by the World Health Organisation through the Office of the Resident Coordinator for Mauritius and Seychelles and partly by the Government of Mauritius.

TECHNICAL ASSISTANCE

Technical assistance on the protocol, questionnaires, survey methodology, data analysis and report writing was provided by Ms Lisa G. Johnston, LGJ Consultants Inc.

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Mrs. SUNNOTAH Ashasingh	Interviewer
Mrs. CLEBY Varsah	Interviewer
Mrs. DINALLY Housna	Interviewer
Mrs. BULLEE Gita	Interviewer
Mrs. SEESUNKUR Surroswaree	Interviewer
Miss SAKURDEEP Sudiksha	Interviewer - Focus Group Discussions
Miss SEELOCHUN Darshana Devi	Interviewer - Focus Group Discussions

ABBREVIATIONS/ACRONYMS

Acronym	Complete terminology
LSD	Lysergic Acid Diethylamide
MOHW	Ministry of Health and Wellness
MMT	Methadone Maintenance Therapy
NDCMP	National Drug Control Master Plan
NDS	National Drug Secretariat
NEP	Needle Exchange Programme
NGO	Non-Governmental Organization
NPS	New Psychoactive Substances
OST	Opioid Substitution Therapy
PWID	People Who Inject Drugs
PWUD	People Who Use Drugs
RDS	Respondent Driven Sampling
SS-PSE	Successive Sampling-Population Size Estimation
THC	Delta9-Tetrahydrocannabinol
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

EXECUTIVE SUMMARY

BACKGROUND AND METHODS

This report presents the 2021 results of the first large-scale, nation-wide survey to examine the extent and patterns of drug use in Mauritius (excluding Rodrigues). The overall objective of this study was to provide insights into the extent of drug use among people who use illicit non-injection drugs. More specifically, this survey measured:

1. The extent, types, frequency and pattern of drug use (e.g. difference by sex, types of drugs used).
2. The socio-demographic characteristics of drug users (i.e. gender, age, marital status, education, employment).
3. The social and health consequences of drug use (i.e. overdose, arrest, and family impact).
4. The accessibility and utilization of services for drug dependence treatment.
5. The impact on families by family members who use drugs and perceptions of the impact of drug use by people who use drugs.

Data were collected using the Respondent Driven Sampling (RDS), a probability-based sampling method, to collect numeric data and qualitative methods to collect contextual and descriptive data through focus groups and key informant interviews. For the quantitative survey, PWUD were defined as male or female, 18 years or older, living in Mauritius and having used any illicit psychoactive substances (excluding alcohol) in the past months. The results of this survey aim to provide the baseline information needed for the design and implementation of effective prevention, treatment and care services that are evidence-based and targeted to reduce the demand for drugs and prevent the morbidity and mortality attributable to drug use in Mauritius.

FINDINGS

In September 2021, 602 PWUD enrolled in the quantitative survey. The majority of PWUD were between the ages of 18 and 24 (29% of all age groups), male (87%), living in Port Louis (46% of all nine districts), employed (76%) and single (46% of all civil statuses). Few (17%) had used alcohol in the past month, most had ever used Cannabis (88%) and in the past month (61% of those who had ever used Cannabis) and those who used drugs other than Cannabis, the highest percentages used heroin (63%) and synthetic drugs (57%) in the past month. Just over one quarter (27%) had ever sought treatment for non-injection drug use, among which the majority sought medical treatment and rehabilitation (68%). Three quarters of those using illicit drugs (excluding Cannabis) and 95% of PWUD who use synthetic drugs, do not use it with others.

Only 15% of PWUD were able to stop drug use when they wanted to, 81% ever felt bad or guilty about drug use and 22% ever engaged in illegal activities to obtain drugs. Twenty-two percent had ever experienced blackouts or flashbacks, 79% experienced withdrawal symptoms, 13% experienced medical problems and 10% had overdosed as a result of using drugs. Just over one quarter were ever neglected by family, 58% received complaints from family and 45% ever neglected their family as a result of drug use. Twenty-eight percent were ever arrested for drug use, among which 26% were arrested in the past year and 46% were incarcerated, among which 41% used drugs during incarceration. Just over half of PWUD agreed to provide urine to test certain drugs, among which 69% were found to have THC (Cannabis), 32% had basic opiates (codeine, morphine) and 13% had amphetamines (including methamphetamines) in their systems.

Drug use among females

Females comprise 13% of PWUD in Mauritius. Most females who use drugs are between 18 and 24 years, have low education (completed primary or less), are employed on a full time basis (59%), and are single or cohabitating (74%). In terms of drug use, most females use cannabis (75%), most of whom use cannabis 2 to 3 times a week or less. Among females, 39% are using drugs other than cannabis 2 to 3 times a day and just over 60% are using synthetic drugs and/or heroin. Among females who provided a urine test, 81% were found to have THC and 27% had basic opiates in their systems. A slightly higher percentage of female PWUD (33%), compared to males (30%), have ever had treatment for non-injecting drugs.

Exclusive Cannabis users

Eleven percent of PWUD use only cannabis, among whom most are male, age between 18 to 24 years (30% among all age groups) (however, the next largest age group was those 50 years or older, 19%), reside in Plaines Wilhems, have completed primary school (however, 14% have tertiary education) and more than 82% are employed.

Synthetic drug use

Among those who have ever used synthetic drugs, most are male (90%), 32% are between 18 and 24 years of age, live in Port Louis (61%), have only completed primary school (44%, among all educational levels), are employed (73%), and are single and never married (46%, among all civil statuses). Twenty-eight percent of those who ever used synthetic drugs have been arrested. Among those who ever used synthetic drugs and agreed to have a urine test, the majority had THC (57%), followed by basic opiates (28%) and amphetamines (17%), in their systems.

POPULATION SIZE ESTIMATION

The population size estimation based on the successive sampling-population size estimation (SS-PSE) method found a mean size estimation of 55,000, with 25% probability bounds of 28,000 and 90% probability bounds of 111,500, illicit drug users in Mauritius. The total population of those between the ages of 18 and 59 years in Mauritius (excluding Rodrigues) in 2021 is about 740,000. If we apply the mean population size of PWUD to this population, PWUD make up about 7.4% of the population between the ages of 18 and 59.

DISCUSSION

Most PWUD are using cannabis, heroin, and synthetic drugs. Few are using other types of drugs, although males are using a wider variety of drugs compared to females. This survey did not establish drug dependence, however, the majority of PWUD reported using cannabis and/or synthetic drugs 2 to 3 times a day or more in the past week. Use of any non-injecting drug (other than cannabis) was also 2 to 3 times a day or more in the past week. This is considered high frequency drug use. Among males, most are using drugs other than cannabis 2 to 3 times a day or more and among females, most are using drugs other than cannabis once a day or more (slightly less frequency compared to males). Drug use does not appear to be a social event as most are using them while alone. PWUD are concerned about financial issues (e.g., how to pay bills, buy drugs, etc.), how they impact their families, their own view of themselves (e.g., feeling guilty, loss of self-trust, etc.) and arrest.

RECOMMENDATIONS

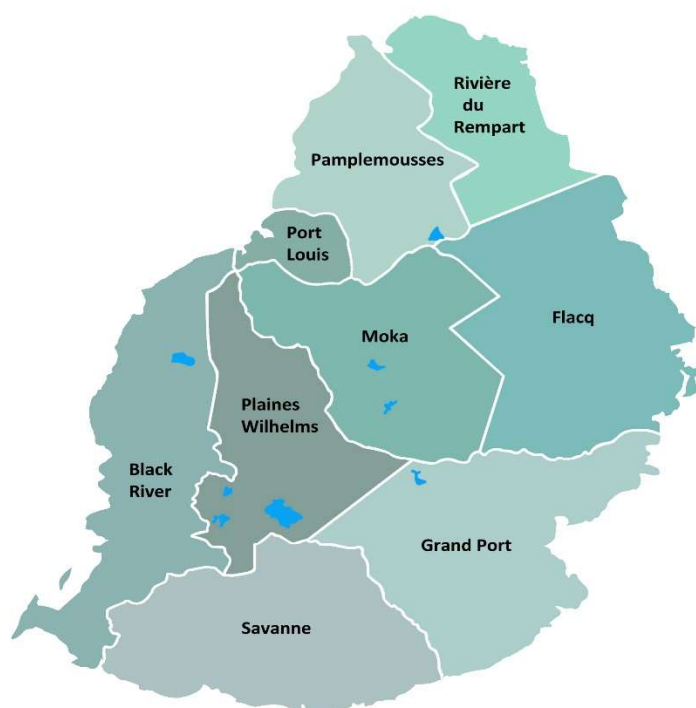
- PWUD have strong social networks as confirmed by the use of peer-to-peer recruitment. This knowledge is useful in delivering peer driven prevention and intervention modalities.
- Females have different patterns of drug use and needs compared to males; creative treatment modalities are needed to address the needs of females who use drugs. Furthermore, it is recommended that additional and focused in-depth qualitative research be conducted among females who use drugs to better understand their behaviors and harm reduction and treatment needs.
- A scale up of services providing the most effective medications and treatment modalities for specific drug types as well as socio-psychological components to deal with the root causes of problem drug use are needed for anyone who needs help to stop using drugs, including those in prison settings. It is essential to maintain best practices for PWUD targeted programs to provide harm reduction education, effective drug treatment and maintenance modalities.

- Education and policy should be enhanced to ensure an effective human rights based criminal justice response to drug problems and focus more on harm reduction rather than on punishment.
- Outreach efforts as well as policy changes are needed to reduce stigma and discrimination related to PWUD among the community.
- All treatment programs should be accessible, affordable, and friendly. There are indications from focus groups with PWUD and their families that including family members in a person's treatment of drugs is effective. Programs should continue to involve families in the treatment and recovery of problem drug users.
- PWUD start using drugs at young ages. It is important to continue enhancing youth programs to include healthy lifestyle choices and support for young people who may be vulnerable to drug use. Additional efforts are needed to educate young people about drug use and to allow harm reduction and outreach to young people.
- In an effort to monitor changes in drug use behaviors and to monitor the impact of interventions, future surveys using the same sampling method and eligibility to monitor are warranted.
- Conduct rapid assessments to quickly understand the situation and service need for young populations and conduct research to estimate the cost of these services.
- There are an estimated 55,000 PWUD in Mauritius. This population size estimation should be used to better plan and allocate resources for prevention and intervention programmes.

BACKGROUND AND RATIONALE

This report presents the results of the first large-scale, nation-wide survey to examine the extent and patterns of drug use in Mauritius. The results of this survey aim to provide the baseline information needed for the design and implementation of effective prevention, treatment and care services that are evidence-based and targeted to reduce the demand for drugs and prevent the morbidity and mortality attributable to drug use in Mauritius.

Figure 1. Map of Mauritius



The island of Mauritius is located in the Southwest of the Indian Ocean and has a population of 1,221,921 inhabitants as of 2020. In Mauritius, as in many societies, drug use is criminalized, hidden, and stigmatized. It is hypothesized that trends and patterns of drug use and abuse vary in Mauritius from area to area and even by sex and are affected by a range of social, economic, and cultural factors.

Knowledge about drug use garnered through traditional epidemiological survey techniques such as household surveys, often result in underestimations.

As such, knowledge about the extent of illicit non-injecting drug use in Mauritius has been based on case reports from arrests, and governmental and non-governmental organization (NGO) services, qualitative and non-probability based quantitative surveys and hearsay. These sources of information indicate that drug use in Mauritius is a cause for concern and additional, reliable data are needed to understand the extent of illicit drug use in the country.

The Republic of Mauritius has ratified the three International Drug Control Conventions, namely the Single Convention on Narcotic Drugs of 1961, as amended by the 1972 Protocol; the Convention on Psychotropic Substances of 1971; and the Convention against illicit trafficking of Narcotic Drugs and Psychotropic Substances of 1988. Mauritius has also ratified the United Nations Convention against Transnational Organized Crime of 2000 and has enacted several drug related legislations thereby signifying its strong

commitment to address drug issues. In response to an escalating drug problem in the Republic of Mauritius, the National Drug Secretariat (NDS) was created in 2019, under the Prime Minister's Office, with the mandate to coordinate drug programmes and strategies. The NDS advises on the strategic vision and overall policy direction regarding all drug control related matters, ensures the coordination, monitoring and evaluation of programmes involving a large spectrum of key actors at the national, regional and international levels and advocates and mobilizes resources needed to achieve the goals and objectives set.

The National Drug Control Master Plan (NDCMP) 2019-2023, a collaborative effort among key stakeholders, governmental and non-governmental organisations, focuses on a holistic approach to address drug trafficking, drug use disorders, harm reduction and the criminal, societal and public health ramifications of drug use. The NDCMP has four strategic pillars: 1) Drug supply reduction through law enforcement and financial penalties; 2) drug demand reduction, comprising drug use prevention, drug use disorders treatment, rehabilitation, and social reintegration; 3) harm reduction, such as Methadone Maintenance Therapy (MMT) and the Needle Exchange Programs (NEP); and 4) a coordination mechanism relating to legislation, implementation framework, monitoring and evaluation and strategic information. An important element in alleviating the impact of drugs and to achieve the goals set out in the NDCMP is to understand the extent of illicit drug use in Mauritius. This report presents qualitative and quantitative findings from a survey of people who use drugs (PWUD), excluding people who inject drugs (PWID), on the island of Mauritius (excluding Rodrigues, where the extent of drug use is not considered as problematic) conducted in 2021. These findings are essential in tailoring a comprehensive, integrated and balanced response to illicit drug use in the country.

NON-INJECTING ILLICIT DRUG USE IN MAURITIUS

In 2018, an estimated 269 million (range: 166–373 million) people had used a drug at least once in the previous year, equivalent to 5.4% of the global population aged 15–64.¹ Since the 1980s, Mauritius has endured serious drug use and trafficking problems due to its strategic geographical location, an extensive air network and being a major seaport, and an important tourist destination. Drug use among the population in Mauritius is a matter of concern, especially cannabis and heroin use. Based on an interview with the Forensic Science Laboratory (October 2021) which receives seized drugs for testing, the non-

¹ UNODC, World Drug Report 2020, booklet 2, Drug Use and Health Consequences (United Nations publication, 2020). Accessed at: https://www.unodc.org/res/wdr2021/field/WDR21_Booklet_2.pdf.

injection drug market has a composition of 30% heroin, 30% synthetic drugs, 30% cannabis and 10% amphetamines.

Opiates

Opiates, particularly heroin (brown sugar, a crude form of heroin) and Subutex (also known as buprenorphine, a substance generally prescribed as substitution treatment for heroin dependence), have been widely used in Mauritius for a long time. In 2010, Mauritius had the misfortune of being among the countries with the highest rate of heroin consumers in the world.² Although Heroin is generally injected, people who do not inject heroin can sniff, snort, or smoke it. Since 2015, there have been increases in heroin seizures by the police. Based on an interview with the Forensic Science Laboratory (October 2021), the purity of heroin in 2016 was less than 5%, whereas the purity is now about 40%.

Synthetic drugs

Since 2013, there has been an increase in the use of synthetic drugs, also known as New Psychoactive Substances (NPS), of which there has also been a sizable increase in related police seizures and arrests³. In addition, since 2015, there has been an increase in the admissions to Public Health Institutions due to adverse reactions to synthetic drugs⁴. Synthetic drugs are manufactured in laboratories using chemicals to mimic traditional narcotics or hallucinogens such as cannabis, cocaine, ecstasy, Lysergic Acid Diethylamide (LSD), amphetamine-type stimulants and even morphine. Based on an interview (October 2021) with the Forensic Science Laboratory, the most common types of these drugs in Mauritius are synthetic cannabinoids (to mimic the effects of Delta9-Tetrahydrocannabinol [THC], the main psychoactive ingredient of cannabis). Most synthetic drugs are made with chemicals that are easily imported online in powder or liquid form, almost all of which are imported from China, and to a lesser extent from India and South Korea. These imported chemicals are used at home to prepare the final drug using many types of chemical and non-chemical products to increase the quantity for commercial purposes. Controlling the use of synthetic drugs is extremely challenging given, as reported by the Deputy Commissioner of Police of the Anti Drug and Smuggling Unit (October 2021), the evolving nature of the molecules in the preparation of synthetic drugs.

² IBID

³ Chelin R. Synthetic drugs on the rise despite Mauritius's best efforts. 2020. Accessed at: <https://enactafrica.org/enact-observer/synthetic-drugs-on-the-rise-despite-mauritiuss-best-efforts>

⁴ Ministry of Health and Wellness. National Drug Observatory, Third report. 2020. Accessed at: <https://health.govmu.org/Documents/Legislations/Documents/NDO%20Report%202020.pdf>

Cannabis

Cannabis, also referred to as 'gandia' in Mauritius, is widely used throughout Mauritius. There is a large debate at the moment about whether to legalize cannabis for medicinal use. In 2018, the police reported a total of 4,267 drug offences out of which the highest percentage (43%)⁵ was related to cannabis use. Nevertheless, the trends in admissions to public health institutions related to cannabis use have remained low and steady between 2015 and 2018. In general, cannabis use has much lower morbidity or mortality compared to heroin or synthetic drug use. According to the Anti Drug and Smuggling Unit (October 2021), cannabis has become more scarce resulting in an increased price for the product. As such, many people who might normally use cannabis are using the less expensive synthetic drugs instead.

DEARTH OF ACTIONABLE DATA ON ILLICIT DRUG USE

In Mauritius, not much is quantitatively known about illicit drug use, not including injection drug use. Since 2009, Mauritius has undertaken five rounds of HIV biological behavioral surveillance surveys of PWID among whom questions of non-injection drug use were asked. The latest survey conducted in 2020⁶ found that 89% of PWID had used non-injection drugs in the past three months, among which the majority were using cannabis (59%), synthetic drugs (46%), heroin (45%), tranquilizers (40%), and cough syrup (30%). Between 10% and 21% were using codeine, buprenorphine, pregabalin, tramadol and ecstasy. This survey also found that roughly one quarter of PWID had moved from starting to use non-injecting drugs to using injection drugs in less than a year. This short duration for shifting from non-injection to injection drug use slightly decreased from 17% in 2013 to 15% in 2017.

Generally, drug use is lower among females compared to males. However, to understand drug use among females, the only current available data are from the HIV biological behavioral surveillance surveys of Female Sex Workers. The survey conducted in 2020⁷, found that one quarter of Female Sex Workers ever used non-injecting drugs, among which 86.2% had used non-injecting drugs in the past three months preceding the 2020 FSW survey. The drugs used in the past three months were cannabis (53%), followed

⁵ Ministry of Health and Wellness. National Drug Observatory, Third report. 2020. Accessed at: <https://health.govmu.org/Documents/Legislations/Documents/NDO%20Report%202020.pdf>

⁶ National AIDS Secretariat. Fifth Integrated Biological and Behavioral Surveillance [IBBS] survey among People Who Inject Drugs, by the Ministry of Health and Wellness. 2020. Accessed at: https://health.govmu.org/Documents/Departments-Hospitals/Departments/demoevaluation/Documents/PWID_FINAL_REPORT%20SENT%20TO%20CABINET.pdf

⁷ National AIDS Secretariat. Fourth Integrated Biological and Behavioral Surveillance [IBBS] survey among female sex workers, by the Ministry of Health and Wellness. 2020.

by synthetic drugs (36%), methadone (18%), cough mixture (13%), codeine (13%) and tranquilizers (12%). Under 10% used tramadol, ecstasy, and other drugs.

STUDY OBJECTIVES

The overall objective of this study was to provide insights into the extent of illicit drug use among people who use illicit non-injection drugs, not including injection drug use, in Mauritius. More specifically, this survey measured:

1. The extent, types, frequency, and pattern of drug use (e.g. difference by sex, types of drugs used, etc.).
2. The socio-demographic characteristics of PWUD (i.e. gender, age, marital status, education, employment status).
3. Social and health consequences of drug use (i.e. overdose, arrest, and family impact).
4. Accessibility and utilization of services for drug dependence treatment.
5. Impact on families by family members who use drugs and perceptions of the impact of drug use by PWUD.

METHODOLOGY

Data were collected using quantitative and qualitative methods. The quantitative methods used Respondent Driven Sampling, a probability-based sampling method, to collect numeric data. The qualitative methods collected contextual and descriptive data during focus group discussions and key informant interviews.

QUANTITATIVE METHODS

Inclusion criteria

The inclusion criteria of PWUD were:

1. Male or female
2. Used any illicit psychoactive substances (not including alcohol) including NPS, synthetic cannabinoid, prescription medications, cannabis and amphetamine type stimulants consumed orally (inhaling or swallowing) or by sniffing in the past month
3. Live in the Island of Mauritius.
4. Ages 18 years and older

Exclusion criteria

Any person who does not meet the inclusion criteria were excluded. Any person who met the inclusion criteria but who fit any of the following exclusion criteria were not enrolled in the survey:

- Ever injected drugs
- unable or unwilling to give informed consent
- communication barrier (inability for data collector and participant to communicate effectively, including due to a language barrier, deafness or intellectual disability)
- aggressive, violent, or intoxicated, or the data collector feels otherwise unsafe in administering the questionnaire

SURVEY LOCATIONS AND OFFICES

There were six survey sites for data collection within the island of Mauritius. All participants were allowed to enroll in any of the six survey sites. Only survey staff, investigators and recruits with coupons were granted access beyond the reception area of each survey site. The survey site had enough rooms to serve several recruits concurrently and to avoid overcrowding.

SAMPLE SIZE CALCULATION

The sample size was calculated based on an apriori estimation of the population size of PWUD of 36,000 (3% of the population), 5% margin of error and 95% confidence. The formula used to calculate the sample size was as follows:

$$X = Z(c/100)2r(100-r)$$

$$N = N x / ((N-1)E^2 + x) * D$$

$$E = \text{Sqrt}[(N - n)x/n(N-1)]$$

Where:

X = The Z score for the desired confidence level set at 1.96

N = Sample size

D = Design effect set at 2.0

E = margin of error at 5%

R = is the fraction of responses needed

The final sample size was calculated was 600 with a design effect of 2.0.

SAMPLING DESIGN

This survey was a cross-sectional design using RDS.

Respondent Driven Sampling

Worldwide, PWUD comprise a relatively rare and highly stigmatized population making them hard-to-reach through conventional population-based survey methods. In response, specialized survey methods have been developed that can approximate probability-based sampling through peer referral (e.g., RDS). RDS is used worldwide to recruit hidden and hard-to-reach populations⁸. This survey used standard RDS procedures to recruit PWID⁹. The theoretical premises of RDS have been explained in detail elsewhere¹⁰. In brief, RDS begins with the selection of “seeds” that are known members of the target population who are instructed to recruit a limited number of their peers from their social network, who in turn are enrolled (if eligible) and instructed to recruit other peers and so on. The number of recruits per person is usually restricted to no more than three to ensure that recruitment chains progress through diverse social networks. Coupons are used to anonymously link participants to their questionnaires and to track who recruits whom.

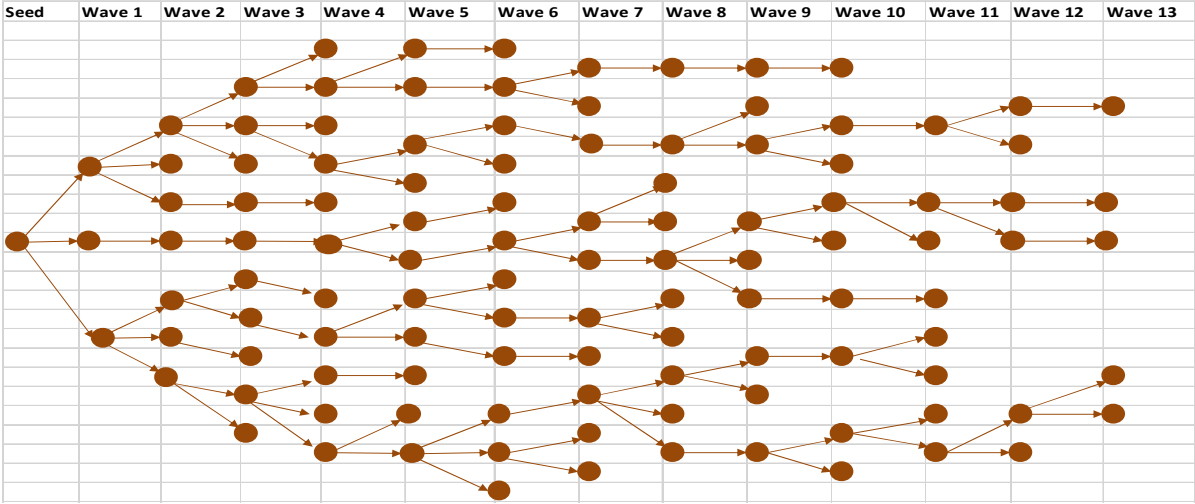
A primary incentive is given for completion of the survey and secondary incentives are given for each successfully recruited peer. RDS reduces the biases inherent in peer referral methods through statistical adjustments that attempt to account for social network size and homogeneity among persons within social networks. Although sampling begins with purposely chosen initial subjects, known as *seeds*, the composition of the final sample approaches independence from the bias of the initial participants. Recruitment progresses to produce numerous waves of recruits and ends once the calculated sample size is achieved (Figure 2). Each eligible participant who presented to one of the RDS survey sites with a valid coupon was enrolled into the survey.

⁸Johnston LG, Hakim AJ, Dittrich S, et al. A Systematic Review of Published Respondent-Driven Sampling Surveys Collecting Behavioral and Biologic Data. *AIDS Behav.* 2016;20(8):1754-76.

⁹ Johnston LG. Introduction to Respondent Driven Sampling. Introduction to HIV/AIDS and sexually transmitted infection surveillance. World Health Organization Regional Office for the Eastern Mediterranean. Geneva Switzerland; 2013. Available from: http://applications.emro.who.int/dsaf/EMRPUB_2014_EN_1686.pdf

¹⁰ Heckathorn DD. Respondent-driven sampling: A new approach to the study of hidden populations. *Soc Probl.* 1997;44:174-199; Heckathorn DD. Respondent-driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. *Soc Probl* 2002;49:11-34.

Figure 2. Example of one recruitment chain with 13 waves.



URINE TESTING PROCEDURES

As part of the screening, each candidate, presenting a valid coupon and completing the screening process, was asked to undergo a voluntary urine test using LumiQuick (www.lumiquick.com) from the USA to determine if he or she had at least one drug of the following drugs in their system: THC, Opiates, Benzodiazepine, Methadone, Buprenorphine, Amphetamine. This test is painless and was carried out in a confidential manner. There was no personal information attached to the results of the test, only the candidate’s unique coupon number. Once the needed data were recorded, the specimens were discarded in a biohazard container.

DATA MANAGEMENT AND ANALYSIS

Microsoft Excel spreadsheets were used to monitor recruitment progress and track coupon numbers during data collection. Data were downloaded from the tablets during data collection for inspection and, at the end of data collection, for analysis. Complete datasets were cleaned and coded in preparation for analysis. Data collected through RDS were analysed using the successive sampling estimator in RDS Analyst (www.hpmrg.org) ¹¹. Data needed for this estimator included the coupon numbers of each participant and the coupons distributed for recruitment, the social network size of each participant, and a prior estimation of the population size. As a baseline survey activity, the primary analyses were the adjusted population point estimates of sociodemographic characteristics, key behaviours (e.g., drug use, types of drugs, age of drug debut, impact of drug use, etc.), access to drug treatment and prevention programs. Data are presented in tables with category sizes and 95% Confidence Intervals (CI) and in

¹¹ Gile KJ, Handcock MS. Respondent-driven sampling: an assessment of current methodology. *Sociol Methodol.* 2010 Aug;40(1):285–327

graphs. Potential future rounds of the survey will track changes and trends in prevalence of characteristics and behaviours over time.

POPULATION SIZE ESTIMATION

Successive Sampling Population Size Estimation, which can only be used for surveys using RDS, was used to estimate the size of the population of PWUD. The SS-PSE method uses each participant's social network size data gathered during the RDS survey to quantify population sizes by assuming that the network size distribution of successive waves reflects a depletion of the population¹². The estimates use a Bayesian framework (i.e. quantifies uncertainty about unknown quantities by relating them to known quantities) incorporating information about a "guess" or prior knowledge of the size of the sampled population¹³. The Bayesian framework also allows the computation of probability intervals. Data needed to model the population size using this method include social network sizes, date of enrolment, prior estimates of the population size and coupon data (who recruited whom). Because this method uses a Bayesian framework, final estimates are based on mean or median probabilities and probability bounds and analysed in an open-source software based in R Program called RDS Analyst (www.hpmrg.org). This method has been used to estimate the population sizes of numerous hard-to-reach populations worldwide¹⁴.

QUALITATIVE ASSESSMENT

The qualitative research consisted of key informant interviews of persons working in law enforcement, education, harm reduction, forensic science and drug treatment and focus groups of people who use drugs, family members and others that know PWUD. The main purpose of the qualitative research was to evaluate the extent of drug use, including both illicit and non-medical use of prescription drugs, the perceived needs and resources with regard to drug dependence treatment and care services, and the

¹²Gile KJ, Handcock MS. Respondent-driven sampling: an assessment of current methodology. *Sociol Methodol*. 2010;40(1):285–327.

Available from: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=3437336&tool=pmcentrez&rendertype=abstract>

¹³ Handcock MS, Gile KJ, Mar CM. Estimating hidden population size using Respondent-Driven Sampling data. *Electron J Stat*. 2014;8(1):1491–521. Available from: <http://projecteuclid.org/euclid.ejs/1409619420>

¹⁴ 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 violence-related 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>.

impact of drug use on family members and people who know PWUD and PWUD themselves. The findings from the qualitative assessment are presented in the introduction (key informant interviews) and discussion sections of this report to highlight findings from the quantitative findings.

KEY INFORMANT INTERVIEWS

Six key informant interviews were conducted in October 2021 with the following individuals (Table 1):

Table 1. Names, designation and department of key informant interviewees, 2021

Name	Designation	Department/ Ministry
Mr. C. Bhojoo	Deputy Commissioner of Police, Head of ADSU	Anti Drug and Smuggling Unit, Mauritius Police Force
Dr. N Sookool	Ag. Officer-in-Charge	Harm Reduction Unit, Ministry of Health and Wellness
Mrs. G.M. Madhub-Dassyne	Director	Forensic Science Laboratory
Dr (Ms) N. Reetoo	Director	Health and Wellness Directorate, Ministry of Education, Tertiary Education, Science and Technology
Mrs. M Ladine	Director	Chrysalide (Female), NGO
Mr. S Dulloo Mr. F Elyhee	Social Worker Pharmacist	Dr. Idrice Goomany Centre, NGO

FOCUS GROUPS

Four focus groups of current PWUD (two groups comprised of four members, one group of five and one group of six) and three of families of PWUD (two groups of seven, and one group of five) were conducted.

QUESTIONNAIRE THEMES AND SUB-THEMES

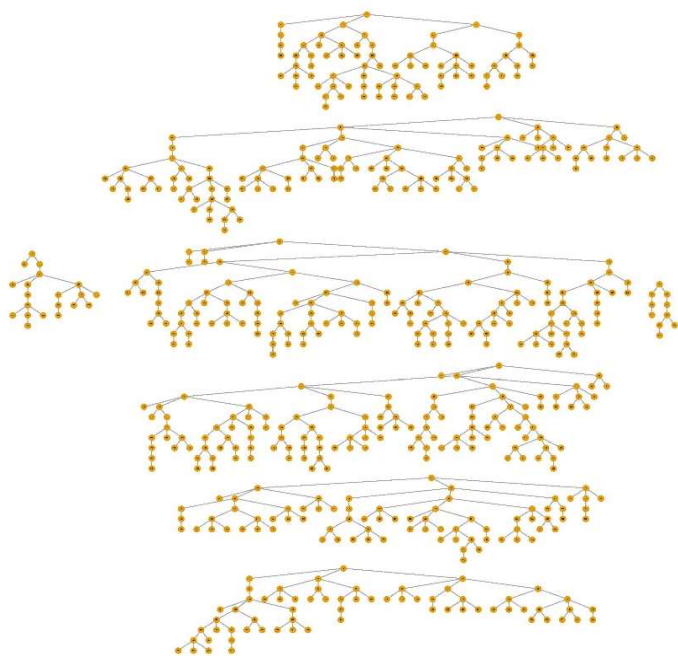
Below is a list of the themes and sub-themes in the semi structured questionnaires.

- Age at initiation and daily drug use
- Reasons for first use of drugs
- First drug used
- Reasons for continuing the use of drugs
- Those most likely to use drugs
- Common drugs
- Sources of drugs
- Problems faced by PWUD
- The number of PWUD in the same family
- Family reactions to finding out a family member uses drugs

- Living with a family member who uses drugs; family perspective
- Attempts to quit using drugs
- Duration of quitting drug use
- Barriers and reasons to wanting to quit using drugs
- Available services

OVERVIEW OF STUDY FINDINGS

Figure 3. Recruitment graph of PWUD, 2021



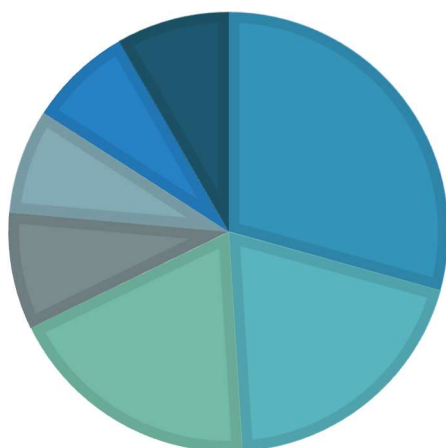
From September 3 to 29, 2021, 602 PWUD (including eight seeds making up eight recruitment chains) enrolled in the survey. The maximum number of waves reached in the recruitment chains was 11 (Figure 3).

SOCIODEMOGRAPHIC PROFILE

Sex, age, and residence

Figure 4. Age groups among PWUD, Mauritius, 2021

■ 18-24 ■ 25-29 ■ 30-34 ■ 35-39 ■ 40-44 ■ 45-49 ■ 50+



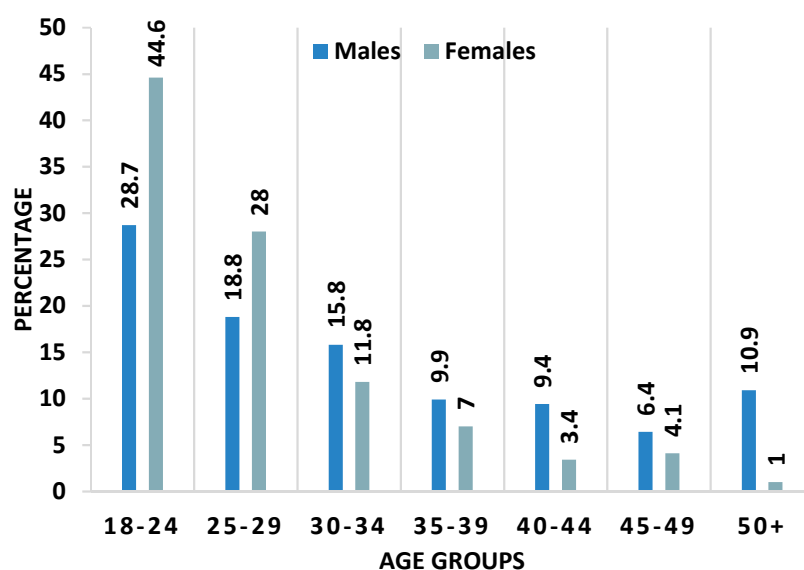
The median age of PWUD was 30, with a range from 18 to 69. Of all the different age groups, 29% were between the ages of 18 and 24, and 20% were between the ages of 25 and 29 (Figure 4). Seventy-one percent of PWUD were adults over the age of 25 versus those below the age of 25 (Table 2). Thirteen percent of PWUD were female and the largest percentage of PWUD reported was living in Port Louis.

Table 2. Sex, age, and residence among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Age group, youth and adult		
<25	162	29.3 (23.5, 35.1)
≥25	438	70.7 (65, 76.5)
Sex		
Male	536	87.3 (83.2, 91.4)
Female	66	12.7 (8.6, 16.8)
Current area of residence		
Port Louis	260	45.8 (19.9, 71.8)
Pamplemousses	75	12.9 (2.7, 23.1)
Rivière du Rempart	1	1.3 (0, 3.3)
Flacq	2	0.3 (0, 0.7)
Grand Port	78	14.7 (0, 34.6)
Savanne	1	0 (0, 0.1)
Plaines Wilhems	168	22.7 (1.7, 43.7)
Moka	0	--
Black River	17	2.2 (0, 4.4)

Sociodemographic profile of males and females

Figure 5. Age groups among PWUD, Mauritius, 2021



Among females who use drugs, the highest percentage were young (18 to 24: 45%; 25 to 29: 28%) (Figure 5). Although the highest percentages of males who use drugs also made up the younger age groups (18 to 24: 29%; 25 to 29: 19%), males PWUD had higher percentages than females in the older age groups.

Education and occupation

Few PWUD were currently enrolled as students and almost all had some formal schooling (Table 3). Most PWUD completed primary school (Table 3). Few had completed lower or upper secondary school. Most were currently employed, among which 46% had full-time employment, mostly in manual labour. Of those

who had no employment, half were supported by their parents and 19% by social benefits or a pension and 45% were homeless.

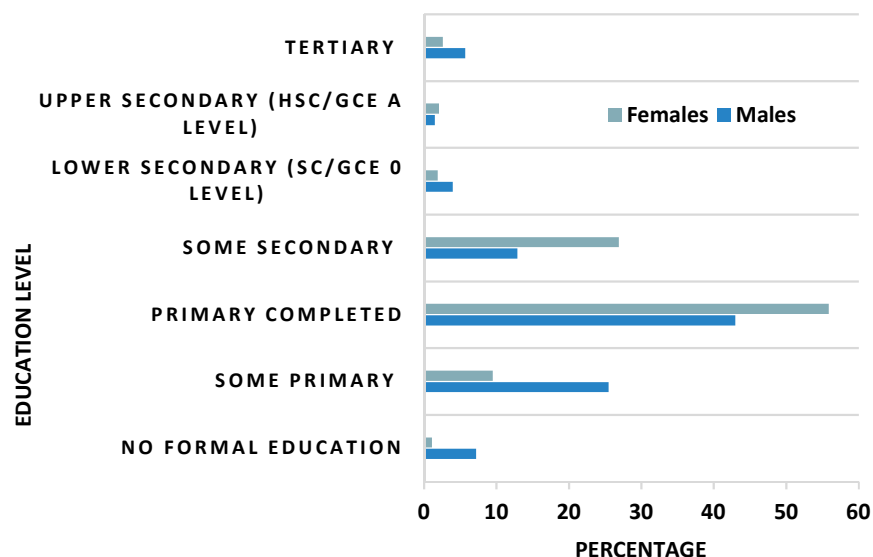
Table 3. Education and occupation among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Currently enrolled as student		
	5	1.2 (0, 2.4)
Level of education		
No formal schooling	40	5.7 (3.5, 7.9)
Some primary schooling	114	21.8 (16.6, 29.9)
Primary school completed	274	43.7 (37.9, 49.6)
Some secondary schooling	94	14.1 (10.1, 18)
Lower secondary (SC/GCE O Level)	26	7.3 (2.8, 11.8)
Upper secondary (HSC/GCE A Level)	8	1.4 (0.2, 2.6)
Tertiary education	34	6 (2.7, 9.3)
Currently employed		
Yes	448	76 (71.2, 80.7)
No	154	24 (19.3, 28.8)
Current employment status		
Full-time employment	176	45.6 (38.2, 53)
Part-time employment	95	21.8 (15.5, 28)
Full-time self-employment	60	10.8 (7.5, 14.1)
Part-time self-employment	51	9.2 (5.9, 12.4)
Casual/seasonal employment	66	12.7 (8.1, 17.2)
Main occupation		
Hairdresser/beautician	4	0.8 (0, 1.6)
Officer worker	16	5.9 (1.3, 10.5)
Professional	1	0.2 (0, 0.6)
Office worker at management level	4	2.3 (0, 5.3)
Manual worker	283	61.8 (54.2, 69.5)
Salesperson	31	5.3 (2.4, 8.1)
Tourism/hospitality/restaurant	18	5.3 (0.9, 9.7)
Sex worker	8	1.3 (0.3, 2.3)
NGO staff	5	0.7 (0, 1.4)
Entrepreneur/businessperson	15	3.1 (1.2, 5.1)
Drug dealer	2	2.5 (0, 5.8)
Driver/taxi	20	3.5 (1.5, 5.6)
Carer, maid, security guard	30	6.2 (3.5, 8.9)
Other	8	1.1 (0.2, 2)
Means of financial support if unemployed		
Parents	73	49.6 (38.3, 60.8)
Partner	26	16.4 (9.4, 23.5)
Other family member(s)	7	3.8 (1.3, 6.2)
Friends	5	2.3 (0, 4.9)

Social benefits/pension	25	19.2 (7.4, 30.9)
Other	22	8.8 (3.3, 14.2)
Current housing situation among those unemployed		
Homeless	69	44.6 (33.2, 56)
Housed	91	55.4 (44, 66.8)

Education and occupation profile of males and females

Figure 6. Education level among male and female PWUD, Mauritius, 2021



More males than females had no formal education (Figure 6). Among females, the largest percentage (56%) completed primary school whereas among males, only 43% completed primary school. More females completed some secondary schooling compared to males.

Figure 7. Employment status among male and female PWUD, Mauritius, 2021



Just over three quarters (n=402; 76%, 95% CI: 71.1, 81.6) of males and 70% (n=46; (% CI: 56.2, 84) of females were currently employed. A higher percentage of females had full-time employment, compared to males (Figure 7).

Civil status

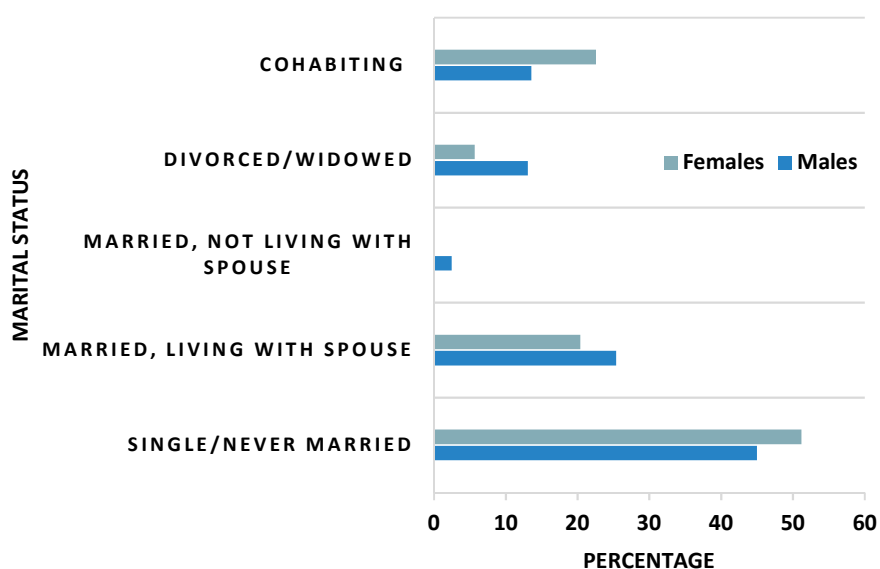
Just under half of PWUD are single never married and 26% are married and living with their spouse (Table 4).

Table 4. Civil status among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Current marital/civil status		
Single/never married	250	45.9 (39.7, 52.2)
Married - living with spouse	162	25.9 (20.5, 31.3)
Married - not living with spouse	14	2 (0.9, 3.2)
Divorced	76	11 (7.4, 14.6)
Widowed	7	1.2 (0.1, 2.4)
Cohabiting	90	13.6 (9.7, 17.4)
Other	2	0.3 (0, 0.8)

Civil status of males and females

Figure 8. Marital status among male and female PWUD, Mauritius, 2021



The highest percentage of male and female PWUD were single or never married (Figure 8).

Among females, 23% were cohabitating whereas among males, only 14% were cohabitating. A larger percentage of males were divorced or widowed, compared to females.

SUBSTANCE USE

Alcohol use

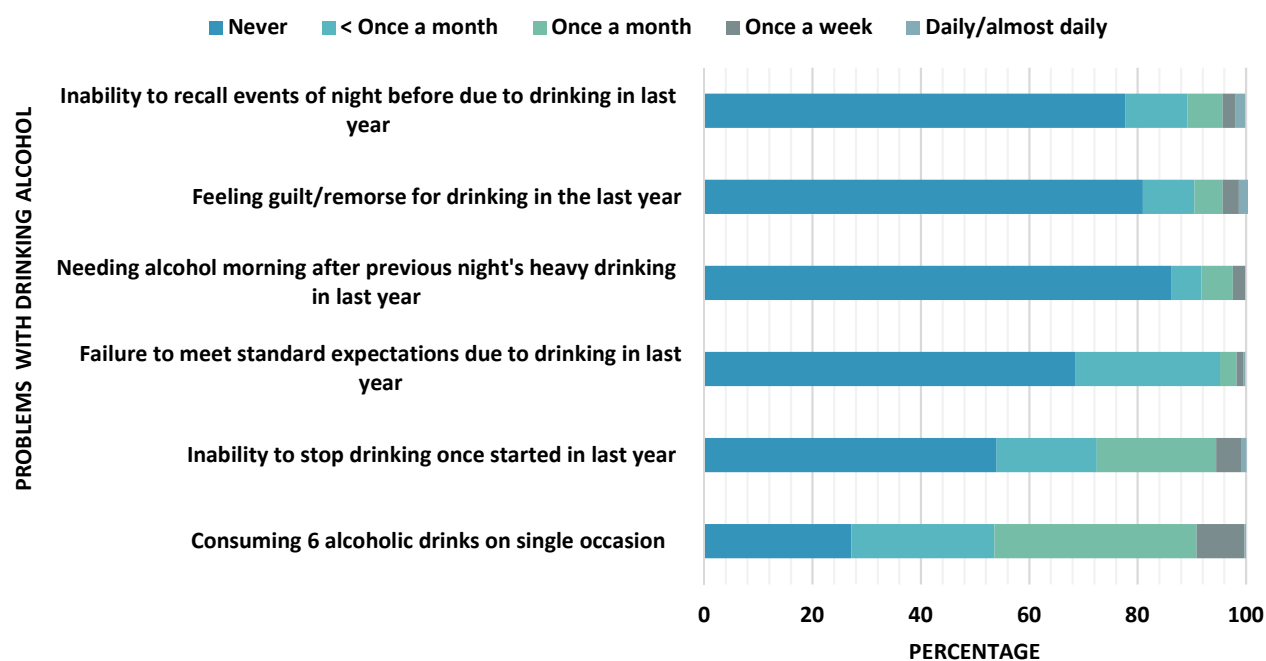
Only 17% of PWUD have had alcohol in the past month, with 53% consuming alcohol once a month or less and 52% having 1 to 2 drinks in a day when drinking alcohol (Table 5). Among those who consumed alcohol in the past month, 88% never caused injury to themselves or someone else due to drinking and 69% never had anyone express concern or suggest reducing alcohol.

Table 5. Alcohol use among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Alcohol in past month		
Yes	103	16.8 (12.4, 21.2)
No	499	83.2 (78.9, 87.6)
Frequency of alcohol consumption		
Once a month or less	59	53.1 (36.5, 69.1)
2-4 times a month	20	21 (11.4, 30.6)
2-3 times a week	18	18.6 (7.3, 29.9)
≥ 4 times a week	6	7.4 (0.9, 13.8)
Number of drinks when drinking alcohol in a day		
1-2	53	51.8 (34.5, 69)
3-4	24	26 (12.6, 39.4)
5-6	11	8.3 (0, 20.6)
7-9	4	10.4 (0, 23.9)
≥ 10	3	3.5 (0, 7.9)
Injury ever caused to self or other due to drink		
Never	74	88.3 (81.9, 94.6)
Yes, but not in last year	3	1.7 (0, 3.5)
Yes, in last year	8	10 (3.8, 16.2)
Concern about alcohol use/suggestion to reduce ever expressed by other(s)		
Never	53	69.1 (49, 89.3)
Yes, but not in last year	13	9.8 (0, 20.4)
Yes, in last year	18	21 (8.7, 33.4)

Most PWUD never experienced problems due to drinking and those who did experience problems few experience them once a week or daily (Figure 9). Just over one third of PWUD experienced consuming six alcoholic drinks in a single occasion at least once a month and experienced the inability to stop drinking once started at least once a month in the past year.

Figure 9. Frequency of having problems due to alcohol among PWUD, Mauritius, 2021



Cannabis use

Close to 90% of PWUD ever used cannabis (also known as ‘gandia’), among which 61% used cannabis in the past month (Table 6). The median age of first cannabis use was 17, with the youngest age being 11 and the oldest being 48. Eighteen percent of PWUD were young teens when they first used cannabis, whereas 32% were teens and 39% were young adults. The median number of years using cannabis was 11, with a range from 1 to 53.

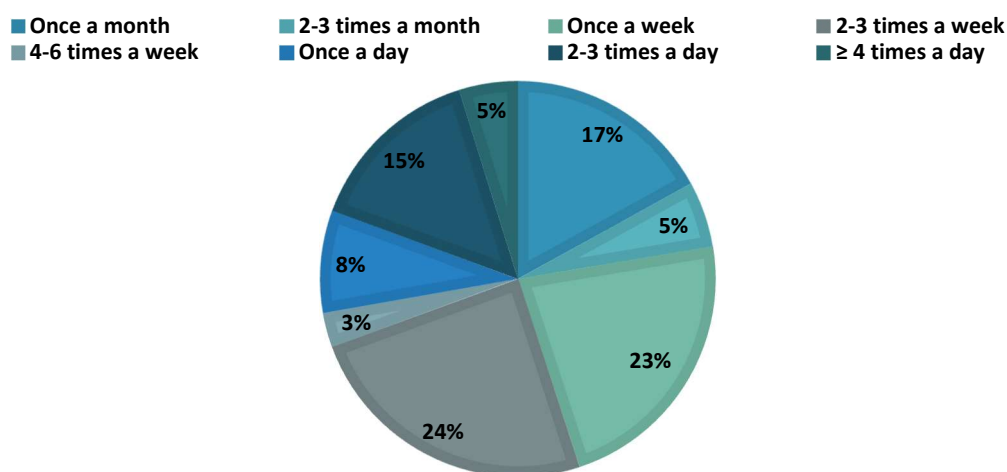
Table 6. Cannabis use among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Ever used cannabis		
Yes	519	87.6 (84.3, 91)
No	82	12.4 (9, 15.7)
Used cannabis in last month		
Yes	331	60.8 (53.4, 68.1)
No	186	39.2 (31.9, 46.6)
Age at first cannabis use		
Child (0 to 11)	8	2.2 (0, 5)
Young Teen (12 to 14)	90	18.2 (13.2, 23.3)
Teen (15 to 17)	203	32.1 (26.5, 37.7)
Young adult (18 to 24)	163	38.7 (32.2, 45.3)
Adult (25 and older)	55	8.7 (5.7, 11.8)

Frequency of cannabis consumption in average month		
Once a month	78	17 (12.1, 22)
2-3 times a month	27	5.4 (2.9, 7.9)
Once a week	100	22.6 (16.2, 28.9)
2-3 times a week	112	24.5 (18.2, 30.8)
4-6 times a week	22	2.8 (1.1, 4.5)
Once a day	59	8.4 (5.5, 11.3)
2-3 times a day	94	14.6 (10.7, 18.4)
≥ 4 times a day	24	4.8 (1.4, 8.1)

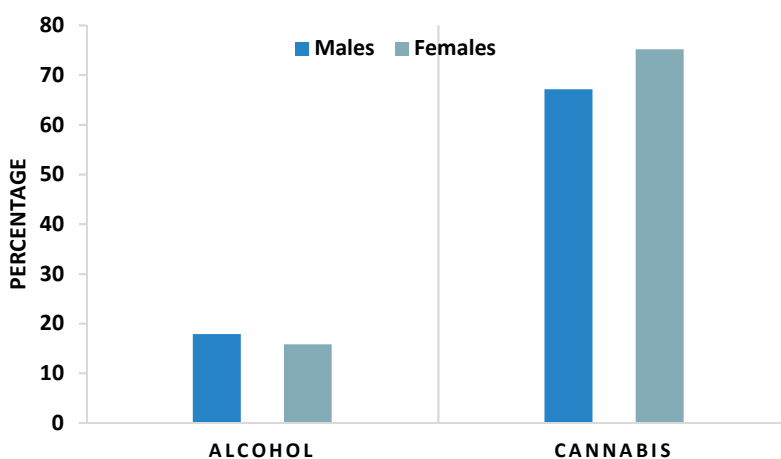
Cannabis use was frequent among those who consumed it. The highest percentages of PWUD who consumed cannabis in the past month, did so 2 to 3 times a week (24%) or once a week (23%) (Figure 10).

Figure 10. Frequency of cannabis use in an average month among PWUD, Mauritius, 2021



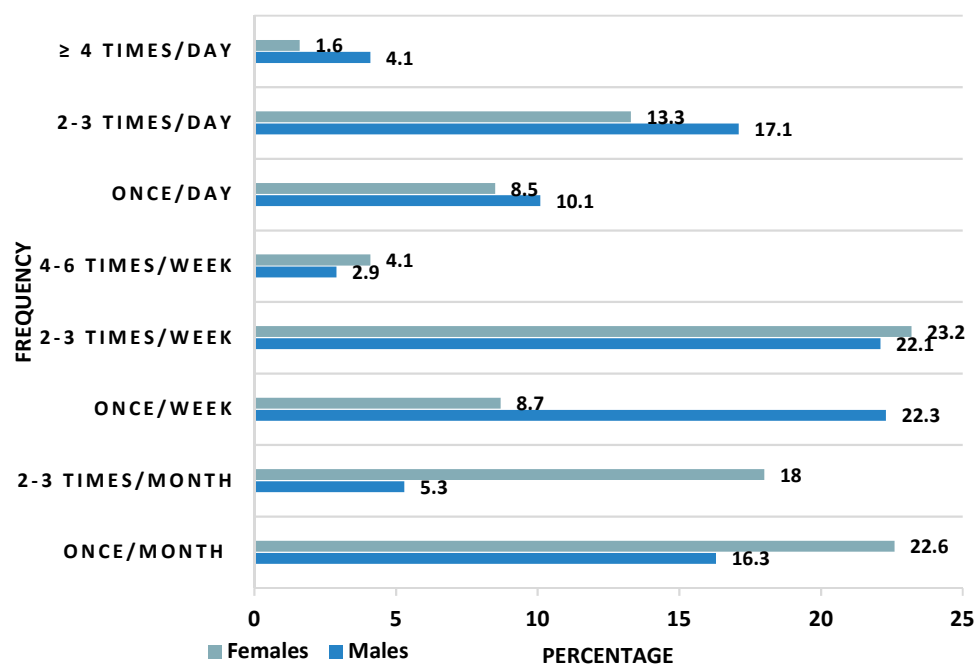
Alcohol and cannabis use among males and females

Figure 11 Frequency of alcohol and cannabis use (past month) among males and females, Mauritius, 2021



Among females, 16% consumed alcohol and 75% consumed cannabis in the past month (Figure 11). Among males, 18% consumed alcohol and 67% consumed cannabis in the past month.

Figure 12. Frequency of cannabis use among males and females, Mauritius, 2021

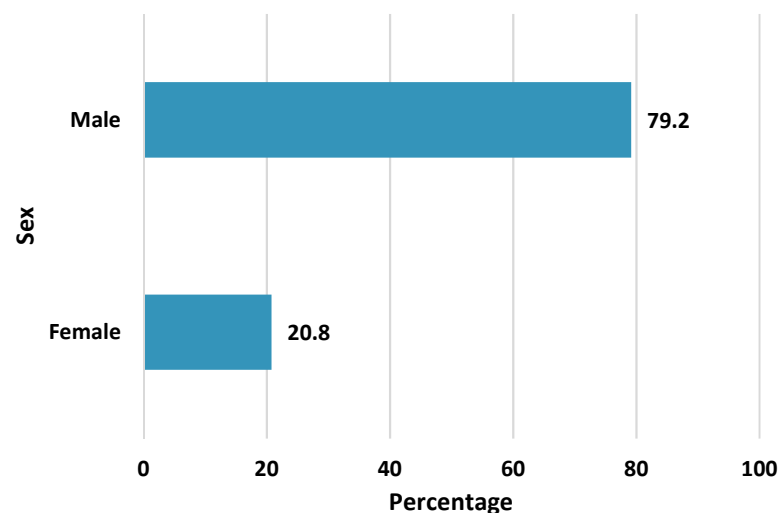


Higher percentages of males used cannabis with greater frequencies compared to females. Higher percentages of females, compared to males, consumed cannabis 2 to 3 times a month or once a month (Figure 12).

Users of cannabis only

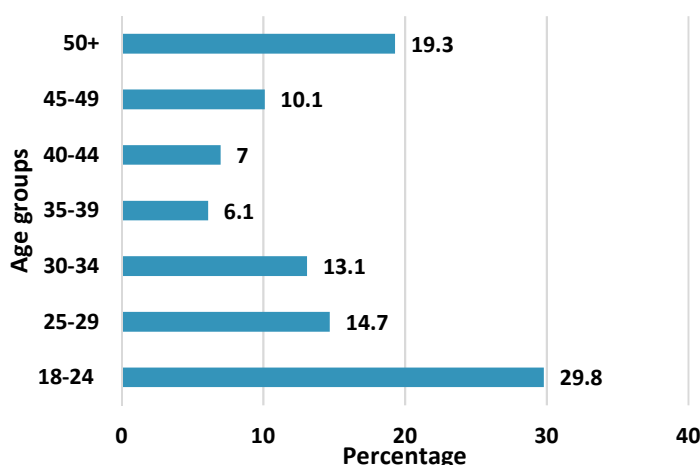
Eleven percent (N=69, 95% CI: 7.3, 15.9) of PWUD reported only using cannabis and no other drug.

Figure 13. Percentage of males and females who only use cannabis, Mauritius, 2021



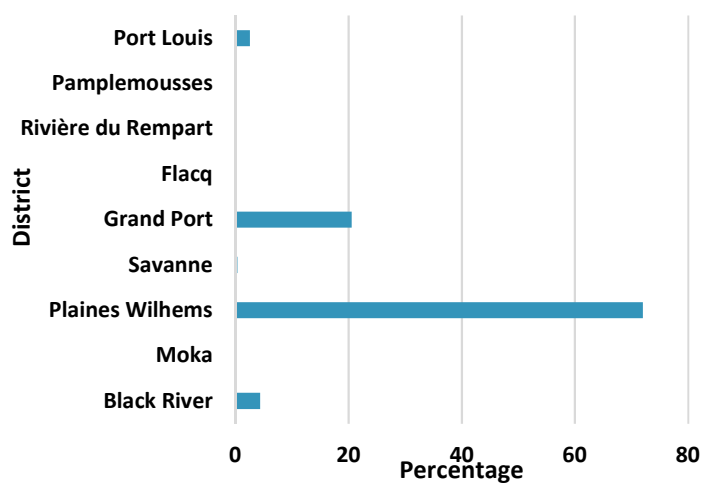
Among those using cannabis only, 79% were males while 21% were females (Figure 13).

Figure 14. Age groups among those who only use cannabis, Mauritius, 2021



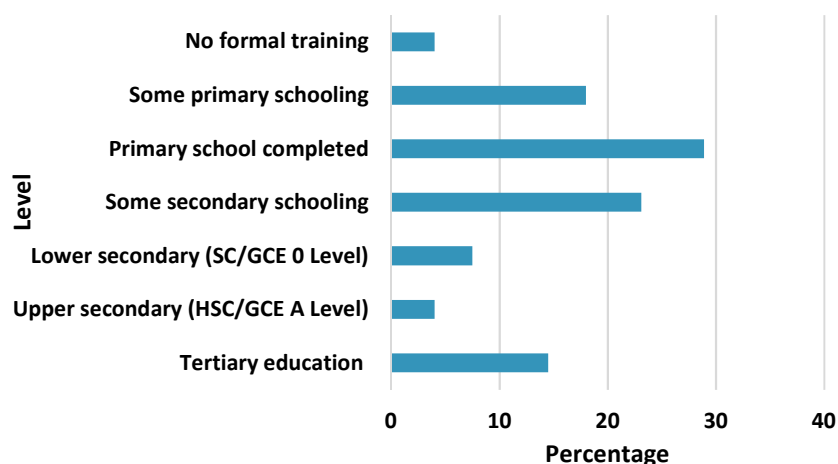
Of those who used only cannabis, the highest age group was between 18 and 24 (30%), after which percentages showed a decreasing and then stabilizing pattern until ages 40 and 44, after which usage of cannabis increased again with 19% of those 50 years and older consumed only cannabis and no other drugs (Figure 14).

Figure 15. Residence among those who only use cannabis, Mauritius, 2021



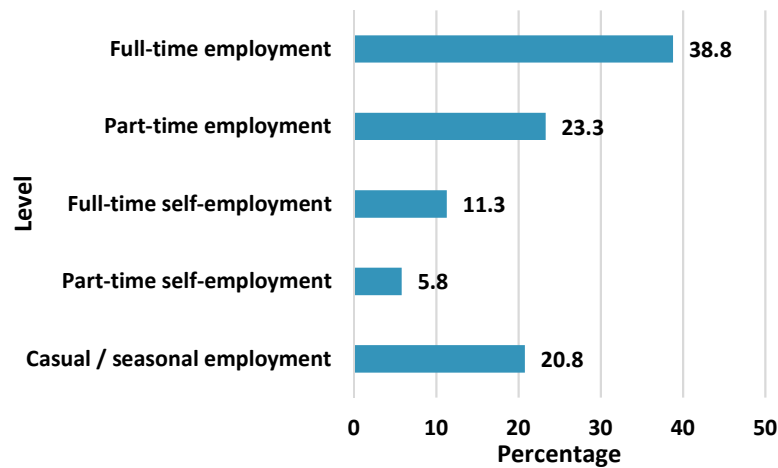
Most of those who only used cannabis are in Plaines Wilhems (72%), followed by Grand Port (21%) (Figure 15).

Figure 16. Education among those who only use cannabis, Mauritius, 2021



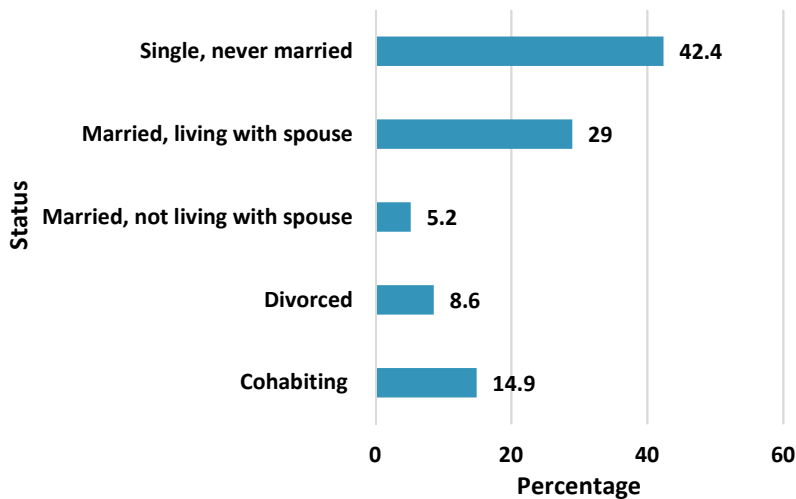
Four percent of those who only used Cannabis have no formal training. Most completed primary school, 23% had some secondary schooling and 14% had tertiary education (Figure 16).

Figure 17. Employment status among those who only use cannabis, Mauritius, 2021



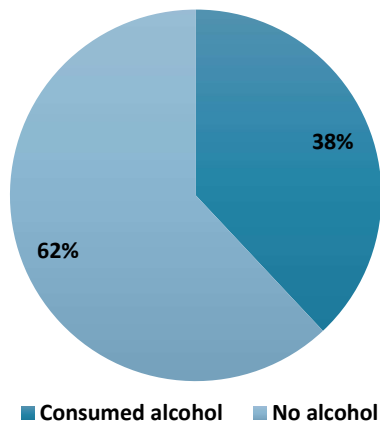
Eighty-two percent of those who only used cannabis are employed, among which 39% have full-time employment and 23% have part-time employment (Figure 17).

Figure 18. Marital status among those who only use cannabis, Mauritius, 2021



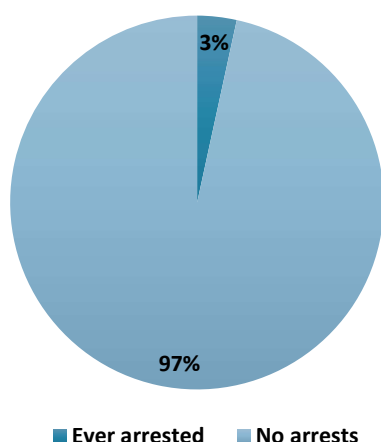
Most of those who only used cannabis were single, never married; 29% were married and living with a spouse (Figure 18).

Figure 19. Consumed alcohol in the past month among those who only use cannabis, Mauritius, 2021



Thirty-eight percent of those who only used cannabis, used alcohol in the past month (Figure 19). This is more than twice as high as all PWUD.

Figure 20. Ever arrested among those who only use cannabis, Mauritius, 2021



Only three percent of those who only used cannabis were ever arrested (Figure 20). This is eight times lower than those who use synthetic drugs.

Although only 69 persons reported only using cannabis and no other drugs, among those who took a urine test, three were positive for amphetamines, one for phencyclidine, one for basic opiates and three for benzodiazepines.

Non-injection drug use-other than Cannabis

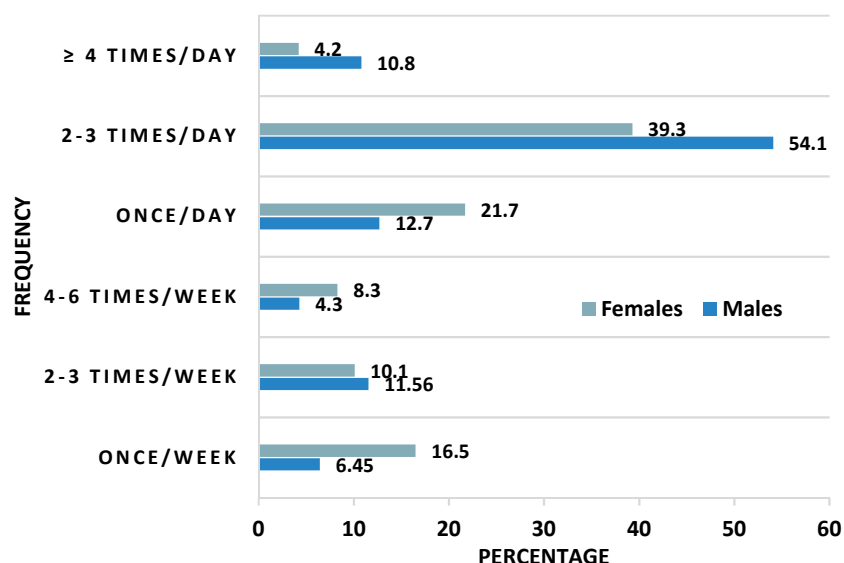
The median age of first using non-injecting drugs, other than cannabis, was 20 with the youngest being 11 and the oldest being 60. Most PWUD first tried drugs as a young adult (Table 7). The median number of years using drugs was 7, with the lowest being 1 and the highest being 46. Forty-six percent of PWUD use drugs 2 to 3 times a day. The median number of times that drugs were used in the previous day was 2, with a range between 1 and 15. Three quarters of PWUD were alone the last time they used drugs.

Table 7. First use and frequency of using non-injecting drug use (other than Cannabis) among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Age at first drug use other than Cannabis		
Child (0 to 11)	1	0.2 (0, 0.9)
Young Teen (12 to 14)	6	2.7 (0, 6)
Teen (15 to 17)	21	4.5 (1.3, 7.7)
Young adult (18 to 24)	303	62.7 (56, 69.8)
Adult (25 and older)	156	29.9 (23.6, 36.3)
Frequency of any non-injected drug use in the last week		
Once a week	27	6.1 (3.3, 9.9)
2-3 times a week	51	11.4 (7.2, 15.7)
4-6 times a week	31	6 (2.3, 9.6)
Once a day	68	16.7 (10.8, 22.5)
2-3 times a day	238	45.9 (39, 52.8)
≥ 4 times a day	65	13.8 (8.3, 19.4)
Alone or accompanied on last occasion of non-injected drug use		
Alone	366	74.9 (69.1, 80.6)
With others	120	25.1 (19.4, 30.9)

Frequency of drug use in past month among males and females

Figure 21. Frequency of drug use in past month among males and females, Mauritius, 2021



Most males used drugs 2 to 3 times per day and a higher percentage of males, compared to females, used drugs ≥ 4 times a day in the past month. A higher percentage of females, compared to males, used drugs once per day in the past month (Figure 21).

Types of drugs used

The first drug used (other than cannabis) was heroin (58%), followed by synthetic drugs (37%) (Table 8). Most PWUD reported using heroin (63%) and synthetic drugs (57%) in the past month. Similarly, the types of drugs most often used in the past month were heroin (54%) and synthetic drugs (41%).

Table 8. Types of drugs used (other than cannabis) among PWUD, Mauritius, 2021

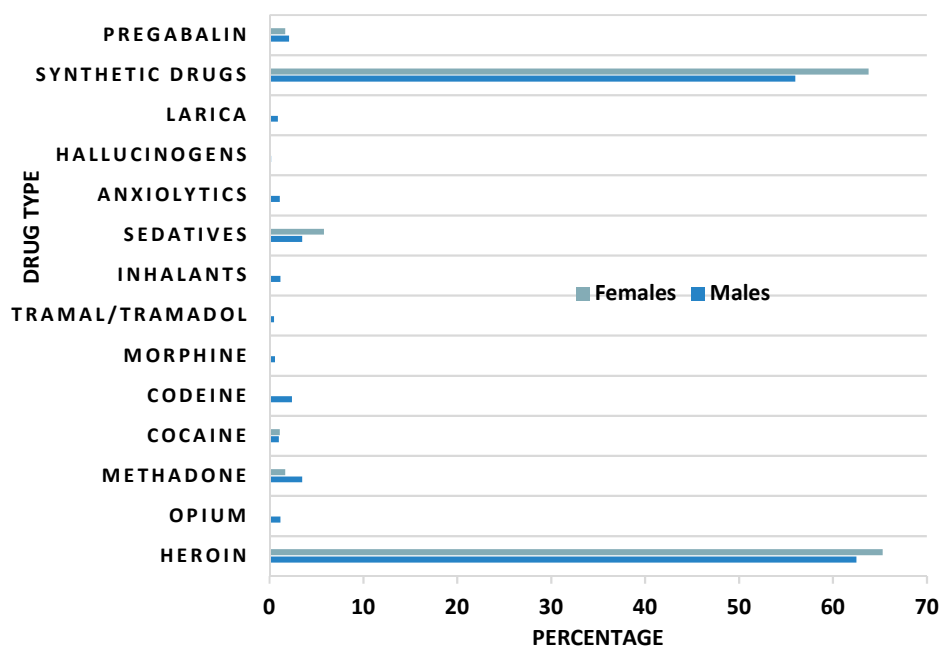
Mauritius N = 602		
	n	%, (95% CIs)
Drug type at first use of non-injected drugs*		
Heroin	303	58.1 (50.3, 65.9)
Opium	2	0.5 (0, 1.1)
Methadone	2	0.3 (0, 1)
Cocaine	2	0.2 (0, 0.5)
Codeine	3	0.4 (0, 1)
Inhalants	1	0.2 (0, 0.6)
Anxiolytics	1	0.1 (0, 0.2)
Hallucinogens	1	0 (0, 0.1)
Lyrica	1	0.1 (0, 0.2)
Synthetic drugs	159	36.6 (28.6, 44.5)
Non-injected drug type(s) used in last month**		
Heroin	326	63.2 (55.1, 71.4)
Opium	4	0.9 (0, 2)
Methadone	25	3.2 (1.7, 4.7)
Cocaine	6	0.9 (0, 3.9)

Codeine	10	2 (0.6, 3.3)
Morphine	1	0.4 (0, 1)
Tramal/tramadol	2	0.4 (0, 1)
Inhalants	2	0.8 (0, 1.8)
Sedatives	20	4.9 (1.4, 8.5)
Anxiolytics	9	2.6 (0, 6.1)
Hallucinogens	3	1.8 (0, 4.9)
Lyrice	7	2.4 (0, 5.6)
Synthetic drugs	256	56.9 (49.5, 64.2)
Pregabalin	13	5.1 (0.4, 9.8)
Non-injected drug type(s) MOST used in the last month		
Heroin	278	53.6 (45.6, 61.7)
Opium	2	0.3 (0, 0.8)
Methadone	2	0.1 (0, 0.4)
Cocaine	3	0.3 (0, 0.6)
Codeine	1	0.3 (0.1, 0.3)
Tramal/tramadol	1	0.1 (0, 0.2)
Hallucinogens	1	0.1 (0, 0.2)
Synthetic drugs	182	40.9 (32.5, 49.2)

*No responses for crack, morphine, tramal/tramadol, amphetamine/dextroamphetamine/methylphenidate, sedatives, hypnotics or pregabalin; **No responses for crack, Amphetamine/dextroamphetamine/methylphenidate, and hypnotics; ^No responses for crack, morphine, amphetamine/dextroamphetamine/methylphenidate, inhalants, sedatives, hypnotics, anxiolytics, Lyrice or pregabalin.

Types of drugs used in past month among males and females

Figure 22. Types of drugs used in past month among males and females, Mauritius, 2021



Higher percentages of female PWUD, compared to males, used synthetic drugs, heroin and sedatives in the past month (Figure 22). Males used a wider range of drug types compared to females.

TREATMENT OF NON-INJECTION DRUG USE

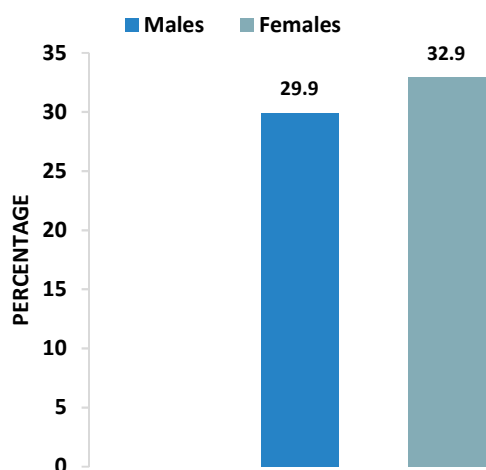
Just over one quarter of PWUD have ever sought treatment for non-injection drug use, among which the majority sought medical rehabilitation (68%), followed by using self-help (15%) (Table 9). The median number of times trying to stop non-injecting drug use was 3, with a range between 1 and 50. Of all the venues where someone can find treatment for non-injecting drug use, 31% sought treatment at NGO I. Goomany Centre, 18% sought treatment at the Addiction unit at the Ministry of Health and Wellness (MOHW) at Victoria Hospital and 13% at the Addiction unit at the MOHW at Mahebourg Hospital.

Table 9. Treatment among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Ever sought treatment for non-injection drug habit		
Yes	143	27.5 (21.5, 33.4)
No	341	72.5 (66.6, 78.5)
Treatment sought for non-injected drug habit		
NGO rehab program	23	14.1 (7.1, 21.1)
Medical rehabilitation	91	67.9 (57.6, 78.1)
Prison rehab	0	--
Detox with family help	5	2.2 (0.4, 4.1)
Self-help	26	15.3 (7.8, 22.8)
Venue(s) where treatment sought for non-injected drug use		
Hospital service (BSMHCC)	5	4.8 (1.8, 7.9)
Addiction unit - MOHW Jeetoo Hospital	9	6 (1.9, 10)
Addiction unit - MOHW Victoria Hospital	33	17.8 (6, 29.6)
Addiction unit - MOHW Flacq Hospital	0	--
Addiction unit - MOHW Mahebourg Hospital	23	12.8 (2.1, 23.5)
Addiction unit - MOHW L. Mountain Hospital	6	4.9 (1.1, 8.6)
NGO- I. Goomany Centre	44	30.7 (14.6, 46.8)
NGO - Help De Addiction Centre	3	6.7 (0, 17.5)
NGO - Centre d'Accueil Terre Rouge	13	9 (1.7, 16.3)
NGO - Centre de Solidarité	7	2 (0.8, 3.2)
NGO - La Caz A	1	1 (0.6, 1.3)
NGO - AILES	4	1.5 (0, 3.2)
NGO - Chysalide	1	0.6 (0.4, 0.9)
Methadone Centre - MOHW Sainte Croix	1	0.4 (0.2, 0.5)
Methadone Centre - MOHW Bouloux Cassis	3	3.4 (0, 8.4)
Methadone Centre - MOHW Mahebourg	2	2.3 (0.1, 4.5)

Treatment among males and female

Figure 23. Treatment among males and females, Mauritius, 2021



A slightly higher percentage of female PWUD, compared to males, have ever had treatment for non-injecting drugs (Figure 23).

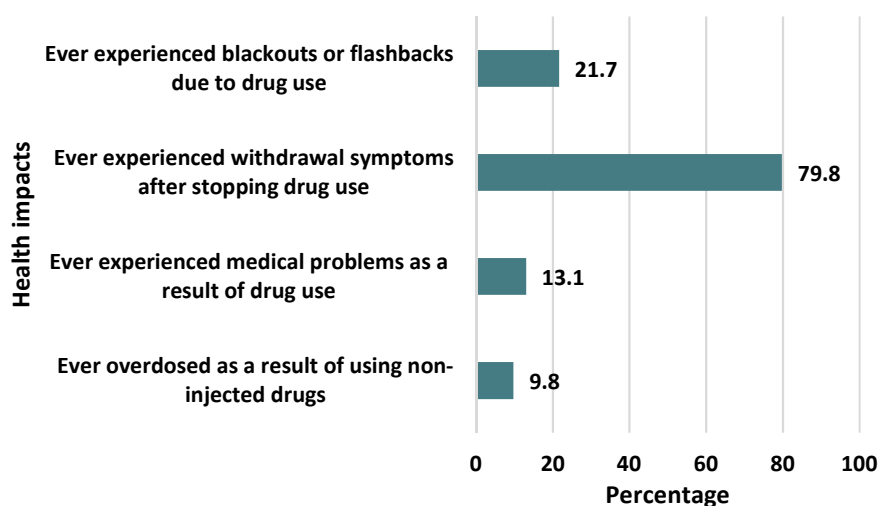
IMPACT OF DRUG USE

Only 15% of PWUD are able to stop drug use when they wanted to, 81% ever felt bad or guilty about drug use and 22% ever engaged in illegal activities to obtain drugs (Table 10).

Table 10. Impact of drug use among PWUD, Mauritius, 2021

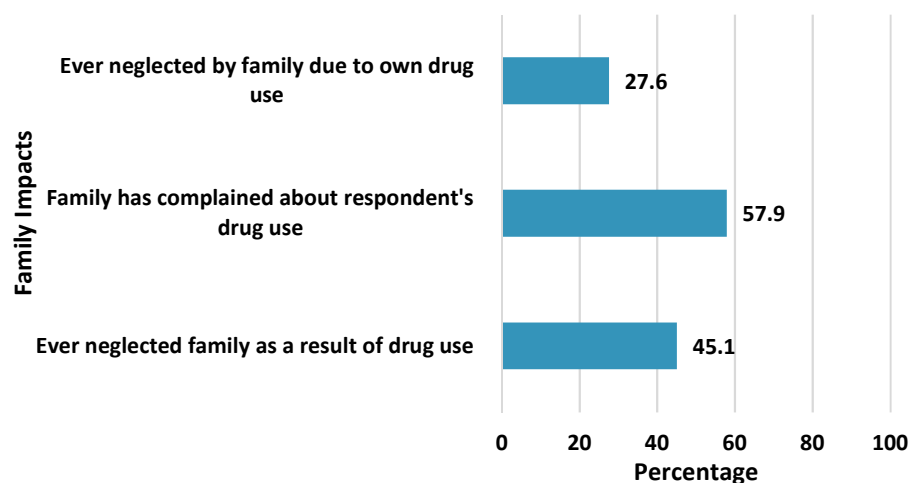
Mauritius N = 602		
	n	%, (95% CIs)
Always able to stop drug use when want to		
Yes	67	14.7 (9.9, 19.5)
No	403	85.3 (80.5, 90.2)
Ever felt bad or guilty about drug use		
Yes	406	81.3 (75.4, 87.2)
No	79	18.7 (12.8, 24.6)
Ever engaged in illegal activities to obtain drugs		
Yes	95	21.6 (14.9, 28.4)
No	390	78.4 (71.6, 85.1)

Figure 24. Health impacts of using drugs among PWUD, Mauritius, 2021



Twenty-two percent of PWUD have ever experienced blackouts or flashbacks, 79% have experienced withdrawal symptoms, 13% experienced medical problems and 10% overdosed as a result of using drugs (Figure 24).

Figure 25. Familial impacts of using drugs among PWUD, Mauritius, 2021



Just over one quarter of PWUD were ever neglected by family, 58% have received complaints from family and 45% ever neglected their family as a result of drug use (Figure 25).

SYNTHETIC DRUG USE

Sixty-five percent of PWUD have used synthetic drugs, among which more than 60% have ever used *Batte dans la tete*, *strawberry*, *wasabi* and *La poussière tombe* (Table 11). However, recently there are indications that all synthetic drugs are commonly referred to as “simik”. Of the 81% who used synthetic drugs in the past week, 28% used them 2 to 3 times a day. Almost three quarters of PWUD who used synthetic drugs in the past week, did so once a day or more.

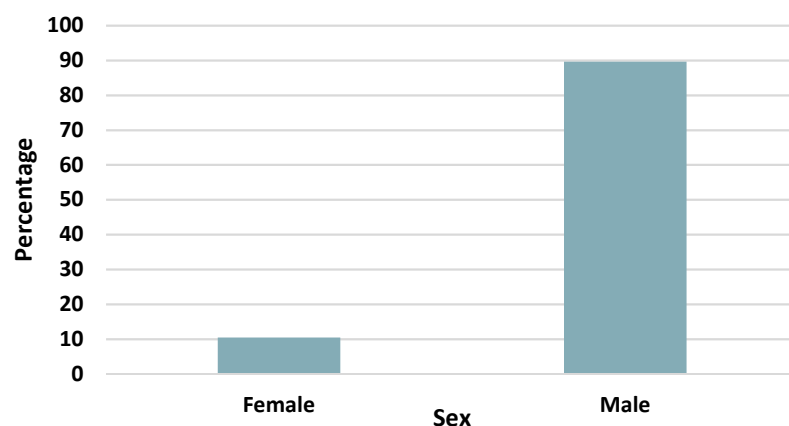
Table 11. Synthetic drug use among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Ever used synthetic drugs		
Yes	385	64.7 (57.3, 72.2)
No	205	35.3 (27.8, 42.7)
Synthetic drug type ever used		
Batte dans la tête	222	62 (54.4, 69.6)
Black Mamba	159	40.2 (32.9, 47.6)
C'est pas bien	205	45.6 (38.1, 53)
Crocodile	46	9.6 (6, 13.2)
Rambo	130	32.2 (25.5, 38.9)
Resine	54	9.9 (6.5, 13.2)
Strawberry	241	63.8 (56.1, 71.6)
Wasabi	225	61.5 (53.6, 69.4)
La poussière tombe	225	61.5 (64, 69)
Simik/Synthe	106	27.3 (20.1, 34.5)
Has used synthetic drugs in the last week		
Yes	322	81.5 (75.1, 87.9)
No	63	18.5 (12.1, 24.9)
Frequency of synthetic drug use in the last month		
Once	9	3.9 (0.7, 7.2)
2-3 times	14	3.3 (1.2, 5.3)
Once a week	8	1.6 (0.4, 2.8)
2-3 times a week	39	12.5 (7.3, 17.6)
4-6 times a week	21	4.7 (2.4, 6.9)
Once a day	49	20 (12.4, 27.6)
2-3 times a day	129	37.8 (29.8, 45.8)
≥ 4 times a day	54	16.3 (8.7, 23.9)
Alone or accompanied on occasion of last synthetic drug use*		
Alone	106	95.5 (92.9, 98.1)
With friend	1	0.6 (0.5, 0.8)
With acquaintance	5	2.5 (0.3, 4.7)
With family member	2	1.4 (0, 3)

*No responses for with sexual partner, stranger or drug dealer.

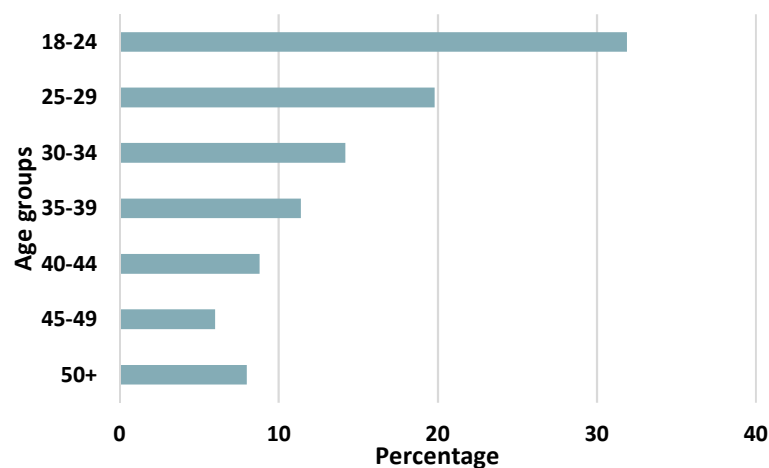
Subset analysis of synthetic users

Figure 26. Percentage of male and female synthetic drug users, Mauritius, 2021



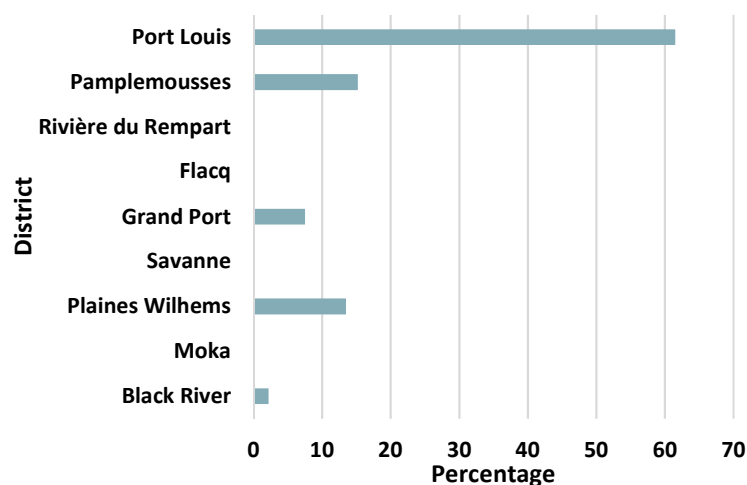
Among those who ever used synthetic drugs, a much higher percentage are male (90%) compared to females (10%) (Figure 26).

Figure 27. Age group among synthetic drug users, Mauritius, 2021



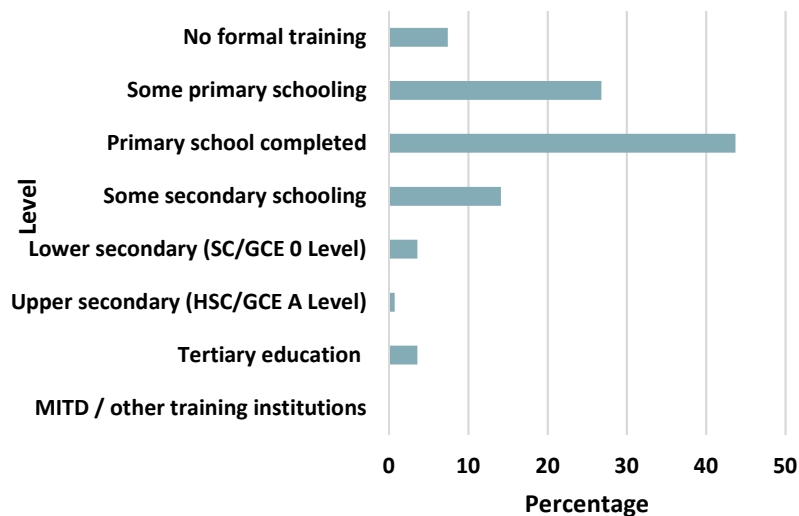
Of those who ever used synthetic drugs, most are between the ages of 18 and 24 (32%), followed by those between the ages of 25 and 29 (20%) (Figure 27).

Figure 28. Residence among synthetic drug users, Mauritius, 2021



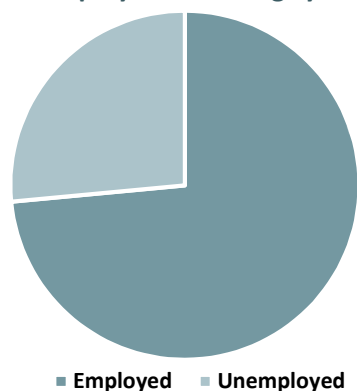
Of those who ever used synthetic drugs, most live in Port Louis (61%), followed by Pamplemousses (15%) and Plaines Wilhems (13%) (Figure 28).

Figure 29. Education level among synthetic drug users, Mauritius, 2021



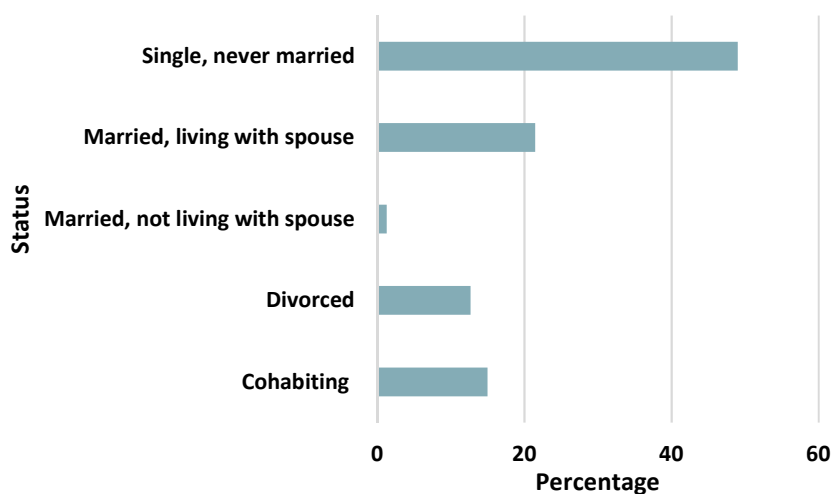
Of those who ever used synthetic drugs, most have completed primary school (44%) or less (34.2%). Seven percent have no formal training and few have completed any level of secondary school (Figure 29).

Figure 30. Employment among synthetic drug users, Mauritius, 2021



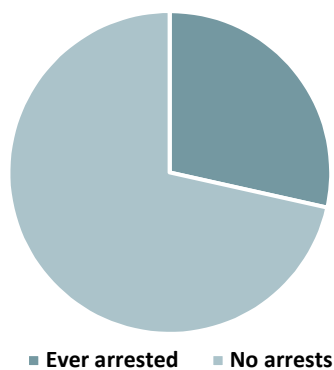
Almost three quarters of synthetic drug users are employed (Figure 30).

Figure 31. Marital status among synthetic drug users, Mauritius, 2021



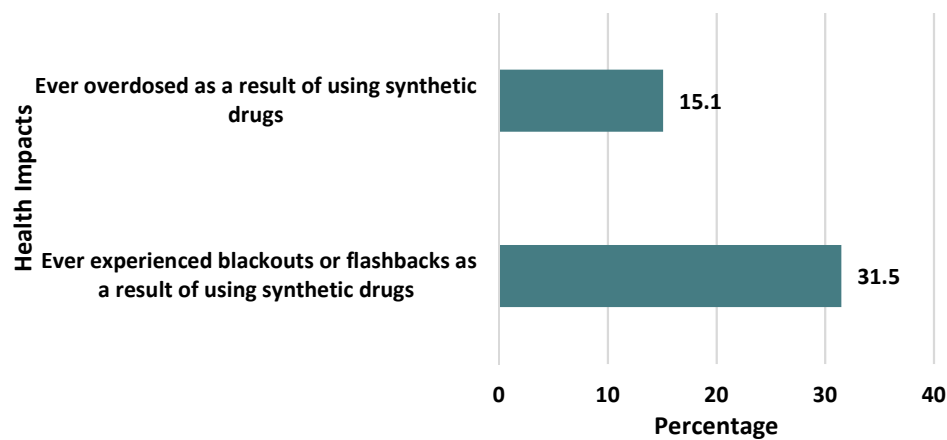
Of those who ever used synthetic drugs, almost half are single and never married and 21% are married, living with a spouse (Figure 31).

Figure 32. Ever arrested among synthetic drug users, Mauritius, 2021



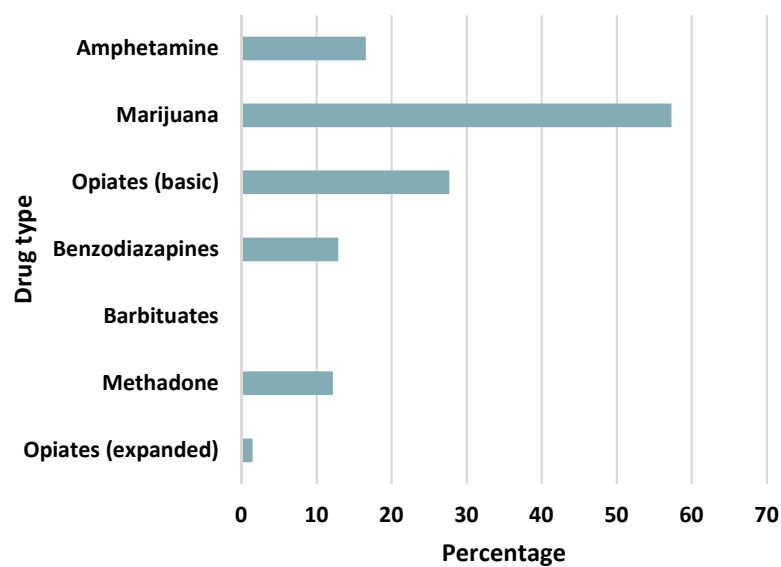
Just over one quarter of synthetic drug users have been arrested (Figure 32). A much higher percentage compared to those who only use Cannabis.

Figure 33. Health impacts of using synthetic drugs among PWUD, Mauritius, 2021



Fifteen percent of PWUD have ever overdosed and 31% have experienced blackouts or flashbacks as a result of using synthetic drugs (Figure 33).

Figure 34. Drugs in system based on urine test among synthetic drug users, Mauritius, 2021



Among those who ever used synthetic drugs, the majority had cannabis (THC) in their systems based on a urine test (Figure 34). Just over one quarter had basic opiates and 17% had amphetamines in their systems. There is no possibility to detect synthetic drugs based on urine analysis.

ARREST AND INCARCERATION

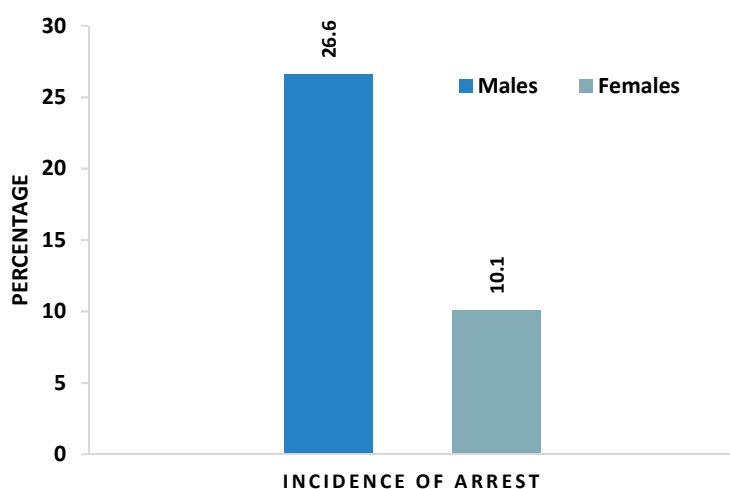
Twenty-eight percent of PWUD have ever been arrested for drug use, among which 27% were arrested in the past year (Table 12). Among those ever arrested, 46% were incarcerated, among which 30% used drugs during incarceration. PWUD reported know a median of 10 (range: 1 to 80) other PWUD who have been incarcerated.

Table 12. Arrest and incarceration for drug use among PWUD, Mauritius, 2021

Mauritius N = 602		
	n	%, (95% CIs)
Ever arrested for drug use		
Yes	175	28.3 (22, 34.7)
No	427	71.7 (65.3, 78)
Arrested for drug use in last year		
Yes	59	26.7 (18.6, 35)
No	115	73.3 (65, 81.6)
Ever incarcerated		
Yes	93	46.1 (33.9, 57.6)
No	81	53.9 (42.4, 66.1)
Ever used drugs during incarceration		
Yes	30	29.7 (18.9, 40.4)
No	63	70.3 (59.6, 81.1)

Arrest among females and males

Figure 35. Arrests among PWUD, Mauritius, 2021



Among females, only 10% have ever been arrested for drug use and among males, over one quarter have ever been arrested for drug use (Figure 35).

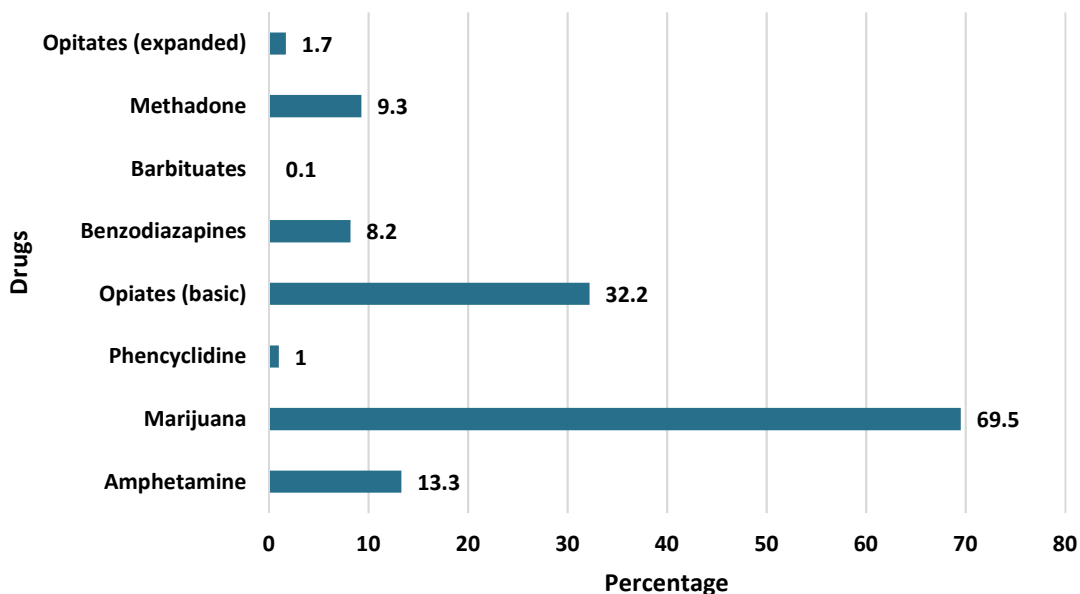
DRUGS FOUND BASED ON URINE TESTS

Just over half of PWUD agreed to take a urine test to test certain drugs in their systems (Table 13), among which 69% were found to have THC (cannabis), 32% had basic opiates (codeine and morphine), and 13% had amphetamines (including methamphetamines) (Figure 36). Only 2% of PWUD had expanded opiates (heroin, codeine, morphine, hydrocodone, hydromorphone, oxycodone, and oxymorphone) in their systems when tested. Thirty-two percent of PWUD who provided a urine test, had more than one drug in their systems.

Table 13. Took urine test among PWUD, Mauritius, 2021

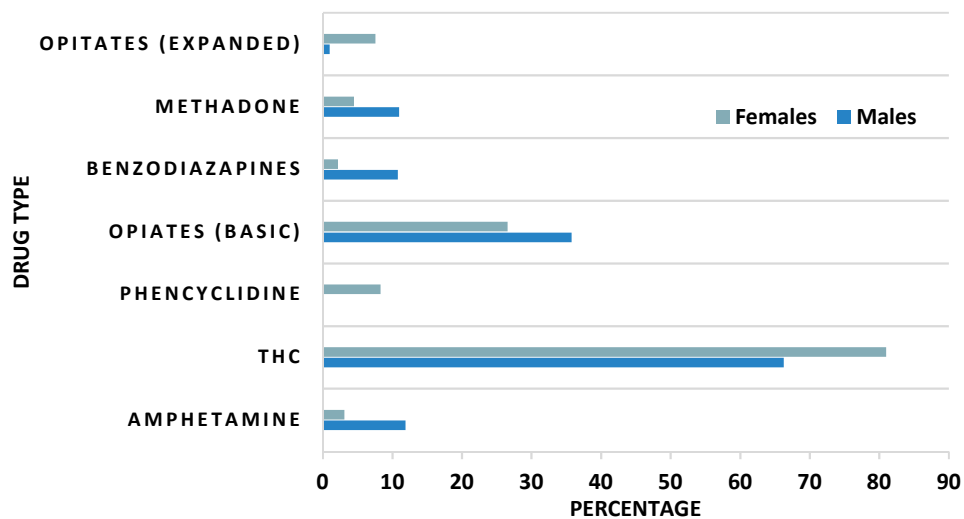
Mauritius N = 602		
	n	%, (95% CIs)
Yes	319	50.4 (37.2, 63.3)
No	282	49.6 (36.4, 62.8)

Figure 36. Drugs found through urine test among PWUD, Mauritius, 2021



Drugs found based on urine test among males and females

Figure 37. Types of drugs found based on urine test among males and females, Mauritius, 2021



A higher percentage of female PWUD (68%), compared to males (49%), agreed to undergo a urine test to detect certain drugs. Of those who underwent a urine test, a higher percentage of female PWUD were found to have THC, expanded opiates and phencyclidine in their systems compared to males (Figure 37). More males, than females, had methadone, benzodiazepines, basic opiates, and amphetamines in their systems.

POPULATION SIZE ESTIMATION

The population size estimation based on the successive sampling-population size estimation (SS-PSE) method found a mean size estimation of 55,000, with 25% probability bounds of 28,000 and 90% probability bounds of 111,500, illicit drug users in Mauritius (Table 14). The total population of those between the ages of 18 and 59 years in Mauritius (excluding Rodrigues) in 2021 is about 740,000. If we apply the mean population size of PWUD to this population, PWUD make up about 7.4% of the population between the ages of 18 and 59. Considering that females made up 13% of PWUD in Mauritius, the number of females who use drugs in Mauritius would be 7,150.

Table 14. Population size estimation among PWUD, Mauritius, 2021

	Mean	Median	Mode	25%	75%	90%	2.50%	97.50%
Prior	69799	56216	27288	32848	96830	143779	13942	182804
Posterior	54947	43915	32937	28346	69862	111578	7987	161677

DISCUSSION

TYPES, FREQUENCIES AND MANNER OF DRUGS USED

Most PWUD are using cannabis, heroin and synthetic drugs. Few are using other types of drugs, although males are using a wider variety of drug types compared to females. This survey did not establish drug dependence; however, the majority of PWUD reported using cannabis and/or synthetic drugs 2 to 3 times a day or more in the past week. Use of any non-injecting drug (other than cannabis) was also 2 to 3 times a day or more in the past week. This is considered high frequency drug use. Among males, most are using drugs other than cannabis 2 to 3 times a day or more and among females, most are using drugs other than cannabis once a day or more (slightly less frequency compared to males). Drug use does not appear to be a social event in Mauritius as 75% of those using illicit drugs (excluding cannabis) and 95% of PWUD who use synthetic drugs are using it alone.

FEMALES WHO USE DRUGS

Among those using drugs in Mauritius, this survey found that 13% were female. This finding lines up with other estimates that females make up roughly 13% of drug users worldwide. The majority of females who use drugs are young, between 18 and 24 years, have low education (completed primary or less), are employed with full time employment (59%), and are single or cohabitating (74%).

In terms of drug use, most females use cannabis (75%), most of whom use cannabis 2 to 3 times a week or less. However, among those who are only using cannabis, a higher frequency of males (79%) use cannabis compared to females (21%). Among females, 39% are using illicit drugs, other than cannabis, 2 to 3 times a day and just over 60% are using synthetic drugs and/or heroin. Of those who have ever used synthetic drugs, however, females made up a lower percentage (10%) compared to males (90%). Among those who took a urine test, 81% of females were found to have THC in their systems.

Based on key informant interviews, there appears to be an increase in drug use among females. This was specifically mentioned during interviews at the Dr. I. Goomany Centre and Chrysalide, both of which are treatment centres. Among females, 33% have ever had treatment for illicit drug use. Chrysalide is the only all-female in-patient treatment center in Mauritius. According to Mrs. Marlene Ladine of Chrysalide, apart from smoking cannabis, most females are smoking heroin or using synthetic drugs. Mrs. Ladine points out that most of the treatment modalities in Mauritius are male centric and that logistics pose a major barrier to females receiving methadone. She would like to see a more proactive approach to responding to drug use and to make more effort for services to go to where female drug users are. She states:

"We always can do more; we always have challenges. Drug use is mobile"

and we need to go to them” rather than wait for them to go to Chrysalide for help.

Research illustrates the needs of females differ from that of males and that females require different treatment modalities compared to males^{15,16}. During focus groups, there were many comments about the increasing use of drugs by females:

“There are more and more girls consuming drugs and they always have money to buy drugs”.

“More girls and women are now consuming drugs. It is not like years ago when drugs were consumed mainly by boys and men. However, the girls and women are more discreet if they are into drugs. They are very prudent as to where to buy and consume their drugs.”

“More and more girls are smoking cigarettes and thus they do not think twice before consuming drugs”.

Among females, 10% have ever been arrested, which validates the statement above that woman may be more discreet about their drug use than are males.

A SMALL SUBSET OF PEOPLE WHO USE DRUGS ARE ONLY USING CANNABIS

Although the majority of PWUD use cannabis, about 11% only use cannabis. Among those only using cannabis, most are male, ages 18 to 24 (30%) (however, the next largest age group were those 50 years or older, 19%), reside in Plaines Wilhems, have completed primary school (however, 14% have tertiary education), and more than 82% are employed. The beneficial uses of cannabis include medical usage for chronic pain, epilepsy and eating and sleeping disorders and mild non-medical usage has been found to

¹⁵ Center for Behavioral Health Statistics and Quality. Behavioral health trends in the United States: Results from the 2014 National Survey on Drug Use and Health (HHS Publication No. SMA 15-4927, NSDUH Series H-50), Baltimore, Maryland. Accessed at: <http://www.samhsa.gov/data>;

¹⁶ UN Task Force on Transnational Organized Crime and Drug Trafficking as Threats to Security and Stability – Policy Brief on Gender and Drugs, UN Women 2014. Vienna, Austria. 2016. Accessed at: https://www.unodc.org/documents/ungass2016/Contributions/UN/Gender_and_Drugs_-_UN_Women_Policy_Brief.pdf.

reduce depression, social anxiety and traumatic stress disorders¹⁷. Mauritius is currently exploring the possibility of allowing the medical use of cannabis in the country. There are now numerous examples around the world (e.g., Netherlands, Portugal, United States, etc.) describing how countries have legalized cannabis, including the potential for benefits and costs. Some areas where cannabis has been legalized have reported economic benefits from taxing the sales of cannabis and more limited exposure to drug sellers and users of more harmful drugs like heroin, methamphetamine and crack or cocaine.

The harmful effects of long term and heavy cannabis use (daily or near daily users) are dependence and potential to drop out of school and to use other drugs in the future and risk for links to cognitive impairment, mental disorders and suicidality¹⁸. Cannabis-use disorder is estimated to affect 1–2% of adults in the past year and 4–8% of adults during their lifetime¹⁹. The risk of developing dependence among those who have ever used cannabis was estimated at 9% in the United States compared to 33% for nicotine, 23-30% for heroin, 15-20% for cocaine, 15% for alcohol and 5-10% for stimulants²⁰. It was generally agreed in focus groups with PWUD and family members of PWUD that cannabis is less addictive. One focus group participant mentioned that:

“Cannabis is not a matter of concern as you can stop consuming it whenever you want to. One can buy a certain amount of cannabis and take more than one week to finish it but synthetic drugs is more addictive, one will have to finish it within 24 hours itself”.

One family member of someone who uses drugs stated:

[W]e prefer [our] relatives who use drugs consume cannabis instead of heroin or synthetic drugs as there are no major side effects”.

¹⁷ Keyhani S, Steigerwald S, Ishida J, et al. Risks and Benefits of Marijuana Use. *Annals of Internal Medicine*. 2018; 169 (5): 282-290)

¹⁸ World Health Organization (WHO). The health and social effects of nonmedical cannabis use. 2016;95. Accessed at: https://www.who.int/substance_abuse/publications/msbcannabis.pdf

¹⁹ Hall W, Pacula RL. Cannabis use and dependence: public health and public policy. 2010. RAND Corporation, California.

²⁰ SAMSHA Center for behavioral health statistics. Results from the 2016 National Survey on Drug use and Health: Detailed Tables. 2017. SAMSHA, Maryland. Accessed at: <https://www.samhsa.gov/data/sites/default/files/NSDUH-DetTabs-2016/NSDUH-DetTabs-2016.pdf>

It is of concern that many cannabis users are in the youngest age group. However, studies have shown that for many young people cannabis use is time-limited; it is most common in persons in their early twenties and ceases in their late twenties²¹. The long-term frequent cannabis users who have tried and failed to stop are those most likely to have cannabis-use disorders and to need help from treatment services²².

Some focus group participants commented that recently the availability of cannabis in Mauritius has decreased and the cost has increased, leaving some cannabis users to turn to other drugs, like synthetic drugs or heroin which are less expensive.

“Cannabis is becoming a rare and expensive drug in the market.”

“People are consuming more heroin than cannabis--cannabis is not readily available, they thus start consuming heroin”.

However, the decrease in availability and increase in cost was also seen as a benefit. One family member of someone who uses drugs mentioned that drugs in Mauritius are not such a big problem because:

Drugs, mainly cannabis (“gandia”), [are] scarce in the market due to its expensive cost. Therefore, there is less drug consumption”.

PEOPLE WHO USE DRUGS ARE YOUNG

The median age of PWUD was 30 years and 29% of those using illicit drugs were between the ages of 18 and 24 years. Many persons interviewed during the qualitative research indicated that many young people are using drugs. One focus group member commented that he was:

“shocked to see that some youngsters are consuming more drugs per day than he was consuming at that particular age”.

²¹ Hall W, Degenhardt L. High potency cannabis: a risk factor for dependence, poor psychosocial outcomes, and psychosis. BMJ. 2015 350. Available from: <https://pubmed.ncbi.nlm.nih.gov/25739398/>

²² World Health Organization (WHO). The health and social effects of nonmedical cannabis use. 2016;95. Accessed at: https://www.who.int/substance_abuse/publications/msbcannabis.pdf

Unfortunately, this survey did not sample those under the age of 18 given restrictions on consent. These findings indicate a strong need to measure the extent of illicit drug users among adolescents as well.

Mauritius should conduct rapid assessments to quickly estimate the situation and service need for young populations and conduct research to estimate the cost of these services. Policies should ensure appropriate representation of young people who use drugs and ensure adequate funding to research and map drug-related risks among people under the age of 18²³. Furthermore, age restrictions on harm reduction services (where they exist) should be removed to allow for age-related data collection and access to existing services

AGE AND REASONS FOR INITIATION OF DRUG USE

The median age of first cannabis use was 17, with the youngest age being 11 and the median age of first illicit drug use (other than cannabis) was 20, with the youngest also being 11. Early initiation of drug use is not unusual in many countries²⁴. For instance, the 2016 National Survey on Drug Use and Health conducted in the United States found that over half of the participants (54%) were under 18 years of age when they initiated illicit drug use²⁵. Use of alcohol, cannabis, and other drugs before the age of 18 increases the likelihood of a drug use disorder, which may disrupt brain development²⁶. Although smoking cannabis is often considered a 'gateway' drug, most people who use cannabis do not go on to use other more deleterious illicit drugs. Nevertheless, cannabis use often proceeds other illicit drug use. As noted in the median age between first cannabis use versus median age of first illicit drug use, the majority of PWUD in Mauritius used cannabis before other illicit drugs. Focus group discussions in Mauritius also found that almost all PWUD used cannabis before using other illicit substances.

The focus groups with PWUD also brought to light a common list of reasons, including stress, curiosity and peer pressure, as to why someone initiates drug use:

"[I] always stayed with older friends and cousins consuming drugs and thus started using drugs as [I saw] fit in the group and I experimented with it".

²³ Barrett D, Hunt N, Stoicescu C. Injecting Drug Use among Under 18s: A Snapshot of Available Data. Harm Reduction International. London, U.K. 2013. Accessed at: https://www.hri.global/files/2014/08/06/injecting_among_under_18s_snapshot_WEB.pdf.

²⁴ Barrett D, Hunt N, Stoicescu C. Injecting Drug Use among Under 18s: A Snapshot of Available Data. London, U.K.; 2013. Accessed at: https://www.hri.global/files/2014/08/06/injecting_among_under_18s_snapshot_WEB.pdf.

²⁵ NIDA. Nationwide Trends. 2017. Baltimore, Maryland. Accessed at: <https://www.drugabuse.gov/publications/drugfacts/nationwide-trends-on-2017>.

²⁶ Jordan CJ, Andersen SL. Sensitive periods of substance abuse: Early risk for the transition to dependence. Dev Cogn Neurosci. 2017;25:29-44.

I started in college with “college friends, [I] wanted to copy friends and feel Accepted”.

Even the family members of PWUD are aware of these factors that may encourage someone to start using drugs, but most family members believe that peer pressure from friends are the main reasons why someone initiates drug use.

Given that drug use starts at a young age and that most PWUD reported ever attending school, among which, the majority reported completing primary school, the risks of drug use should be seriously incorporated into the school curricula when children are still in primary school. Education programs should target younger populations and young people should be screened and provided education during routine medical visits. Although evidence shows that drug education is unlikely to prevent every young person from ever using drugs, programs which keep young people involved in activities and give guidance on values, attitudes and knowledge have been shown to delay onset of drug use for some who may have otherwise initiated drug use at an earlier age²⁷. According to the Ministry of Education, Tertiary Education, Science and Technology, they are working closely with the local NGO in Mauritius to facilitate several complimentary and direct programs that aim to reduce or delay drug use. The Ministry of Education is seeking to introduce additional programs for the upper secondary school groups in collaboration with UNODC, WHO and the MOHW.

HEROIN

58% of PWUD claim that heroin was the first non-injection drug used (other than cannabis), 63% used heroin in the past month and 54% state that heroin is the drug they used most often in the past month. To smoke heroin, users burn the substance and inhale the smoke into the lungs and to snort heroin, users inhale a powdered form through the nose. There is a common misconception that smoking or snorting heroin is not as addictive as injecting it. Smoking or snorting heroin is extremely dangerous, and the belief that it is safer than other methods of ingestion is a hazardous myth²⁸. One participant in a focus group had this to say about smoking heroin:

“[I] regret that [I] started smoking heroin, had [I] known that it was so addictive,

²⁷Caulkins JP, Pacula RL, Paddock S, Chiesa J. School-Based Drug Prevention: What Kind of Drug Use Does It Prevent? RAND Corporation. 2002. Accessed at: https://www.rand.org/pubs/research_briefs/RB6009.html

²⁸ National Institute on Drug Abuse (NIDA). Heroin Drug Facts. 2021. Available from: <https://www.drugabuse.gov/publications/drugfacts/heroin>

[I] would have never tried it. It is better to continue consuming cannabis”.

He then went on to advise all participants in the room to never try heroin as it will be impossible to stop. Another participant, also a heroin user, agreed with what the other participant had said and cautioned others not to start using heroin. Another focus group participant lamented:

“During New Year’s Eve party with cousins, they told [me] it was cannabis but after smoking, [I] realized that it was actually brown sugar²⁹. [I] was thus deceived and tricked by [my] cousins and since then [I] am addicted to brown sugar.

SYNTHETIC DRUGS

Based on discussions with drug treatment centres, the National Drug Secretariat, the Anti Drug and Smuggling Unit and the Harm Reduction Unit of the MOHW, there has been an increase in the use of synthetic drugs. Synthetic drugs are extremely problematic since there are no known treatments, other than palliative, which can only relieve symptoms. In Mauritius, 37% of PWUD claim that synthetic drugs were the first non-injection drug they used, 57% used synthetic drugs in the past month and 41% stated that the drugs they used most often in the past month were synthetic drugs. Most synthetic drug users are high frequency users (once a day or more). Among those who use synthetic drugs, most are male, 32% are between 18 and 24, live in Port Louis, have only completed primary school, are employed, and are single and never married. Twenty-eight percent of those who ever used synthetic drugs have been arrested.

IMPACT OF DRUG USE

Financial issues

During the focus groups with PWUD, participants mentioned being concerned with financial problems stating that they were unable to pay bills and are anxious and stressed about having enough money to buy drugs. Many participants agreed that they spend all their money buying drugs and that they become stressed about where they will find more money when they have already spent their entire salaries on drugs. Other participants claimed that many PWUD just work harder and are always able to sustain their drug consumption. One participant stated:

²⁹ Brown sugar is a form of heroin.

“[I] now do not have any future, no one wants to marry [me] and [I] do not even have enough money to build a future with someone [or] to pay for a wedding, build house, buy gifts”.

Family members in focus groups complain that a family member that uses drugs will often steal money and bother family members to give them money.

“[Our] son fights with other siblings for money and sometimes steals their money.”

Work and school

Although 76% of PWUD are employed, the majority work in manual labour (62%). Among those who are unemployed, half rely on their parents for social support. Almost half of those who are unemployed are homeless. 22% have engaged in illegal activities to obtain drugs. Drug use impacts the working lives of focus group participants who use drugs:

“[I] sometimes cannot attend work as [I am] still in an addiction stage and [I] know [I] won’t be able to perform work well”.

“[I] often lose [my] work due to the fact that [I am] often ill and sometimes [my] work colleagues realize that [I use drugs] and thus complain of it despite the fact that [I] do not consume drugs at the workplace”.

[I] was thrown out [of the] family business. But now [I have] started working in the same family business; however [I] do not have access to activities relating to money, for example clients do not pay [me] anymore”.

Low percentages of PWUD had higher education levels than primary school. Some participants in the focus groups indicated that they could not complete their further studies because they were addicted to drugs.

Family and society

Fifty-eight percent of PWUD say that their families have complained about their drug use and forty-five percent say they have neglected their families as a result of their drug use. Families in focus group discussions complain about their family member who uses drugs as being “disobedient”, “always having

disputes about money”, “becoming violent if refused money”, and having “irresponsible behaviors”. Many of the focus group participants who use drugs stated that they have been thrown out of their homes by their family members. Families of PWUD stated that drug use is a “serious problem in our country because it is destroying family lives and the lives of the current drug users as well”. Participants who use drugs in focus groups stated:

“They [the family] unanimously have lost trust in them. If something gets lost in the house, they [the family] automatically assume that he has stolen it and sold it for his drug consumption” .

“[My] family members ignore [me]. If [I] attend a party, the family members make as if [I] do not exist. [I] do not get invitations to family events as [I] have the title of a “drug addict” some family members have also told [me] that it is better to interact with and meet an alcoholic than to interact with a drug addict”.

“Some family members have severed all their ties with [me], some do not hesitate to treat [me] as a thief or drug addict, some do not even greet [me]”.

“Being a drug addict has destroyed [my] family. [My] parents are now in debt due to [my] addiction and this has caused a lot of stress and frustrations at home”.

Some focus group participants who use drug and families who have members who use drugs have described how drug use had affected marriage and children. They claim that many of the reasons for marital problems are a result of fighting over money and being absent from work (because of drug use) which results in them not being able to support their wives and children. One family member described how their son shows no affection towards his wife or children and becomes violent towards his children due to drug use.

“Due to [my] drug addiction, [I] got separated from [my] wife and children”.

In some cases, family members have made statements that taking and being able to pay for drugs alleviates some of the problems:

“Whenever [my] son has his dos, he does not create any problems in the house”.

“[My] son does not create any problem at home because he works to buy his drug doses”.

Living with drug addiction

Eighty-one percent of PWUD have ever felt guilty about drug use. This is verified through the focus groups with PWUD.

“[I have] actually lost trust in [my]self. [I] do not trust [my]self anymore as [I] feel lost most of the time”.

Aside from the loss of self-respect, some participants talk about the difficulties and struggles of being addicted to drugs.

“[I] am dependent on drugs. [I have] to start [my] day by consuming drugs or otherwise [I] won’t be able to attend work. [I] will spend [my] day having taken drugs in the morning itself which is a matter of concern for [me] and then [I] will spend the night thinking if [I] will get [my] drugs tomorrow or not.

Many PWUD are largely stigmatized by their communities. Participants in focus groups claim that they are rejected by society.

“Neighbors, family members or any other people judge [us] by [our] appearances and thus they do no talk or invite [us] to any events”.

Problems with police, arrest and incarceration

Twenty-eight percent of PWUD have ever been arrested, among which 27% were arrested in the past year. Of those who were ever arrested, 46% were ever incarcerated. Among males, 27% have been arrested and among female, 10% have been arrested. Several focus group participants have mentioned having problems with the police and being arrested for drug use.

“[I] often have police issues and because of [my] appearance the police officers often stop [me] for routine checks”.

Prison settings provide an excellent opportunity for the treatment of drug use. It is essential that efforts are made by the government and prison authorities to scale up drug dependence treatment options for prisoners with problematic drug use, as well as consider providing recreational and educational opportunities which encourage rehabilitation and provide prisoners with activities that will distract them from drug use. It is noted that 41% of those incarcerated used drugs during their incarceration. This situation needs to be addressed. Mauritius should continue to promote an effective human rights based criminal justice response to the drug problems by moving away from laws and policies that are harmful to PWUD and by increasing investment in harm reduction³⁰.

DRUG TREATMENT AND STAYING OFF OF DRUGS

Only 15% of PWUD can always stop using drugs when they want to and only 27% have ever sought treatment for their drug use and abuse. Among females who use drugs, 30% have sought treatment and among males 33% have sought treatment. According to the focus group participants who use drugs and who have been able to stop using drugs in the past, they have not been able to stay off of drugs for very long. The length of time that focus group participants who use drugs claimed they were able to stay off of drugs ranged from one day to two years. There are many reasons why PWUD have reinitiated drug use:

“[I] was able to stop consuming drugs during the lockdown period. He [I] started consuming again when lockdown was over as [I] started getting money again”.

“[I] started consuming again due to family problems. [I] went out to consume alcohol with friends and talk to them about his family situation, and then ended up consuming drugs as [my] friends were doing so in front of [me]. [I] could not resist”.

“[I] relapsed when it was my birthday. [I] remembered that each birthday [I] used

³⁰ UNAIDS. Do no harm: Health, human rights and people who use drugs. Geneva, Switzerland. 2015. Accessed at: http://www.unaids.org/sites/default/files/media_asset/donoharm_en.pdf

to consume drugs and thus [I] could not resist and consumed heroin again”.

Some focus group participants who use drugs were currently undergoing some sort of treatment, including methadone and/or counseling. Family members mentioned that the government needs to provide more alternative activities to help PWUD succeed in treatment. Some family members of drug users state that they are seeing beneficial changes in the behaviors of their drug using family members after attending their counselling sessions. Overall, the family members stated that the treatment centers provide good hospitality and programs for the family member who are using drugs, as well as to the non-drug using family members.

“[I] was thrown out of the house but eventually [I] got the support from [my] family and doctors. [My] family is now very helpful and they are supporting [me] in [my] drug related situations”.

“[My] drug consumption was causing marital problems at first. But now, due to the fact that [I am] on treatment [I have] has fewer marital issues”.

Some focus group participants who use drugs reported not being aware of treatment possibilities and where to access them. Addressing barriers to healthcare access, such as lack of knowledge about existing treatment, ineffective treatment modalities as well as increasing the number number of treatment options, in Mauritius is essential.

RECOMMENDATIONS

- PWUD have strong social networks as confirmed by the use of peer-to-peer recruitment. This knowledge is useful in delivering peer driven prevention and intervention modalities.
- Females have different patterns of drug use and needs compared to males; creative treatment modalities are needed to address the needs of females who use drugs. Furthermore, it is recommended that additional and focused in-depth qualitative research be conducted among females who use drugs to better understand their behaviors and harm reduction and treatment needs.

- A scale up of services providing the most effective medications and treatment modalities for specific drug types as well as socio-psychological components to deal with the root causes of problem drug use are needed for anyone who needs help to stop using drugs, including those in prison settings. It is essential to maintain best practices for PWUD targeted programs to provide harm reduction education, effective drug treatment and maintenance modalities.
- Education and policy should be enhanced to ensure an effective human rights based criminal justice response to drug problems and focus more on harm reduction rather than on punishment.
- Outreach efforts as well as policy changes are needed to reduce stigma and discrimination related to PWUD among the community.
- All treatment programs should be accessible, affordable, and friendly. There are indications from focus groups with PWUD and their families that including family members in a person's treatment of drugs is effective. Programs should continue to involve families in the treatment and recovery of problem drug users.
- PWUD start using drugs at young ages. It is important to continue enhancing youth programs to include healthy lifestyle choices and support for young people who may be vulnerable to drug use. Additional efforts are needed to educate young people about drug use and to allow harm reduction and outreach to young people.
- There are an estimated 55,000 PWUD in Mauritius. This population size estimation should be used to better plan and allocate resources for prevention and intervention programs.
- In an effort to monitor changes in drug use behaviors and to monitor the impact of interventions, future surveys using the same sampling method and eligibility to monitor are warranted.
- Conduct rapid assessments to quickly understand the situation and service need for young populations and conduct research to estimate the cost of these services.