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Drug use in Pakistan 2013

Country Office Pakistan

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Updated estimates of prevalence, number of drug users, and other findings reported here now replace those provided in the *Drug Use in Pakistan 2013 Technical Summary Report* released in March 2013. It is important to note that the previously reported estimates and other information should not be used or quoted in any article or commentary on the drug use situation in Pakistan.

Abbreviations and acronyms

AIDS	Acquired Immune Deficiency Syndrome
ATS	Amphetamine-Type Stimulants
CBO	Community Based Organization
CNSA	Control of Narcotic Substances Act 1997
FATA	Federally Administered Tribal Areas
HIV	Human Immunodeficiency Virus
ICD	International Classification of Diseases
IDU	Injecting Drug Use
INCB	International Narcotics Control Board
KPK	Khyber Pakhtunkhwa
NGO	Non-Government Organisation
NIPS	National Institute of Population Studies, Pakistan
PAK	Pakistan-administered Kashmir
PWID	People Who Inject Drugs
SDS	Severity of Dependence Scale
UNAIDS	The Joint United Nations Programme on AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commission for Refugees
UNODC	United Nations Office on Drugs and Crime
USD	United States Dollar
WHO	World Health Organization

Executive summary

In 2012, a comprehensive national study of drug use was conducted in Pakistan, providing reliable baseline information on the prevalence and patterns of drug use among the population aged 15 to 64. To generate these results, a series of surveys was conducted throughout the four provinces and Pakistan-administered Kashmir, including interviews of 4,533 high-risk drug users[1]; 58 drug treatment centre representatives; 1,198 key informants; and 51,453 participants randomly selected from the general population.

The survey results show considerable past-year use of both plant-based drugs and medical prescription drugs, particularly of cannabis, prescription opioids (painkillers), tranquilizers and sedatives, and opiates (heroin and opium). Drug use in Pakistan is highly differential by gender. The national population prevalence is a combination of very high levels of use of these substances among men, and generally low levels of use among women offset by considerable levels of misuse of prescription opioids and tranquilizers and sedatives among women. Although Pakistan is a country with a large population of youth, drug use was more common among those between the ages of 25 to 39 than 15 to 24.

Among drug users detected in these surveys, dependence and severity of dependence were high. Of the 6.7 million past-year users of any illicit substance, 4.25 million are considered to be drug-dependent. For those who are dependent, there is an overwhelming need for drug dependence treatment and care interventions including low-threshold services, both of which need to be up-scaled. Three-quarters of the regular opiate users interviewed reported a strong desire for treatment, but cited either a lack of access or an inability to afford treatment.

In addition to drug use, there are the warning signs for a rapid expansion of the HIV epidemic. Survey results detected a very high prevalence of HIV risk behaviours among people who inject drugs. Because the majority of HIV positive people who inject drugs are not aware of their status, they are also not taking precautions to prevent further transmission. Further, because knowledge of how HIV is transmitted is extremely low in the general population, opportunities to prevent infection are being missed.

Despite extensive efforts, prevalence estimates reported here are likely to underestimate drug use among women. Further, taking into consideration the very high levels of dependency among those who were detected, we believe recreational or casual drug use is more common than presented here, but was not detected due to underreporting in the general population.

This report *Drug Use in Pakistan 2013* also aims to provide the basis for design and implementation of effective prevention, treatment and care services that are evidence-based, targeted, responsive, and needs-led to counter the extent of a diverse nature of drug use in Pakistan.

[1] The problem drug use indicator has been recently been revised by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) to high-risk drug use, in an effort to capture the population where "recurrent drug use that is causing actual harms (negative consequences) to the person (including dependence, but also other health, psychological, or social problems) or is placing the person at a high probability/ risk of suffering such harms". This indicator includes opioid use, injecting drug use, and frequent and high-risk cannabis use.

Key findings

National

- Approximately six per cent of the population, or 6.7 million people had used any controlled substance including misuse of prescription drugs, in the last year.[2]
- Cannabis is the most commonly used drug, with a prevalence of 3.6 per cent of the population, equivalent to four million users nationwide.
- Poly-drug use is common, with one in five reporting more than one controlled substance in the past-year.
- An estimated 860,000 or 0.8 per cent of the population are regular heroin users and 320,000 (0.3 per cent) are opium users. Combined, 1.06 million people (1.0 per cent of the population aged 15-64 years) are using opiates.
- The majority of drug users in this study fell between 25 and 39 years of age. Cannabis use was highest among 30 to 34 year olds and heroin use was highest among 35 to 39 year olds.
- Previously undetected in the country, trace levels of methamphetamine are now being reported with around 19,000 people estimated to have used this stimulant in the past-year.
- The number of people who inject drugs (PWID) is estimated to be 430,000 nationwide, or 0.4 per cent of the population.
- Among PWID, 73 per cent reported sharing syringes claiming lack of access to sterile injecting equipment; only 1.0 per cent of all people who inject drugs accessed needle and syringe supply or exchange services in the past six months.
- Among the general population, only 13 per cent can accurately name three modes of HIV transmission.
- Approximately 1.5 per cent of the population, or nearly 1.6 million people, reported non-medical use of prescription opioids (painkillers) in the past year.
- While men were found to use more drugs than women for most drug types; women are more likely to misuse tranquilisers and sedatives as well as amphetamines.
- Around 4.25 million drug users in Pakistan are considered dependent on substances and require a form of structured intervention for treatment of their drug use disorder.
- Among dependent users, women were less likely to have received treatment than men.
- Opiate users demonstrate very high levels of drug dependence nationally, which is higher in areas with no reported treatment services.
- The majority of opiate users (76%) report wanting help for their dependence. The most common reason noted for not seeking drug treatment was an inability to pay.

[2] Throughout this report, references to estimates of drug-using populations are specifically for use in the past-year among residents of Pakistan aged 15 to 64 years.

Provincial

- The highest prevalence of opiate users was found in Balochistan, where 1.6 per cent of the population uses either heroin, opium, or both.

- Due to its large share of the population, Punjab has the highest number of drug users and people who inject drugs (PWID) with 2.9 million people using illicit substances in the past year, and approximately 260,000 people who currently inject drugs.

- Approximately 80 per cent of PWID in Punjab share syringes regularly, whereas two-thirds report doing so in Sindh and Balochistan, and half in Khyber Pakhtunkhwa.

- The severity of dependence among opiate users is highest in Khyber Pakhtunkhwa and Balochistan, indicating a significant need for long-term treatment and care for drug use disorders.

- The highest prevalence overall of any form of drug use is in Khyber Pakhtunkhwa where 10.9 per cent of the population had used an illicit substance in the past-year.

- While cocaine use is negligible in most areas of the country, its use was reported in Pakistan-administered Kashmir where approximately 2,300 people had used cocaine in the past year.

- Regarding ATS, an emerging group of substances in Pakistan, Balochistan had the highest prevalence of methamphetamine use and Khyber Pakhtunkhwa had the highest prevalence of prescription amphetamine use. Ecstasy use was not detected in this round of surveys.

- Nearly all regular opiate users report having no access to drop in centres or similar low threshold services in their area in Khyber Pakhtunkhwa (93%) and Balochistan (95%). Further, only 14 per cent reported such access in Punjab. Respondents from Sindh reported the highest access, where services were available to one-third of opiate users (33%).

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1 Introduction

1.1 Aims and objectives of the national survey on drug use

Generating reliable evidence on the extent to which the population is using drugs and suffering from drug use disorders can provide the evidence base required to ensure effective and responsive planning of drug use prevention, treatment, and care services. Although several assessments of drug use have been carried out in Pakistan between 1982 and 2006, a recent and comprehensive study of drug use was required. The aim of this study was to provide estimates of the extent of drug use and associated harm to develop policies and programmes in cooperation with national and international stakeholders to address drug demand reduction efforts in Pakistan in addition to address availability of drugs.

Specific objectives of the national survey on drug use in Pakistan were:

- To provide reliable estimates of the prevalence of drug use among the population aged 15 to 64 in Pakistan, broken down by gender and provinces in the following categories:
    - Illicit drug use
    - Non-medical use of prescription drugs
- To identify socio-demographic features of drug users including the patterns of drug use.
- To enhance understanding around the levels of drug related harm, and perceived accessibility and uptake of drug dependence treatment services and other interventions for drug users.

In order to develop a comprehensive picture of drug use in the country the National Survey comprised the following components: [3]

- A national household survey on health behaviours implemented by the Pakistan Bureau of Statistics, comprising interviews with a nationally representative sample of over 51,000 individuals randomly selected across the country.
- Study of "problem drug use" with 4,500 high-risk drug users (regular opioids and cannabis users) interviewed in community settings in 23 districts across Pakistan. The problem drug use study was conducted with the aim of looking at patterns of high risk drug use that is not likely to be reported or found in conventional household surveys.

  The problem drug use study as well as the other two studies on key informants and audit of drug treatment services were conducted by the Centre of Global Health Pakistan an affiliate of the University of Manitoba, Canada.
- A study of key informants, i.e., individuals in regular contact with drug users as well as those with awareness and knowledge around patterns and trends among drug users, with around 1,200 key informants in 23 districts interviewed. The purpose of the study was to solicit from

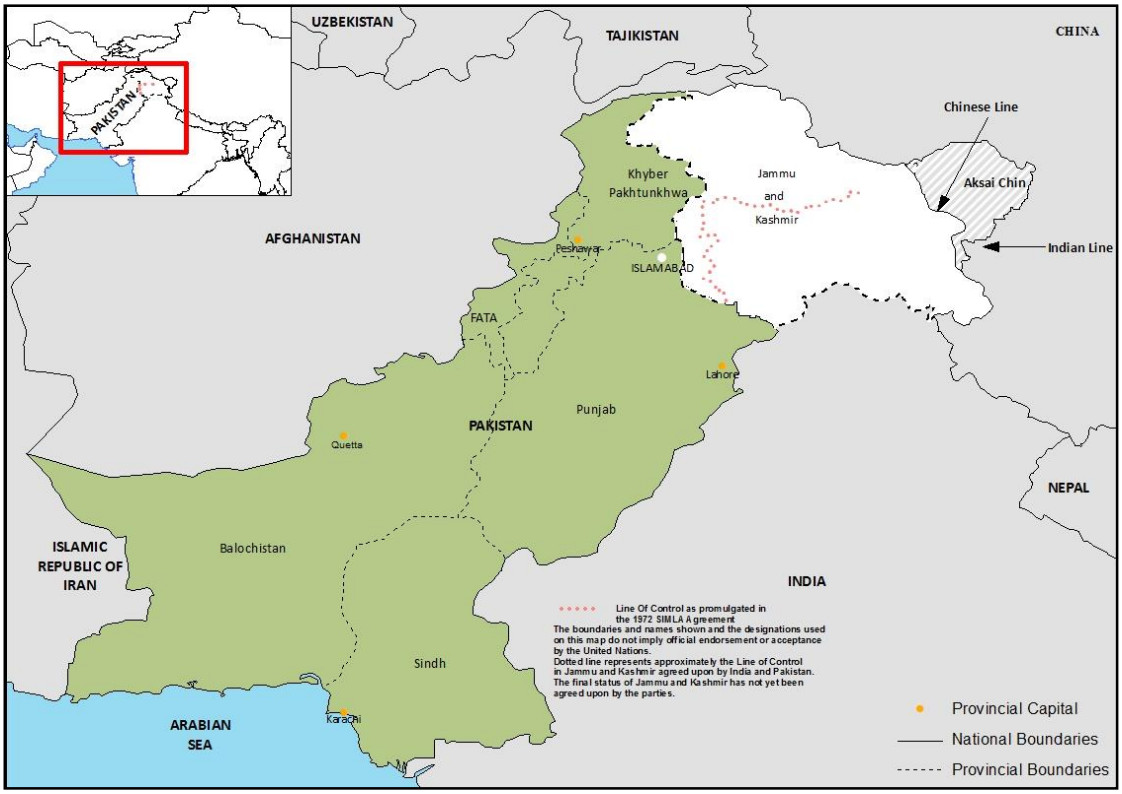
[3] For detailed information on the survey methodology please see the Annex.

the key informants information and their perceptions of drug use patterns, trends, and associated problems related to drug use in their communities.

- An audit of drug dependence treatment services in Pakistan, where information from 58 drug treatment services on the number of drug users treated, as well as related information on their drug treatment capacity, and nature of interventions and services provided were collected. The number of drug users treated was primarily used as the benchmark data to estimate prevalence of opioid and cannabis users using the "multiplier benchmark" method to estimate prevalence of high-risk drug use.

1.2 Background

Map 1: General map of Pakistan



With around 180 million people[4], Pakistan is the sixth most populous country in the world. Pakistan continues to thrive as a key actor, politically and economically, in the south and south west Asian region, despite facing a host of domestic social, economic, and political issues, responsible for hindering its continued development. The country is ranked 146 out of 186 countries by the 2013 *United Nations Human Development Index,* [5] with nearly half of the population living below the poverty levels. According to the same report, almost a quarter of people are estimated to be living on less than USD 1.25 a day. Stark differences can be seen in literacy rates across gender as well as urban and rural sub-divides, as well as between provinces. Despite an overall literacy rate of 58 per

[4] Ministry of Finance, Government of Pakistan. 2012. *Economic Survey of Pakistan.*
[5] UNDP. 2013. *Human Development Report: The Rise of the South: Human Progress in a Diverse World*.

cent, only 46 per cent of women in Pakistan are reported as literate. Pakistan's mean duration of schooling in a formal education setting is a mere 4.9 years.[6]

The development of drug use in Pakistan can be seen in three successive as well as partially overlapping phases.[7] The traditional drug use, which still exists in some parts of Pakistan involves the use of opium, hashish (charas or cannabis resin) or bhang - a drink made from cannabis leaves. At the time of Enforcement of Hudood Ordinance in 1979, that put ban on the cultivation, sale and use of opium there were approximately 100,000 registered opium users in the country.[8] Beginning in the 1980's, the heroin epidemic reached Pakistan spreading rapidly through the male population. Female heroin users were unusual, although regional pockets with high levels of heroin use among women were recorded. The misuse of prescription drugs has also existed at varying levels since decades, e.g., the misuse of pethidine and morphine, and tranquilisers and sedatives in urban centres along with use of substances such as methaqualone (Mandrax) - that was more popular in the seventies in Pakistan.[9] [10]

In addition to the historical and geographical context, socio-demographic, psychological, economic factors also play a role in determining drug misuse. Research conducted in Pakistan show that features of life such as unemployment[11] and post-traumatic stress disorders[12] are highly associated with substance use. In addition, cultural and environmental factors including the availability of both licit and illicit substances are likely to render many segments of the Pakistani population - from both urban and rural areas - increasingly vulnerable to drug use.[13]

1.3 Supply

Pakistan sits on one of the world's busiest drug trafficking corridors, largely due to the cultivation of opium poppy and cannabis in neighbouring Afghanistan. According to UNODC estimates 40 per cent of the drugs (heroin & charas) produced in Afghanistan are routed through Pakistan. This generates a considerable opiate supply for export but also for domestic use. Other than cannabis and opium poppy, available data points to an emerging supply of amphetamine-type stimulants (ATS), ecstasy, and cocaine. Law enforcement authorities in Pakistan have made seizures of methamphetamine in the last few years, as well as identifying irregularities around the import of related precursor chemicals such as ephedrine.[14] Further, Pakistan has a developed pharmaceutical industry and a large network of pharmacies and medical stores that largely remain unregulated, around the country. These pharmacies and stores distribute and sell medicines, including controlled medicines, in nearly all parts of the country, in most instances without a requirement for a prescription from a medical practitioner.

1.3.1 Opiates

Most illicit opium poppy cultivation occurs in the south of Afghanistan in the provinces bordering Pakistan, mainly in Helmand and Kandahar. Of the 11 Afghan provinces bordering Pakistan, only four

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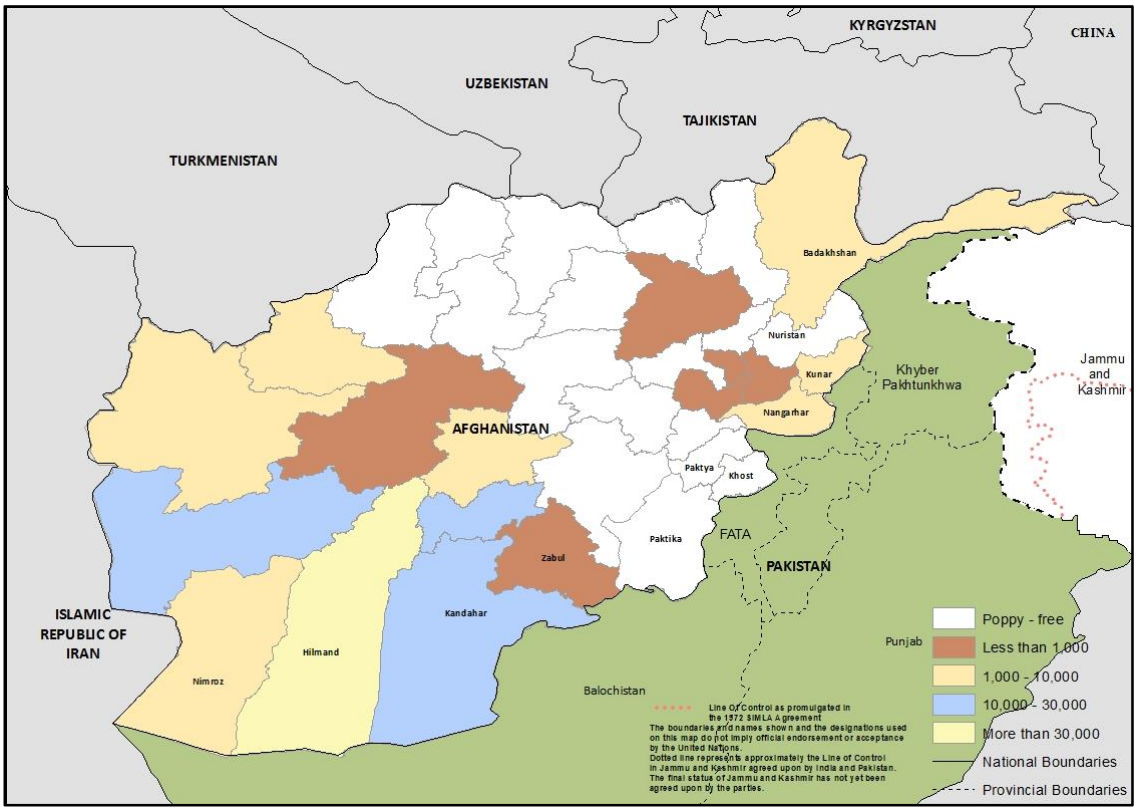
[6] Pakistan Bureau of Statistics, Government of Pakistan. 2012. *Pakistan Social and Living Standards Measurement Survey 2010-11.*
[7] Narcotics Control Division, *Resource and Reference Manual for Prevention Resource Consultant Network*, Government of Pakistan January, 1990
[8] Narcotics Control Division, *Resource and Reference Manual for Prevention Resource Consultant Network*, Government of Pakistan January, 1990
[9] Ibid
[10] Pakistan Narcotics Control Board. 1982/83, 1986, 1987. *The National Survey on Drug Abuse*.
[11] Henkel, D. 2011. "Unemployment and substance use: a review of the literature (1990-2010)." *Curr Drug Abuse Rev* 4(1): 4-27.
[12] Javidi, H., and Yadollahie, M. 2012. "Post-traumatic Stress Disorder." *Int J Occup Environ Med 3*(1): 2-9.
[13] For a better understanding of drug use and risk factors please see the WHO publication on "Neuroscience of psychoactive substance use and dependence http://www.who.int/substance_abuse/publications/en/Neuroscience.pdf
[14] INCB. 2011. *Precursors Technical Report.*
http://www.incb.org/documents/PRECURSORS/TECHNICAL_REPORTS/2011/PARTITION/ENGLISH/PR2011E_ExtentOfLicitTradeAndLatestTrendsInTraffickingPrecursors.pdf.

were estimated to have cultivated less than 100 hectares of poppy in 2012.[15] UNODC predicts that in 2013, largely due to the current high price of opium and compensation for a low yield in 2012, the cultivation levels of opium poppy will reach record levels, surpassing the 154,000 hectares cultivated in 2012.[16]

Map 2: Extent of opium cultivation in Afghanistan, 2012, at provincial level

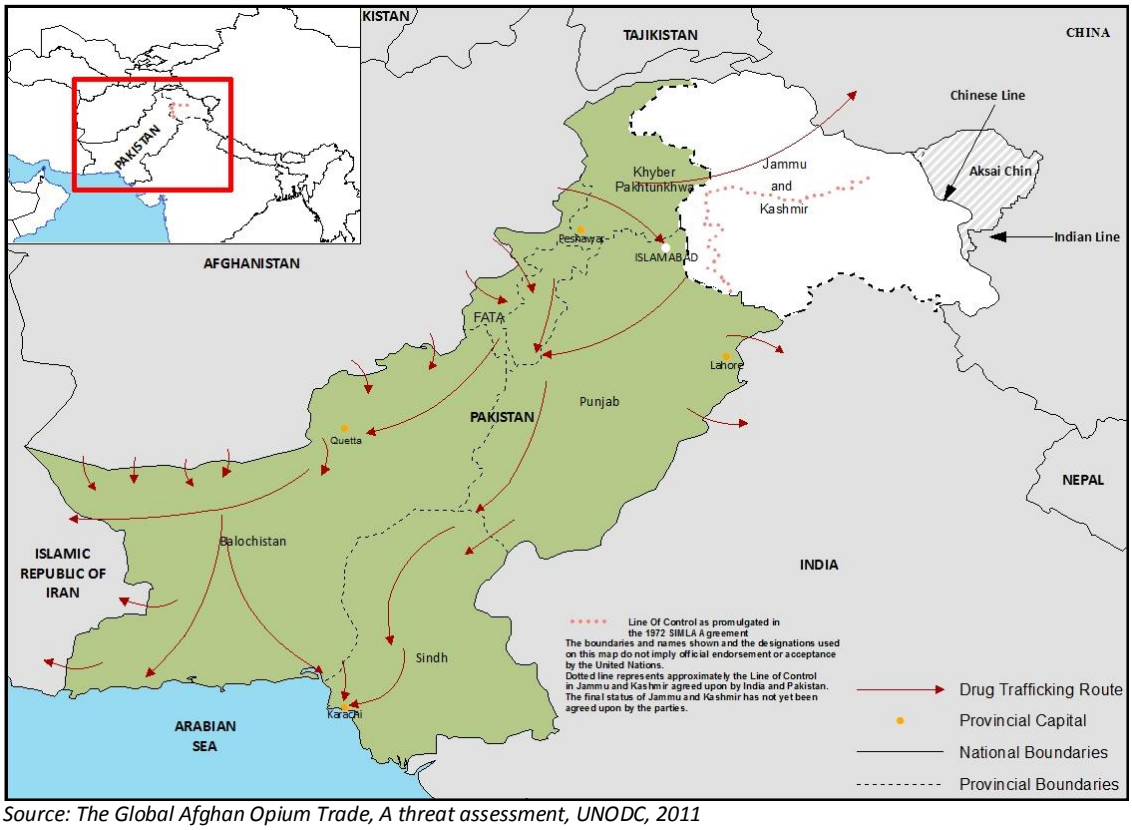


The border area between Afghanistan and Pakistan is porous, inhospitable, and unstable in many areas. Few official border crossing points exist, resulting in a challenging task for law enforcement authorities from both countries when attempting to address drug trafficking.[17] Global trafficking routes and seizure data in Pakistan indicate that the most well-travelled trafficking routes within Pakistan run from Afghanistan through the western provinces of Khyber Pakhtunkhwa and Balochistan to Iran in the west and Pakistan's coastline in the south, including its seaports of Karachi and Port Qasim.

Extensive research previously conducted by UNODC and detailed in *The Global Afghan Opium Trade 2011,* reports that of the estimated 350 to 400 tons of opium trafficked through Pakistan in 2009, an estimated 132 tons were consumed in the country. Also in 2009, of the approximately 160 tons of heroin trafficked from Afghanistan into Pakistan, 20 tons were considered to be consumed in Pakistan.

[15] UNODC. 2012. *Afghanistan Opium Survey – Summary Findings 2012.*
[16] UNODC. 2013. *Afghanistan Opium Risk Assessment Report.*
[17] UNODC. 2012. *Afghanistan Opium Survey – Summary Findings 2012.*

Map 3: Reported opiate trafficking routes in Pakistan, 2009



Source: The Global Afghan Opium Trade, A threat assessment, UNODC, 2011

1.3.2 Cannabis

UNODC estimates that in 2011, farmers in Afghanistan planted cannabis in areas with a combined surface area of 12,000 hectares, resulting in the illicit production of some 1,300 tons of cannabis resin (hashish). Like poppy cultivation, large-scale cannabis cultivation also takes place in the southern and insecure provinces of Afghanistan, often with the same farmers being involved.[18] As such, cannabis resin originating in Afghanistan is trafficked along the same routes through Pakistan as is opium and heroin—corroborated by seizure data reported by the authorities in Pakistan.

1.3.3 Precursors

The International Narcotics Control Board identifies Pakistan as having the fourth highest annual legitimate requirement for ephedrine[19] - a precursor chemical which besides its legitimate use, is also diverted for the manufacture of ATS.

Acetic anhydride is a precursor chemical used to convert morphine into heroin. While Pakistan, due to the large textile and tanning industry has considerable licit use of acetic anhydride, between the years of 2008 and 2011, approximately 36,000 litres of *illicit* acetic anhydride were seized in Pakistan. The price of acetic anhydride in Afghanistan, where there are no licit uses, dropped from $350/L in 2008 to less than $200/L in 2012, providing some evidence that more acetic anhydride is reaching the area for conversion processes than four-years ago.

[18] UNODC. 2011. *Survey of Commercial Cannabis Cultivation and Production.*
[19] INCB. 2012. *Report of the International Narcotics Control Board 2012.*

1.3.4 Psychotropic substances

Pakistan has a budding pharmaceutical industry with some 400 manufacturers producing nearly three-quarters of the country's domestic medication.[20] Imported and locally manufactured medicines are sold through a vast network of dispensers [21] made up of pharmacies, medical stores, and other retail outlets. [22] Because access to qualified medical practitioners is limited [23] in most rural and urban areas, dispensers play a major role in prescribing and are the first point of contact for many patients seeking health care. Many dispensaries and pharmacies double as general convenience stores with long opening hours, and the presence of qualified pharmacists is limited. [24]

While legal frameworks have long been in place for regulation of the prescribing and sale of pharmaceutical drugs, [25] adherence to the law appears lax. A 2013 published report on Pharmaceutical Care at Community Pharmacies in Pakistan reports the lack of professional and qualified dispensers, ambiguity of laws and their implementation, sale of prescription only medicines (POM) including narcotic painkillers without a prescription, and scant provision of information to clients as the main reasons for poor quality of services offered at community pharmacies in Pakistan.[26] Similarly a 2012 published cross sectional survey of community pharmacies in Islamabad, Peshawar, and Lahore, reported that none of the pharmacies surveyed completely complied with legal requirements in terms of licensing, premises, storage, documentation, narcotics section, drug labelling and prescription checking. [27]

1.4 Drug use

The use of illicit drugs and the non-medical use of prescription drugs are established and widely recognised phenomena in Pakistan. The issue of non-medical use of prescription drugs has always remained a challenge for Health Administrators. The National Ministry of Health Reforms and provincial Health Departments never undertake any scientific study/research to identify the gravity of non-medical use of prescription drugs and its consequences. The psychological, biological, social, as well the cultural factors (e.g. traditional use of cannabis and Heroin), combined with the easy access to an abundance of controlled substances within the country, have likely resulted in a large number of people experimenting or using drugs for recreational purposes as well as developing drug use disorders and dependence.[28] In addition to this geographical location of Pakistan with Afghanistan, the largest opium producer in the world has made Pakistan more vulnerable to the drugs (charas & heroin).

National drug use surveys and assessments have been carried out in Pakistan since 1982. Notwithstanding the demographic changes in the country, because these surveys had different scopes and methodologies it is difficult to draw direct comparisons. Nevertheless, these studies have generated estimates of the different drug using populations, providing useful information for policy and programming purposes in the country.

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[20] Pakistan Pharmaceutical Manufacturers' Association. 2013. Accessed January 14, 2013 http://www.ppma.org.pk/.

[21] Also referred to as 'quacks'.

[22] Anwar, M., Green, J., and Norris, P. 2012. "Health-seeking behaviour in Pakistan: a narrative review of the existing literature." *Public Health* 126(6).

[23] World Health Organization. 2013. *Country Profile: Pakistan*.

[24] Ibid

[25] . Ministry of Health, Government of Pakistan. 2010. *Pharmaceutical Profile for Pakistan*.

[26] Hussain, A, Malik M, Toklu, H Z., "A literature Review: Pharmaceutical Care an Evolving Role at Community Pharmacies in Pakistan" *Pharmacology and Pharmacy,* 2013, 4, 425-430. Published online August 2013 (www.scirp.org/journalpp)

[27] Hussain, A., Ibrahim, M. I., and Baber, Z. U. "Compliance with legal requirements at community pharmacies: a cross sectional study from Pakistan." *Int J Pharm Practice*, vol. 2, issue 3 (2012),pp. 183-190.

[28] Please see the WHO publication " Neuroscience of psychoactive substance use and dependence http://www.who.int/substance_abuse/publications/en/Neuroscience.pdf

Led by the erstwhile Pakistan Narcotics Control Board, the first survey estimated there were around 1.3 million users of any substance[29,30] living in Pakistan. The following year, a more specialised study on heroin use was carried out revealing an estimated 100,000 heroin users.[31] In 1986 an update to the survey was conducted estimating 1.9 million overall drug users[32] and within two years this figure was estimated to have increased to 2.24 million any illicit drug users, as reflected in the Board's 1988 report.[33] By 1993, an estimated 3.01 million users of different illicit substances were believed to be living in Pakistan.[34] This indicated that even at that time a wide range of licit (prescription drugs) and illicit substances besides opiates and cannabis were used in the country. The next national assessment conducted in 2000 with the support of UNODC employed a methodology to derive more reliable estimates of regular heroin users. The study assessed that in the year 2000, there were an estimated 500,000 regular heroin users in Pakistan.[35] The last assessment of opioid use, conducted in 2006 also with the support of UNODC, using a multiplier/benchmark method estimated there were 624,000 regular opiate users and 130,000 people who injected drugs in the country.[36] These numbers are now estimated to have reached 1.06 million opiate users and 430,000 people who inject drugs.

1.5 International conventions and national legislative and policy frameworks

Pakistan is signatory to the three international drug control treaties. The objectives of the *Single Convention on Narcotic Drugs 1961* (as amended by the 1972 Protocol) were to limit the possession, use, trade, distribution, import, export, manufacture, and production of drugs – essentially substances such as opium, cocaine and their derivatives and cannabis – exclusively to medical and scientific purposes.[37] The *Convention on Psychotropic Substances*, 1971, mirrors the 1961 Convention but additionally introduced controls over a number of psychotropic substances, such as the central nervous stimulants, sedative-hypnotics, and hallucinogens according to their abuse potential on the one hand and their therapeutic value on the other. The *United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances*, 1988, additionally provides comprehensive measures against drug trafficking, which include preventing precursor chemicals being diverted into the manufacture of illicit drugs as well as provisions to counter money laundering. Therefore, the three international drug control conventions, to which Pakistan is a party, together regulate both plant based substances and their derivatives – heroin, cocaine, cannabis and synthetic or psychotropic substances.

As such, governments are expected to give special attention to, and take all practicable measures for, the prevention of the illicit use of drugs and for the early identification, treatment, education, after-care, rehabilitation, and social reintegration of the persons involved. Further, they should do so in a coordinated effort. Governments should also take all practicable measures to assist those whose work requires them to gain an understanding of the problems of drug use and of its prevention, and also promote such understanding among the general public if there is a risk that drug use becomes widespread.[38]

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[29] Along with the methodologies, the list of substances included in different surveys have also varied.
[30] PNCB (Pakistan Narcotics Control Board). 1982. *National Survey on Drug Abuse in Pakistan.*
[31] PNCB. 1983. *Heroin Study.*
[32] PNCB. 1986. *National Survey on Drug Abuse in Pakistan.*
[33] PNCB. 1988. *National Drug Abuse Survey for Pakistan.*
[34] PNCB. 1993. *National Survey on Drug Abuse in Pakistan.*
[35] Ministry of Narcotics Control, Anti-Narcotics Force and UNODC. 2000. *Drug Abuse In Pakistan: Results from the year 2000 National Assessment.*
[36] Ministry of Narcotics Control, Anti-Narcotics Force and UNODC, *Problem Drug use In Pakistan*: *Results from the year 2006 National Assessment*, 2007
[37] UNODC, *The International Drug Control Conventions* ISBN 978-92-1-148248-5.
[38] *Single Convention on Narcotic Drugs 1961 Article 38, 1, 2,3. The International Drug Control Conventions* ISBN 978-92-1-148248-5*1;*

Pakistan has ratified these international obligations and included them in national legislation. At present, the *Control of Narcotic Substances Act*, 1997, is in force. The Act prohibits the cultivation, production, manufacturing, extraction, preparation, transportation, possession, trade, financing, and trafficking of narcotics and psychotropic or controlled substances except for scientific, industrial or medical purposes. It defines the sentences for drug offences, prescribes the search and investigation mandates of law enforcers, and carries provisions about the freezing and forfeiture of assets. Though not implemented fully, the Act further stipulates that each provincial government is required to register all drug users to facilitate treatment and rehabilitation. The law also prescribes that each registered drug user should carry a registration card. Finally, the Act empowers provincial governments to establish as many treatment centres as are considered necessary to ensure proper treatment of drug users and their rehabilitation.

The *Anti-Narcotics Policy* (2010) of Pakistan aims to re-energize existing National Drug Law Enforcement institutions, build capacity for the Anti-Narcotics Force (ANF), develop an effective coordination and control mechanism, and mobilize the people of Pakistan, especially youth and institutions (national/international, private/public), to ensure their active participation in eradicating drugs. This policy also seeks to promote international cooperation for mutual support and partnership against narcotic drugs. The strategies in place are three-fold:

- Supply Reduction: Dismantling of drug trafficking networks, limiting the smuggling, trafficking and distribution of narcotics in the country and strict control on movements of precursor chemicals through an elaborated precursor control regime.
- Demand Reduction: Reducing the demand of illicit drugs through awareness programmes, preventive education, treatment and rehabilitation as well as harm reduction programmes.
- International Cooperation: Enhancing international co-operation in the fight against drugs by maintaining liaison with all national and international narcotics control authorities and organizations such as United Nations Office on Drugs and Crime (UNODC), International Narcotics Control Board (INCB), Interpol, and the Bureau of International Narcotics and Law Enforcement Affair (of the United States of America).

The *Anti-Narcotics Policy* is translated into practical measures in the Government's *Drug Abuse Control Master Plan* for the period 2010 to 2014, which aims "*to reduce the health, social and economic costs associated with drug trafficking and substance abuse in Pakistan*" and it envisages a "*drug-free Pakistan by 2020*". The strategy focuses on supply reduction through invigorated and strengthened law enforcement, with demand reduction through accelerated initiatives and increased international support.

In particular, the Master Plan[39]:

- Places emphasis on sustained, continuous drug use prevention programs for schools and communities, improved treatment services, and expansion of the Government's capacity to collect and maintain data related to drug use.
- Provides for increased guidance to and support for non-governmental organisations and community-based organisations. This support is to develop, implement, monitor, and evaluate drug-related prevention projects at provincial and district levels. Also envisaged is the development of prevention campaigns for electronic and print media to target rural youth and other specific groups.

[39] Ministry of Narcotics Control, Government of Pakistan. 2010. *Drug Abuse Control Master Plan 2010-2014.*

- Stipulates that provincial health departments are to upgrade 20 existing drug treatment centres in public and private sectors, which are to be monitored by the Anti-Narcotics Force. In addition, the Force is to establish additional drug treatment centres. Special measures are recommended for street children with solvent use problems and for women with drug use problems.
- Advocates establishing technical working groups to address and make recommendations on injecting drug use, street children using solvents, and HIV in prisons.

1.6 Institutional framework

1.6.1 Ministry of Interior and Narcotics Control

The Narcotics Control Division (NCD) comes under Ministry of Interior and Narcotics Control is the principal policy-level body responsible for drug control decision and policy-making, planning, and coordination. It leads in coordinating the implementation of the National *Anti-Narcotics Policy* in consultation with other ministries and departments, ensuring the alignment of responses to addressing drug use. The Ministry conducts focused studies and assessments on the extent of drug use in the country. In addition, it has established a Planning and Monitoring Unit (PMU) to plan development projects and monitor the projects financed by the public sector. The PMU has also developed a database of organizations dealing with awareness activities, treatment and rehabilitation of drug users.

1.6.2 Anti-Narcotics Force (ANF)

The counter narcotics efforts of Pakistan are led by ANF, which derives its authority from the ANF Act 1997. It is organized into five Regional Directorates (RDs) headquartered in Rawalpindi. ANF is responsible for intelligence collection, arrests, drug seizures, asset seizures, as well as the investigation and prosecution of offenders. The ANF also shares responsibility with other Federal and Provincial Law Enforcement Agencies throughout Pakistan.

The ANF is contributing to supply reduction by dismantling drug trafficking networks, limiting the smuggling, trafficking and distribution of narcotics in the country and ensuring the strict control of precursor chemical movements through an elaborated precursor control regime. For reducing drug demand, ANF and MNC run programmes related to drug use awareness, preventive education, treatment and rehabilitation, and harm reduction. ANF has also established three drug dependence treatment centres in Quetta, Islamabad and Karachi, and is also providing drug treatment services to drug using prison inmates in one prison in Rawalpindi.

The ANF also provides anti-narcotics training through the ANF Academy, where training courses for students from domestic as well as regional and international drug law enforcement agencies are offered. The ANF Academy is also working on enhancing research, analysis and forensic capabilities with the help of UNODC and other national and international stakeholders.

1.6.3 Other law enforcement agencies

In addition to the Anti-Narcotics Force, other federal and provincial level government entities working in drug control include the Airport Security Force (ASF), Pakistan Coast Guards, Customs Services of Pakistan, Maritime Security Agency, Provincial Excise and Taxation Departments, Frontier Corps (Khyber Pakhtunkhwa and Balochistan), Frontier Constabulary, and the Pakistan Rangers (Punjab and Sindh).

1.6.4 Provincial health departments

The provincial health departments are responsible for supervision and regulation of manufacturing and sale of psychotropic medicines. The 18th Amendment of the constitution, passed in 2010, fully dissolved federal ministries of health, education, social welfare, sports, culture and women's development; leaving these functions to be administered at the provincial level. Since that time, the provincial health departments have become responsible for implementing health policy by generating the required human resources, providing specialised care through tertiary care hospitals, and overseeing primary and secondary health care services provided by the district governments. The actual service delivery takes place at the district level where the two tiers of primary and secondary health outlets are managed.[40] The provincial health departments within their domains are also responsible for supervision, regulation of manufacturing and sale of medicines including prescription drugs.

The AIDS Control Programmes that function under the Provincial heath ministries have developed HIV prevention strategies. Punjab and Sindh provinces have service delivery projects for high-risk populations including people who inject drugs and other drug users. Donor agencies such as the Global Fund for AIDS, Tuberculosis and Malaria (GFATM) and UNODC also support harm reduction programmes for people who inject drugs that are implemented through civil society organisations (CSOs) in selected cities. Free HIV testing is available in several major cities under the Enhanced HIV & AIDS control Programme.

1.6.5 Provincial social welfare departments

The department of Social Welfare and Special Education in each province runs a range of institutions across the province for destitute, women, children and physically and mentally disabled persons in addition to homes for the elderly and vocational training centres. The social welfare departments are also responsible for registration of non-governmental organizations and oversight of their activities. Approximately half of the existing drug treatment centres in Pakistan are registered with the Social Welfare Department of their respective province.

1.6.6 Provincial education departments

One of the key functions of provincial departments of education is formulation of provincial policies, plans, and programmes in education as well as the development of curricula and textbooks for schools. Provincial school systems and links can be effectively used for prevention programmes. In the past, federal government have included drug awareness literature in their curricula.

1.6.7 Provincial prisons

There are approximately 85,000 people incarcerated in Pakistan's 97 prisons. According to 2012 prison statistics, approximately 11,137 prisoners have been convicted for drug-related offences. Of these, 3,630 are drug users and 7,507 are drug traffickers. It is suspected that the number of drug users in prisons is significantly higher than these official statistics suggest. Drug use in prisons is reportedly widespread, the result of readily available drugs and the prison environment.[41] Anti-Narcotics Force is providing drug treatment and rehabilitation services to drug user prison inmates of Adiyala Prison Rawalpindi, Pakistan.

The National Academy for Prisons Administration (NAPA), working under the Ministry of Interior imparts professional training to all the Prison Staff, Reclamation Personnel (Probation and Parole Officers) of all the provinces and periodically collect prison related information.

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[40] Ministry of Health, Government of Pakistan. 2009. *National Health Policy*.
[41] National Academy for Prisons Staff Training Academy Administration Report 2012.

1.6.8 National Drug Regulatory Authority

The national Drug Regulatory Authority (DRA) was recently established to provide effective coordination and enforcement of the 1976 *Drugs Act* and to bring harmony to inter-provincial trade and commerce of drugs and therapeutic goods. The agency is an autonomous body under the administrative control of the Federal Government with sub-offices and laboratories at the provincial level. The agency consists of a chief executive officer and seven full members to be appointed by the Federal Government in consultation with provincial governments. The Government of Pakistan promulgated a Drug Act, which was passed by parliament in November 2012, which deals with matters related to the manufacture, preparation and control of all medicines and controlled substances falling under the domain of the DRA.

1.6.9 Provincial Drug Laws/Acts

An important mechanism at the provincial and district levels to oversee the functioning of pharmacies and medical stores and thereby for the control of prescription medicines and psychotropic substances comes through the Provincial and District Quality Control Boards and Drug Inspectors that derive their legal authority from the Provincial Drug Laws and Acts. While the operational details may vary, the drug laws/acts lay out the rules and regulations concerning licensing of pharmacies and medical stores, as well as their conditions of operations and dispensing of psychotropic substances through a prescription regime and record keeping.[42] [43]

1.6.10 Inter-agency Task Force

An Inter-Agency Task Force (IATF) was established in pursuance to the Prime Ministers' directive in 2010, comprised of 27 federal and provincial drug control agencies, under the Chairmanship of the Director General of the ANF. The Task Force coordinates the work of its members related to implementation of the national *Drug Abuse Control Master Plan*. It was established to coordinate drug interdiction strategies and enhance cooperation amongst law enforcement agencies and has come up as a very useful forum for coordination and effective implementation of the Anti-Narcotics Policy of Pakistan. During the meetings of the forum, representatives of member law enforcement agencies share performance of their respective departments and also proffer proposals to enhance cooperation in combating drug trafficking in the country**.**

[42] Both Federal and Provincial laws, acts and regulations specifying the dispensing of pharmaceutical drugs can be found at the following website, namely the Allopathic System (Prevention of Misuse) Ordinance of 1962, and provincial Drug Laws. Accessed May 14, 2013, http://www.allpklaws.com/index.php/laws?catid=0&id=334

[43] As an example see the Punjab Drug Rules 2007 http://www.pcdapakistan.com/wp-content/uploads/2013/04/PUNJAB-DRUGS-RULES-2007.pdf

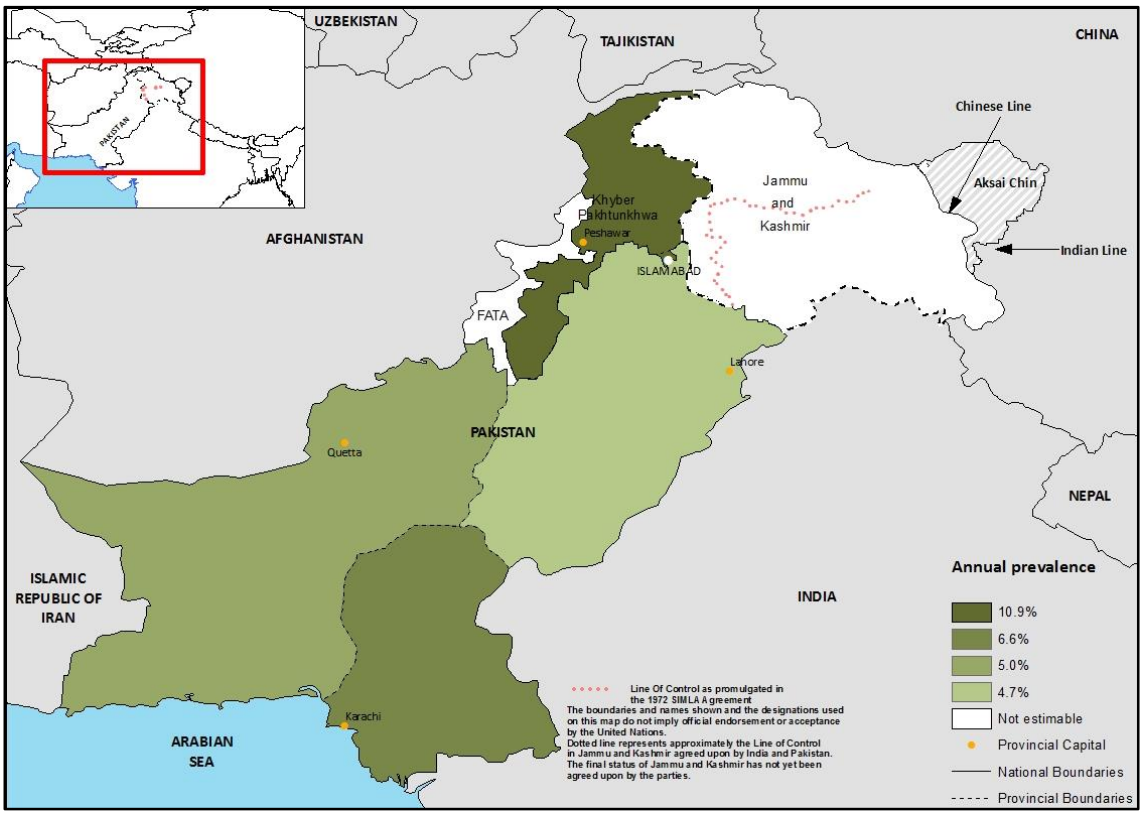
2 Results of the survey on drug use in Pakistan

2.1 Prevalence estimates

The information on the extent and patterns of drug use in Pakistan presented in the subsequent sections is collated from the National Health Behaviour Survey 2012 (n=51,453) as well as the 23 district study on Problem Drug Users (n=4,533).

2.1.1 National drug use estimates

Map 4: Annual prevalence of all illicit drug use, 2012



An estimated six per cent of the population in Pakistan, or 6.7 million people, aged between 15 and 64 had used drugs in the past year, including those who had used at least once as well as regular drug users (Table 1) of these, 4.25 million people are thought to be suffering from drug use disorders and drug dependence,[44] reporting significant challenges controlling or reducing their use and experiencing negative personal consequences as a result of their drug use.

The categories of drug types and drug classes presented in this report are described in detail in Table A1 of the Annex. The number of those qualifying for "any illicit drug use" was adjusted to count only once the individuals who used multiple substances in one year, and consequently, the sum of the individual drug estimates will sum to a number greater than the estimated total. Similarly, for opiates (heroin and opium), the sum of heroin and opium users will exceed the total number of

[44] The World Health Organization defines a dependent drug user in accordance with the ICD-10 classification of mental and behavioral disorders: WHO. 1992b. *Clinical descriptions and diagnostic guidelines*. All regular opiate users are considered dependent users.

opiate users because a fraction of users reported use of both substances. For further details please see Section 2.2.6 on poly drug use.

Please note the national estimates do not include Pakistan-administered Kashmir, which are presented separately in this report. National estimates apply to the four provinces of Pakistan, including the FATA and the Islamabad Capitol Territory. Because the FATA was not directly surveyed, drug use patterns in that area may differ significantly from the numbers here which have been generalized from the four provinces.

Although the focus of these estimates is on the annual prevalence, lifetime and past 30 days estimates are also provided in the Annex (Table A2).

Table 1: Annual prevalence of all illicit drug use in Pakistan, 2012.[45]

	Annual prevalence (%)			Number[46]
	Estimate	*Low estimate*	*High estimate*	
Any illicit drug use ‡	6.0%	5.0%	7.4%	6,700,000

‡ Aggregated categories were adjusted for the per cent of users in the total population known to be poly-drug users (20 per cent).
Note: Values estimated for national estimates are larger than the sum of the four provinces due to the inclusion of the FATA and the Islamabad Capital Territory in the total population size (111.3 million) as compared to the sum of the four provinces (108 million), and also because the figures presented here have been rounded. Pakistan-administered Kashmir is not included in the national estimates.

Of all controlled substances, cannabis was the most commonly used, followed by opioids and tranquilizers/ sedatives (Table 2). Within the categories of opioids and ATS, subcategories of drugs are also provided. Opioids include both opiates and opioids. For opiates, specific estimates for heroin and opium have been provided, and for opioids, prescription opioids (painkillers). Due to the high degree of poly-drug use among those who use heroin and opium, the number of users of opiates was adjusted to avoid counting one user of both substances twice.

Table 2: Annual prevalence of use of controlled substances, by type, 2012.

Drug type/class	Annual prevalence (%)			Number[47]
	Estimate	*Low estimate*	*High estimate*	
Individual drug categories (sum will not reflect above totals due to poly-drug use)				
Cannabis (resin or herb)	3.6%	3.1%	4.0%	4,000,000
Opioids	2.4%	2.0%	3.1%	2,700,000
Opiates ‡	1.0%	0.7%	1.5%	1,060,000
Heroin	0.8%	0.5%	1.3%	860,000
Opium	0.3%	0.2%	0.6%	320,000
Prescription opioids	1.5%	1.3%	1.6%	1,600,000
Tranquilisers/sedatives	1.4%	1.1%	1.7%	1,500,000
Cocaine	0.01%	0.0001%	0.02%	13,000
Amphetamine-type stimulants	0.08%	0.04%	0.2%	93,000
Prescription amphetamines	0.07%	0.04%	0.1%	75,000
Methamphetamine	0.02%	0.0001%	0.11%	19,000
Solvents/inhalants	0.03%	0.0001%	0.08%	35,000

[45] National estimates are based on the sum of the numbers estimated for the four provinces, which were then generalized to the larger population which includes the Federally Administered Tribal Areas and the Islamabad Capitol Territory. Note: The sum of the provincial estimates will not total to the national estimate due to the difference in population sizes and rounding. The region of Pakistan-administered Kashmir is not included in the national estimates and is reported separately.
[46] Based on a national population estimate of 111,323,400 people aged 15 to 64 (UNFPA/NIPS, 2012).
[47] Based on a national population estimate of 111,323,400 people aged 15 to 64 (UNFPA/NIPS, 2012).

Of the total past-year drug users estimated, 430,000 were administering drugs by injection. Based on the proportion of opiate users who inject drugs and a small proportion of respondents from the household survey who inject drugs, the estimated proportion of the population aged 15 to 64 who injected drugs in the past year is 0.4 per cent (Table 3).

Table 3: Annual prevalence of injecting drug use and approximate number of people who inject drugs, 2012.

	Annual prevalence (%)			Number[48]
	Estimate	*Low estimate*	*High estimate*	
Injecting drug use	0.4%	0.3%	0.5%	430,000

Note: Injecting drug use is a mode of drug administration. The estimated number of injecting drug users are a portion of the overall figure for annual prevalence. As reported here and elsewhere, common drugs injected include heroin, but also tranquilizers/ sedatives, antihistamines, and other injectable opioids (such as morphine, buprenorphine, pethidine, pentazocine, etc.).

Table 4: Annual prevalence of selected controlled substances, by type, 2012.

	Annual prevalence (%)			Number
	Estimate	*Low estimate*	*High estimate*	
Cannabis (resin or herb)	3.6%	3.1%	4.0%	4,000,000
Opiates ‡	1.0%	0.7%	1.5%	1,060,000
Heroin	0.8%	0.5%	1.3%	860,000
Opium	0.3%	0.2%	0.6%	320,000
Cocaine	0.01%	0.0001%	0.02%	13,000
Methamphetamine	0.02%	0.0001%	0.11%	19,000
Solvents/inhalants	0.03%	0.0001%	0.08%	35,000

Table 5: Annual prevalence of controlled substances (prescription drugs), by type, 2012.

Non-medical use of	Annual prevalence (%)			Number[49]
	Estimate	*Low estimate*	*High estimate*	
Prescription opioids	1.5%	1.3%	1.6%	1,600,000
Tranquilisers/sedatives	1.4%	1.1%	1.7%	1,500,000
Prescription amphetamines	0.07%	0.04%	0.1%	75,000

2.2 National drug use estimates, by drug type

2.2.1 Cannabis

Nationwide, 3.6 per cent of the population, or four million people, reported using cannabis in the past year, placing it as the most common drug of use nationally—a ranking also supported by perceptions of key informants. The vast majority of users were men, and among both men and women who reported past year use, education levels were lower than among non-users. Survey findings show that an archetypal cannabis user is most likely a 33-year-old male who has obtained education levels up to primary school or less, but has either full or part-time employment. Approximately half of all cannabis users are married.

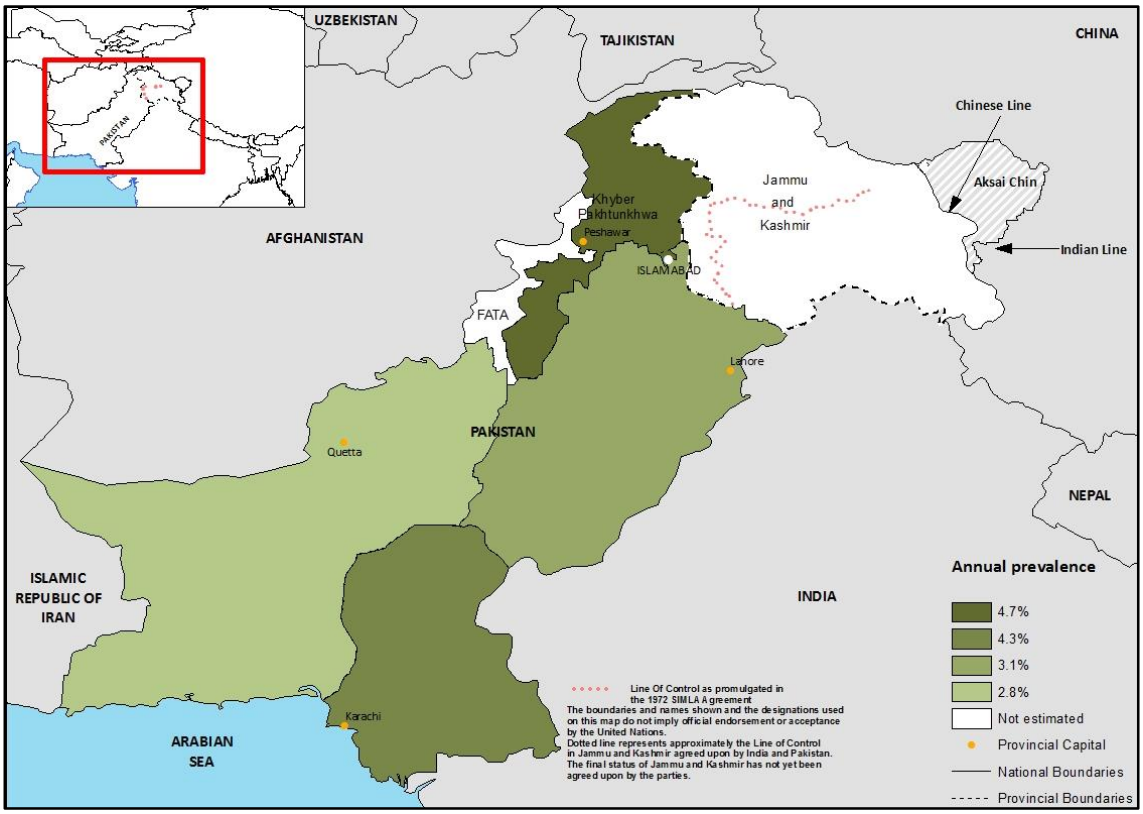
Among both male and female users, the frequency and severity of cannabis use was high. One-third of cannabis users reported daily use, while and qualify for drug use disorders and dependence based

[48] Based on a national population estimate of 111,323,400 people aged 15 to 64 (UNFPA/NIPS, 2012).
[49] Based on a national population estimate of 111,323,400 people aged 15 to 64 (UNFPA/NIPS, 2012).

on the ICD-10 criteria. However, among regular cannabis[50] users only seven per cent reported engagement in drug treatment in the past year.

While few respondents in the survey considered cannabis the most harmful drug on the market, 76 per cent of regular opiate users reported cannabis (89 per cent charas and 11 per cent bhang) as the first drug they ever used. The majority of problem drug users reported they were first introduced to cannabis either by a friend or family member, and the most commonly noted event was at a wedding. Nationally, the average age of initiation of cannabis use was 21 years.

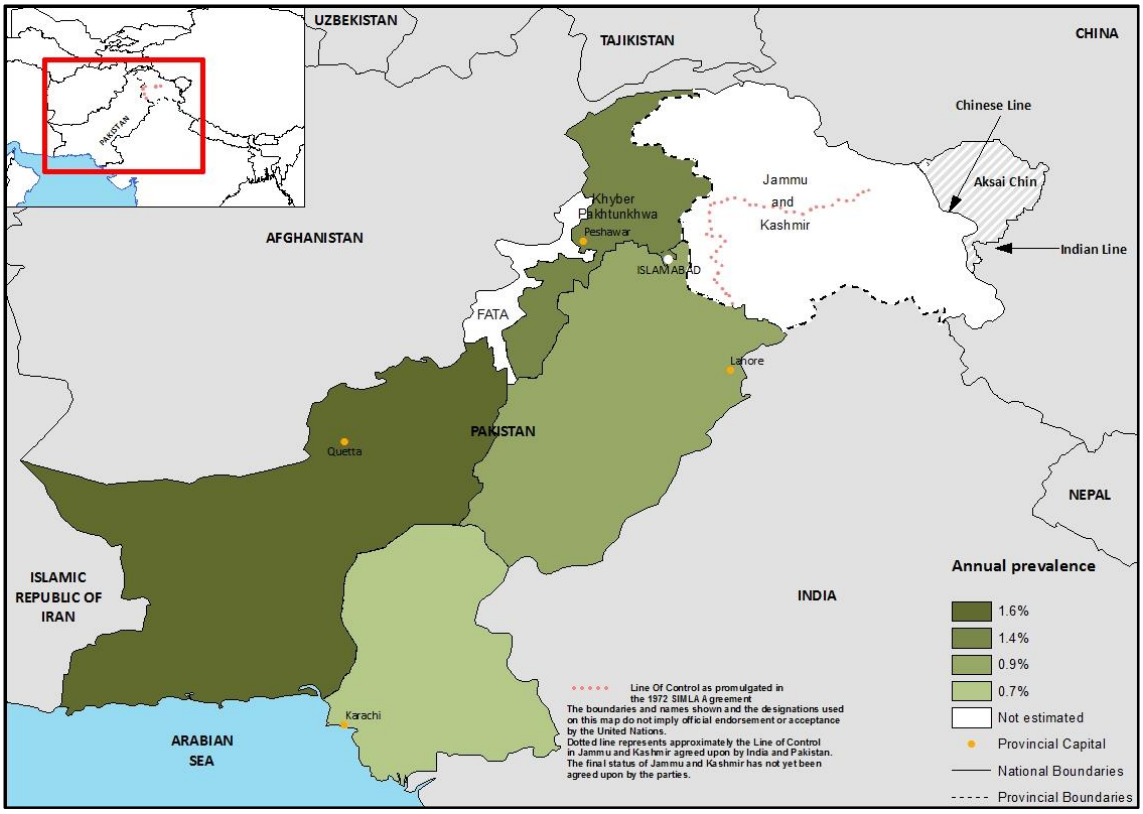
Map 5: Annual prevalence of cannabis use, 2012



[50] Those who had used cannabis in the past 12 months and 30 days.

2.2.2 Opiates: heroin or opium

Map 6: Annual prevalence of opiate use, 2012



Nationwide, one per cent of the population –over one million people– were estimated to be regular opiate (heroin or opium) users. The majority (80 per cent) use heroin, while one-third (33 per cent) use opium. Opium users were slightly older (mean age 38.2, standard deviation 10.1 years) than heroin users (mean age 33.8, standard deviation 9.4 years), and more likely to live in rural environments whereas heroin users tend to live in cities. Nearly two-thirds of opium users and one-third of heroin users were married, and while opium users mostly live in a home (84 per cent), nearly forty per cent of heroin users lived in a park/road, shrine, or a location other than a home.

A daily heroin habit in Pakistan is estimated to cost between 1.50 and 3.00 USD, yet only 6.5 per cent of heroin users are employed full-time. To earn money, one-third report donating/selling blood, and forty per cent report exchanging sex for drugs or money. Opiate users also often beg for money in the streets, or perform tasks for daily wages such as selling garbage. A small number (7 out of 3,330) reported working as professional injectors who inject other users, and one-quarter of users receive financial support from family or friends.

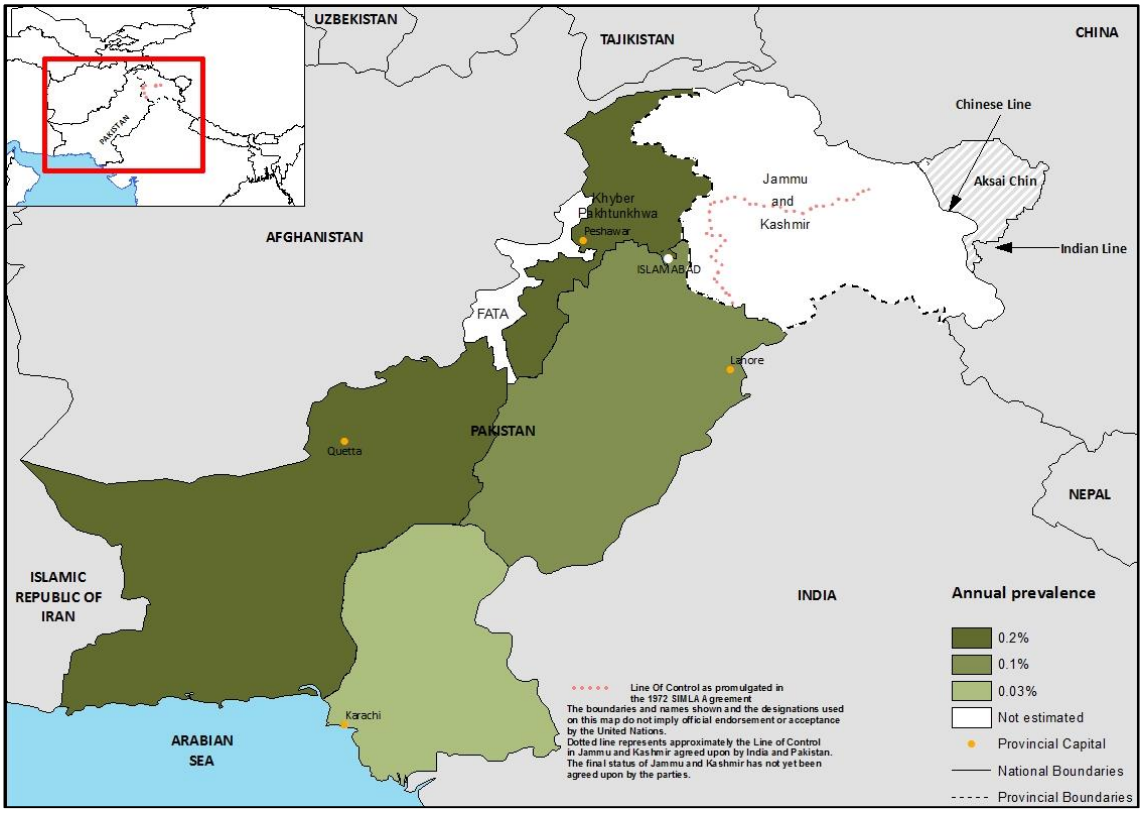
The average number of years of opiate use among respondents was 16 (15 among heroin users and 19 for opium users), evidence of the long-term nature common for opioid use. Poly-drug use is also very common among opiate users, whereas 74 per cent also used other psychotropic substances in the past year. The majority also use cannabis (67 per cent), but a significant proportion also use tranquilisers or sedatives (26 per cent) and various other substances such as prescription opiates (7 per cent) and/or cough syrups (4 per cent).

2.2.3 Stimulants: amphetamine-type stimulants and cocaine

This study found new patterns of drug consumption to be emerging across Pakistan. Levels of amphetamine-type stimulant (ATS) and cocaine use are at 0.08 per cent and 0.01 per cent respectively. Within the class of ATS, methamphetamine - previously undetected in Pakistan - was estimated to be used by 19,000 people in the past-year. ATS users are a combined group of individuals who have reported either taking prescription amphetamines or methamphetamines in the past-year. While prescription amphetamines such as Ritalin have been available in medical stores for the control of attention deficit disorders (ADHD); methamphetamine is exclusively manufactured illicitly as a drug of use. Though these numbers are low in comparison to other substances, misuse of these stimulants can rapidly spread throughout the population as demonstrated in many other countries.

This research suggests that a typical prescription amphetamine user is likely to be a 36-year-old, married female that is moderately educated - defined as completion of primary or middle school,[51] while a typical methamphetamine user is more likely to be a married male, around the same age, with a moderate education. Similarly, a typical cocaine user in Pakistan is likely to be male, moderately educated and in his mid-thirties. Around 19,000 people are estimated to have taken methamphetamine in the last 12 months, equivalent to 0.02 per cent prevalence.

Map 7: Annual prevalence of ATS use, 2012



[51] In this case a moderate level of education is the completion of primary or middle school.

2.2.4 Non-medical use of prescription drugs

The prevalence of prescription opioid misuse is considerably high with 1.5 per cent of the population (1.6 million people) having used these drugs for non-therapeutic purposes and without seeking the advice of a doctor prior to use. Additionally, 1.4 per cent of the population or 1.5 million people misused tranquilisers and sedatives for non-therapeutic purposes in the past year. Those who reported the non-medical use of these substances reported regular use in the past 30 days. Among past-year users of tranquilizers/sedatives, 55 per cent used them more than once a week and 18 per cent used them every day. Among past-year users of prescription opioids, 56 per cent used them more than once per week, and 6 per cent used them every day.

The measurement and detection of prescription drug misuse is confounded by a common practice of seeking medication from a medical store, which is most often not staffed by an accredited pharmacist or a registered medical professional. Though it was specifically asked in the survey if the medicine had been used without the advice of a doctor, the practice of receiving a prescription prior to the use of an opioid painkiller may not be in place, particularly in areas where health care services are sparse. Though it cannot be said with certainty that those surveyed did not have a perceived medical need, some data were available on health indicators to evaluate the overlap between poor health and prescription drug misuse.

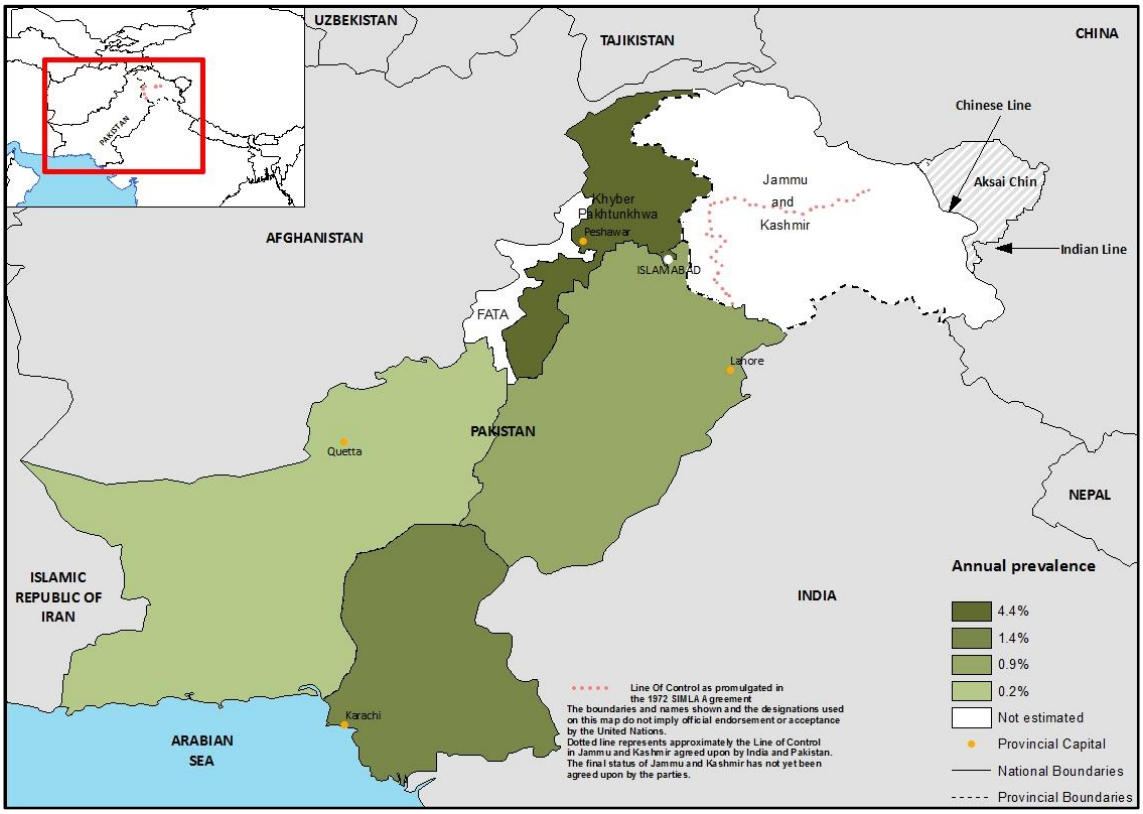
The analyses showed that non-medical use of tranquilisers or sedatives was more prevalent among men and women who had been hospitalised in the past year for mental health issues. In particular, non-medical use was high among those hospitalised for anxiety, depression, and stress, as compared to other conditions.[52] This was after adjusting for age, sex, urban or rural area, and literacy level. The findings reveal a 13-fold increased risk of tranquiliser or sedative misuse among this group which may point to self-medication following discharge from inpatient facilities and no follow up. On the other hand psychiatric comorbidity such as anxiety, depression and post-traumatic stress disorder (PTSD) are also commonly found among regular drug users, and due to the cross-sectional nature of these surveys, we cannot say which came first.

In addition, men and women suffering from chronic illnesses that have experienced past-year hospitalisation are found to be at high risk of misusing opioid-based painkillers. These findings can be supported by wider global-level epidemiology which finds that "nonmedical use of prescription drugs is typically greater among hospital patients than in the general population and the gap widens further for those patients who are mentally ill".[53]

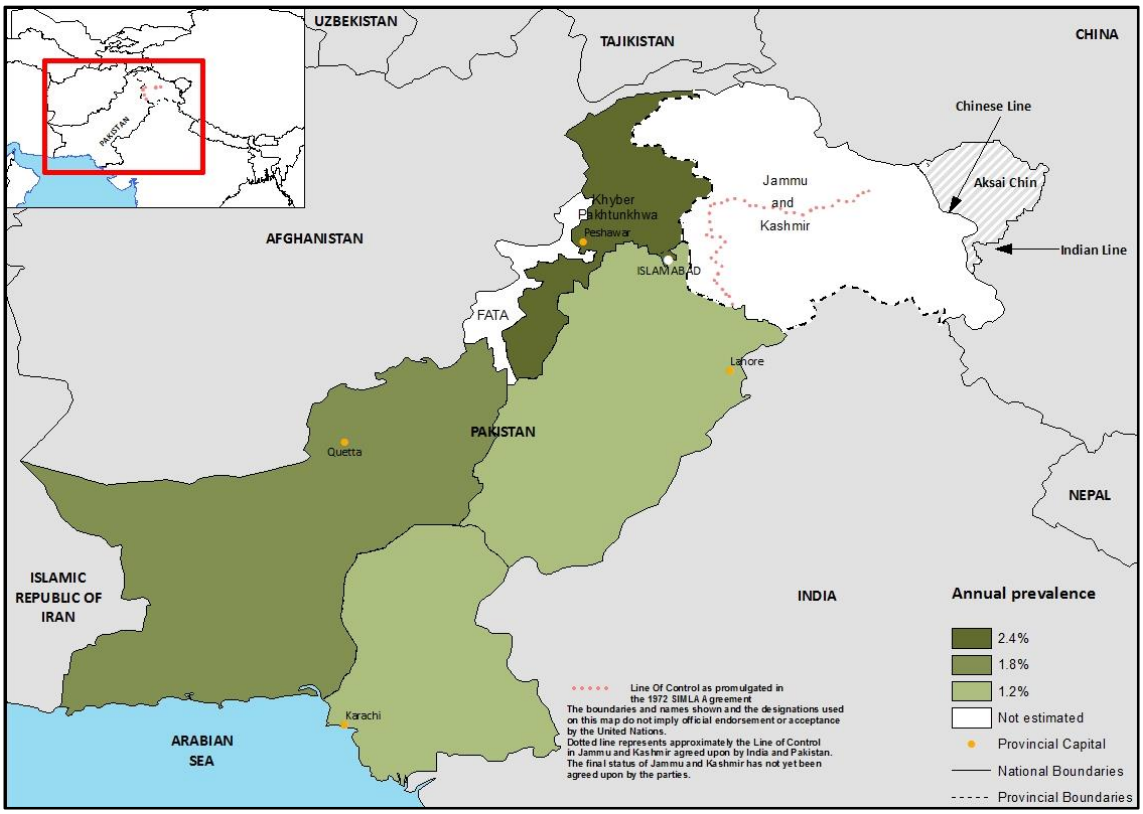
[52] A five category variable was constructed for hospitalisation due to various health conditions, including: ear, nose or throat conditions; chest or respiratory conditions; childbirth; mental health conditions; and, gastrointestinal or abdominal conditions. The reference category was hospitalisation for ear, nose or throat conditions.

[53] UNODC. 2011. *The non-medical use of prescription drugs, policy direction issues: a discussion paper.*

Map 8: Annual prevalence of prescription opioid (painkiller) misuse, 2012



Map 9: Annual prevalence of tranquiliser or sedative misuse, 2012



2.2.5 Solvents or inhalants

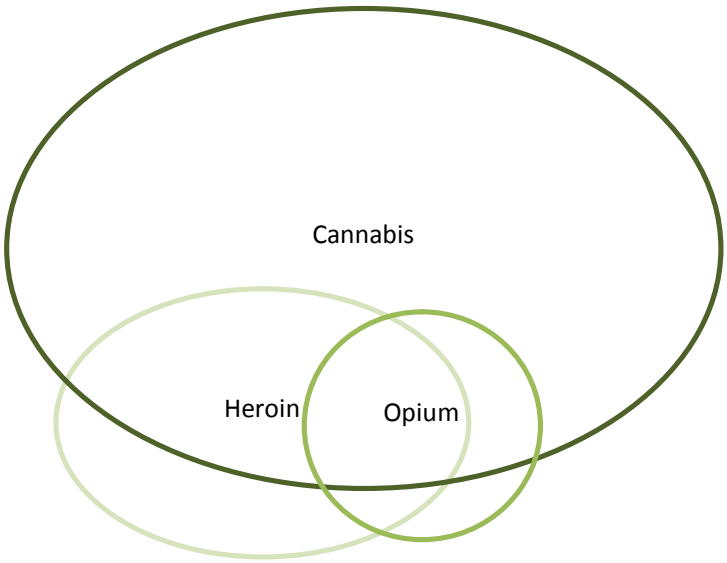
Previous research done in Pakistan suggests solvent or inhalant use is rife among street children under the age of 15,[54] the majority of which were not captured by this research owing to the study's age restriction. However, key informants did report inhalant use was on the increase. Among the population aged 15 to 64 included this study, the prevalence of solvent or inhalant use was estimated to be 0.03 per cent of the population or 35, 000 people.

2.2.6 Poly-drug use

Poly-drug use is more common phenomenon among long-term, regular drug users or opiate users than among casual users. Overall, one in five or approximately 20 per cent of the estimated 6.7 million drug users in Pakistan reported using more than one illicit or controlled substance in the past year. Among drug users in the general population,[55] only 11 per cent reported using more than one substance in the past year but among regular opiate users, three-quarters used more than one substance, most commonly reporting a combination of heroin, cannabis, and tranquiliser use.[56] Poly-drug use varied by province with the highest use in Balochistan (25 per cent), followed by 22 per cent in Punjab, 18 per cent in Khyber Pakhtunkhwa, and 16 per cent in Sindh. In Pakistan-administered Kashmir, 28 per cent of users reported use of more than one substance.

Using an example of poly-drug use between cannabis, heroin, and opium, Figure 1 demonstrates that the overlap between each substance in this population is significant. Among heroin users, 65 per cent used cannabis in the past year. Among opium users, 83 per cent used cannabis in the past-year. Approximately 20 per cent of heroin users used opium in the past year, but among opium users, 44 per cent used heroin. To describe this in numbers, of the 4 million cannabis users, approximately 560,000 also used heroin, 265,000 used opium, and 220,000 would have used all three substances, cannabis, opium, and heroin.

Figure 1: Depiction of poly-drug use between cannabis and opiates.

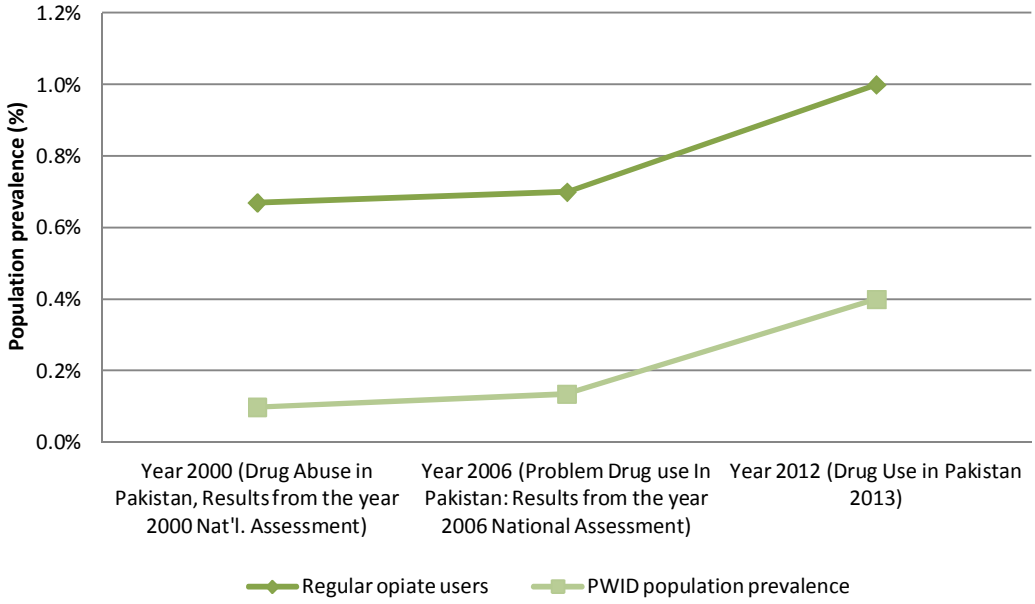


[54] UNODC, *Solvent abuse among street children in Pakistan*, The United Nations System in Pakistan, Islamabad, 2004,
[55] Based on a survey of 51,453 respondents surveyed in households across Pakistan.
[56] Based on a survey of 3,330 problem drug users.

2.3 Trends in drug use prevalence and patterns over time

While numerous past surveys and assessments conducted in Pakistan have generated estimates of the overall prevalence of drug use, it is important to emphasise that caution must be applied in making direct comparisons between periodic estimates. This is because of the varying methodologies applied, the differing scope of the assessments, as well as other factors such as the criteria for inclusion of different substances. Nevertheless, between 2002 and 2012 both opiate and injecting drug use have increased (Figure 2). A critical difference in the estimation of injecting drug use is the inclusion of respondents from the household survey who also reported the practice of injecting substances, and were included in the estimates reported here, which are typically only calculated as a fraction of opiate users.

Figure 2: Trends in the annual prevalence of regular opiates use and injecting drug use (2000-2012).



From a health perspective, injecting drug use is perceived to be the most problematic route of drug or substance administration owing to the high risk of acquiring and spreading HIV and other blood-borne infections. Results from the most recent HIV/AIDS Surveillance Project for Pakistan, published in 2011,[57] show an alarming increase in HIV infection among people who inject drugs, increasing from 10.8 per cent in 2005 to a staggering 37.8 per cent in 2010. While HIV among the general population stands at below 0.1 per cent,[58] Pakistan is now in the midst of a concentrated epidemic of HIV infection among sex workers and people who inject drugs, with significant risks for expansion.[59]

2.4 Prevalence estimates, by province or region

For estimates of the number and prevalence of drug use by province, see Table 5.

[57] National AIDS Control Programme. 2011. *HIV Second Generation Surveillance in Pakistan – National Report Round IV-2011.*
[58] National AIDS Control Programme, Ministry of Inter-Provincial Coordination, Government of Pakistan.
[59] UNAIDS. 2012. *Country Progress Report, Pakistan Global AIDS Response Progress Report 2012*.

2.4.1 Khyber Pakhtunkhwa

Khyber Pakhtunkhwa has the highest prevalence of drug use in Pakistan, with 10.9 per cent of the adult population using drugs. Cannabis, opioid, and tranquiliser or sedative use were the highest in Khyber Pakhtunkhwa with prevalence rates of 4.7 per cent, 5.8 per cent, and 2.4 per cent respectively. Opiates are used by 1.4 per cent of the population, with 140,000 using heroin and 84,000 using opium. Levels of dependent drug use among opiate users in Khyber Pakhtunkhwa were found to be higher when compared to dependence levels in other provinces (Table 5).

2.4.2 Balochistan

Balochistan had the highest prevalence of opiate use nationally, particularly for opium. While in most other areas opiate users were more likely to use heroin, in Balochistan they were nearly equal in prevalence, with 1.0 per cent using opium compared to 1.1 per cent using heroin. In addition, 0.2 per cent or around 13,000 people took methamphetamine in Balochistan in the last year, representing 70 per cent of national use although they make up only 5 per cent of the country's population. Tranquiliser and sedative misuse is also considerable compared to other provinces with 1.8 per cent of the population, or 100,000 people, using these substances. The prevalence of people who inject drugs is 0.3 per cent of the population, with an estimated 17, 000 injectors in the province (Table 6).

2.4.3 Sindh

With 4.3 per cent of the population using cannabis in the last year, the province of Sindh had the second highest prevalence rate for cannabis use in the country. An estimated 570,000 people in Sindh used opioids last year. Of these, 66 per cent used prescription opioids (painkillers) and 34 per cent used heroin, opium or both. Almost 100,000 drug users in Sindh are estimated to be injecting drugs, primarily opiates. Prevalence estimate for the use of tranquilisers and sedatives in Sindh is comparable with that of Punjab while the use of ATS are not as high as in other provinces (Table 6).

2.4.4 Punjab

With more than half of the country's population, Punjab is the most populous province in Pakistan. Based on a population estimate of 61.41 million people aged between 15 and 64 years, 4.7 per cent or 2.9 million people across the province were estimated to have used any drug in the preceding year. Punjab alone has approximately 480,000 heroin users and 86,000 opium users. Of all amphetamine-type stimulant users in Punjab, the vast majority used amphetamine (prescription stimulants) compared to methamphetamine, at 0.1 and 0.001 per cent respectively. Around one quarter of a million people are estimated to be injecting drugs in Punjab. Because of the size of the population, Punjab therefore has the largest number of drug users and people who inject drugs of all provinces (Table 6).

Table 6: Annual prevalence of the use of controlled substances in Pakistan, by province, 2012[60,]

	Punjab		Sindh		Balochistan		Khyber Pakhtunkhwa	
	Annual prevalence % (95% CI)	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*
Any illicit drug use ‡	4.7 (3.6-5.9)	2.9m	6.6 (5.1-8.0)	1.7m	5.0 (3.4-6.6)	0.28m	10.9 (8.4-13.0)	1.6m
Injecting drug use	0.4 (0.2-0.6)	260k	0.4 (0.2-0.6)	96k	0.3 (0.1-0.5)	17k	0.3 (0.1-0.5)	47k
Prevalence estimates for individual drug categories (sum will not reflect above total due to poly-drug use)								
Cannabis (resin or herb)	3.1 (2.5-3.8)	1.9m	4.3 (3.5-5.0)	1.1m	2.8 (2.1-3.6)	160k	4.7 (3.7-5.7)	710k
All opioids ‡	1.7 (1.3-2.2)	1.1m	2.2 (1.7-2.7)	570k	1.7 (1.2-2.3)	97k	5.8 (4.7-6.8)	870k
Opiates ‡	0.9 (0.6-1.2)	540k	0.7 (0.5-1.0)	190k	1.6 (1.2-2.0)	88k	1.4 (1.0-1.8)	210k
Heroin	0.8 (0.5-1.1)	480k	0.6 (0.3-0.8)	150k	1.1 (0.7-1.4)	59k	1.0 (0.6-1.3)	140k
Opium	0.1 (0.01-0.3)	86k	0.3 (0.1-0.5)	90k	1.0 (0.6-1.3)	55k	0.6 (0.3-0.8)	84k
Prescription opioids	0.9 (0.7-1.0)	530k	1.4 (1.2-1.6)	370k	0.2 (0.06-0.3)	9k	4.4 (3.7-5.0)	660k
Tranquilisers or sedatives	1.2 (0.8-1.6)	730k	1.2 (0.8-1.6)	310k	1.8 (1.2-2.4)	100k	2.4 (1.7-3.0)	350k
Cocaine	0.007 (0.0001-0.04)	4k	0.03(0.000-0.06)	8k	0.003 (0.0001-0.02)	170	None sampled	
Amphetamine-type stimulants	0.1 (0.06-0.16)	40k	0.03(0.0003-0.06)	7k	0.2 (0.07-0.4)	13k	0.2 (0.07-0.4)	31k
Amphetamines	0.1 (0.06-0.14)	40k	0.01(0.0001-0.03)	2.6k	0.001 (0.0001-0.01)	60	0.2 (0.07-0.3)	31k
Methamphetamine	0.001 (0.00-0.01)	600	0.02(0.0001-0.04)	4.3k	0.2 (0.07-0.4)	13k	0.003 (0.0001-0.02)	400
Solvents or inhalants	0.01 (0.00-0.04)	6k	0.06 (0.0006 0.1)	16k	0.1 (0.001-0.2)	6k	0.05 (0.0001-0.1)	8k

[2] Based on a population estimate of 61.41 million persons aged 15-64 (UNFPA/NIPS).

[3] Based on a population estimate of 25.95 million persons aged 15-64 (UNFPA/NIPS).

[4] Based on a population estimate of 5.59 million persons aged 15-64 (UNFPA/NIPS).

[5] Based on a population estimate of 15.08 million persons aged 15-64 (UNFPA/NIPS).

[12] Province totals do not sum to national totals due to the inclusion of the Federally Administered Tribal Areas and the Islamabad Capital Territory in the national population estimate.

[60] The estimated number of drug users were based on the following population sizes for persons aged 15-64 (in millions): Punjab (61.41), Sindh (25.95), Balochistan (5.59), KPK (15.08) (UNFPA/NIPS). Values estimated for approximate provincial numbers will not sum to the national estimates due to the inclusion of the FATA and the Islamabad Capital Territory in the total population size (111.3 million) as compared to the sum of the four provinces (108 million), and also because the figures presented here have been rounded. Poly-drug use was accounted for by reducing the sum of the major drug classes by the portion who are known to be multi-substance users, by province: Punjab(22%), Sindh(16%), Balochistan (25%), KPK (18%).

Table 7: Annual prevalence of selected controlled substances, by province, 2012.

	Punjab		Sindh		Balochistan		Khyber Pakhtunkhwa	
	Annual prevalence % (95% CI)	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*
Cannabis (resin or herb)	3.1 (2.5-3.8)	1.9m	4.3 (3.5-5.0)	1.1m	2.8 (2.1-3.6)	160k	4.7 (3.7-5.7)	710k
Opiates ‡	0.9 (0.6-1.2)	540k	0.7 (0.5-1.0)	190k	1.6 (1.2-2.0)	88k	1.4 (1.0-1.8)	210k
Heroin	0.8 (0.5-1.1)	480k	0.6 (0.3-0.8)	150k	1.1 (0.7-1.4)	59k	1.0 (0.6-1.3)	140k
Opium	0.1 (0.01-0.3)	86k	0.3 (0.1-0.5)	90k	1.0 (0.6-1.3)	55k	0.6 (0.3-0.8)	84k
Cocaine	0.007 (0.0001-0.04)	4k	0.03 (0.0003-0.06)	8k	0.003 (0.0001-0.02)	170	None sampled	
Methamphetamine	0.001 (0.00-0.01)	600	0.02 (0.0001-0.04)	4.3k	0.2 (0.07-0.4)	13k	0.003 (0.0001-0.02)	400
Solvents or inhalants	0.01 (0.00-0.04)	6k	0.06 (0.0006-0.1)	16k	0.1 (0.001-0.2)	6k	0.05 (0.0001-0.1)	8k

Table 8: Annual prevalence of controlled substances (prescription drugs), by province, 2012.

	Punjab		Sindh		Balochistan		Khyber Pakhtunkhwa	
	Annual prevalence % (95% CI)	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*	*Annual prevalence % (95% CI)*	*Number*
Prescription opioids	0.9 (0.7-1.0)	530k	1.4 (1.2-1.6)	370k	0.2 (0.06-0.3)	9k	4.4 (3.7-5.0)	660k
Tranquilisers or sedatives	1.2 (0.8-1.6)	730k	1.2 (0.8-1.6)	310k	1.8 (1.2-2.4)	100k	2.4 (1.7-3.0)	350k
Prescription amphetamines	0.1 (0.06-0.14)	40k	0.01 (0.0001-0.03)	2.6k	0.001 (0.0001-0.01)	60	0.2 (0.07-0.3)	31k

2.4.5 Pakistan-administered Kashmir

Overall prevalence rates of drug use in Pakistan-administered Kashmir are relatively low, compared to general rates in Pakistan. An estimated 3.8 per cent of the population used drugs in the last year. However, the prevalence of cannabis use is comparable to that in other provinces, at 3.2 per cent. In contrast, levels of illicit tranquiliser and sedative misuse are lower, at 1.1 per cent. Heroin and opium use prevalence rates in Pakistan-administered Kashmir were similar to elsewhere in Pakistan. Of all amphetamine-type stimulant users in Pakistan-administered Kashmir, relatively few used amphetamine compared to methamphetamine, at 0.001 and 0.02 per cent respectively. Although cocaine use rates are low in Pakistan, they were highest in Pakistan-administered Kashmir at 0.07 per cent (Table 9).

Table 9: Annual prevalence of drug use in Pakistan-administered Kashmir (numbers excluded from national estimates), 2012

Pakistan-administered Kashmir		
	Annual Prevalence (%)	Number
Any illicit drug use ‡	3.8 (3.3-4.4)	130k
Injecting drug use	0.2 (0.03-0.3)	6k
Prevalence estimates for individual drug categories (sum will not reflect above total due to poly-drug use)		
Cannabis (resin or herb)	3.2 (2.5-4.0)	113k
Opioids	0.9 (0.6-1.1)	30k
Opiates ‡	0.7 (0.4-0.9)	23k
Heroin	0.5 (0.2-0.7)	16k
Opium	0.4 (0.2-0.6)	13k
Prescription opioids	0.2 (0.1-0.3)	7k
Tranquilisers or sedatives	1.1 (0.6-1.5)	36k
Cocaine	0.07(0.00-0.2)	2.4k
Amphetamine-type stimulants	0.02 (0.00-0.07)	700
Amphetamines	0.001 (0.00-0.06)	35
Methamphetamine	0.02 (0.00-0.07)	700
Solvents or inhalants	0.02 (0.00-0.07)	700

‡ Aggregated category were adjusted for the per cent of users in the total population known to be poly-drug users.

2.5 Socio-demographic characteristics

2.5.1 National drug use estimates, by gender

Proportionately, more men have used drugs in Pakistan in the last year than women, but prevalence estimates for women are likely underestimated (see the text box below). The proportions are 9 per cent and 2.9 per cent respectively. In other words, of all 6.7 million drug users in Pakistan in the last 12 months, three-quarters are men (5.2 million) and one-quarter are women (1.5 million). Significant differences in patterns of consumption by type of drug used are observed among men and women. While men are more likely to use cannabis and opiates, the use of tranquilisers and sedatives and prescription amphetamines is higher among women (Table 10).

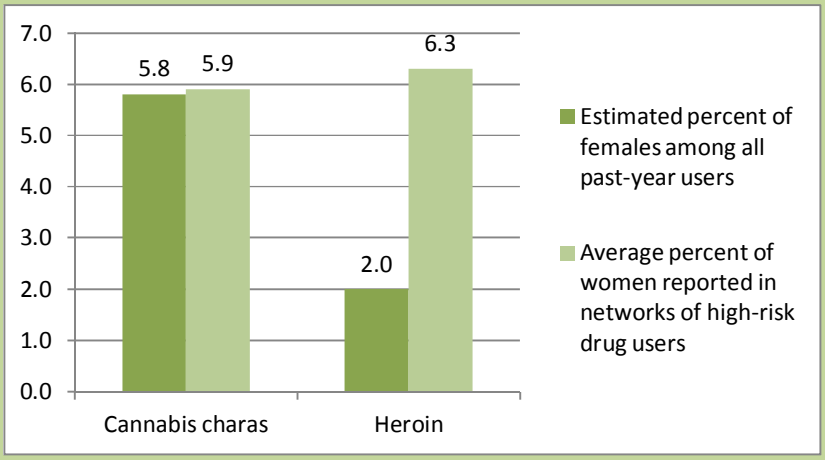
Table 10: Annual prevalence of drug use in Pakistan, by gender, 2012.

	Men		***Women***	
	Annual prevalence (95% CI)	**Number**	**Annual prevalence (95% CI)**	**Number**
Any illicit drug use	9.0 (7.4-10.6)	5.2m	2.9 (2.5-3.7)	1.5m
Injecting drug use	0.7 (0.6-0.9)	423k	0.01 (0.001-0.4)	7k
Prevalence estimates for individual drug categories (sum will not reflect above total due to poly-drug use)				
Cannabis (resin or herb)	6.7 (5.9-7.6)	3.9m	0.2 (0.1-0.2)	100k
Opioids	3.4 (2.7-4.0)	1.9m	1.4 (1.3-2.1)	800k
Opiates	1.8 (1.3-2.3)	1.04m	0.04 (0.001-0.6)	20k
Heroin	1.5 (1.1-1.9)	845k	0.03 (0.001-0.3)	17k
Opium	0.6 (0.3-0.8)	315k	0.01 (0.001-0.3)	5k
Prescription opioids	1.6 (1.4-1.7)	890k	1.4 (1.2-1.6)	730k
Tranquilisers/sedatives	1.3 (0.9-1.6)	725k	1.5 (1.4-1.7)	817k
Cocaine	0.01 (0.00-0.02)	13k	none detected	
Amphetamine-type substances	0.1 (0.07-0.14)	44k	0.14 (0.1-0.2)	49k
Amphetamines	0.1 (0.04-0.1)	27k	0.13 (0.1-0.2)	48k
Methamphetamines	0.03 (0.01-0.06)	18k	0.002 (0.00-0.1)	1k
Solvents/inhalants	0.06 (0.03-0.09)	35k	0.001 (0.00-0.004)	500

Drug use among women in Pakistan: low prevalence or a hidden population?

As described in the 2010 UNODC report on female drug users in Pakistan, "unlike male drug users who congregate and use drugs with other drug users, drug use is a discreet, hidden and more of an individual activity for female drug users" (UNODC 2010 *Female Drug Use in Pakistan: Mapping Estimates, Ethnographic Results and Behavioural Assessment).* There is no doubt that women experience higher levels of stigma associated with drug use compared to that experienced by men.

As such, we explored evidence that drug use among women may have been underestimated by comparing differences between the proportions of female users estimated directly in the survey results versus the proportion of female users reported within the networks of regular opiate users.

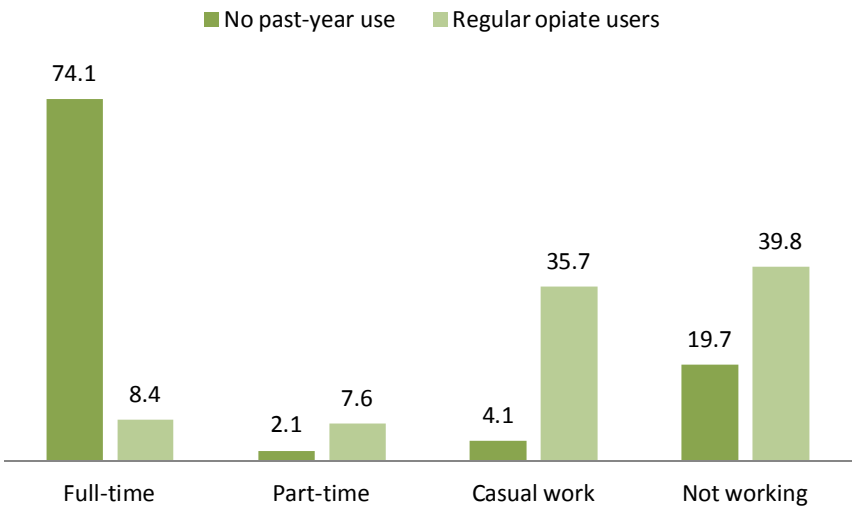


These results show evidence that female heroin users were likely underestimated in this study. Future efforts to estimate the prevalence of drug use in Pakistan should take special care to capture hard to reach and hidden populations, such as high risk female drug users, to derive more accurate estimates.

2.5.2 Employment status among drug users, by drug type

There is compelling evidence that drug use leads to lower productivity and profitability. In this study, three-quarters of men (74.1 per cent) who had not used opiates or any other drug in the past year were employed on a full-time basis. In contrast, nearly 40 per cent of regular opiate users were found to be currently unemployed, though reportedly doing casual work (Figure 3).

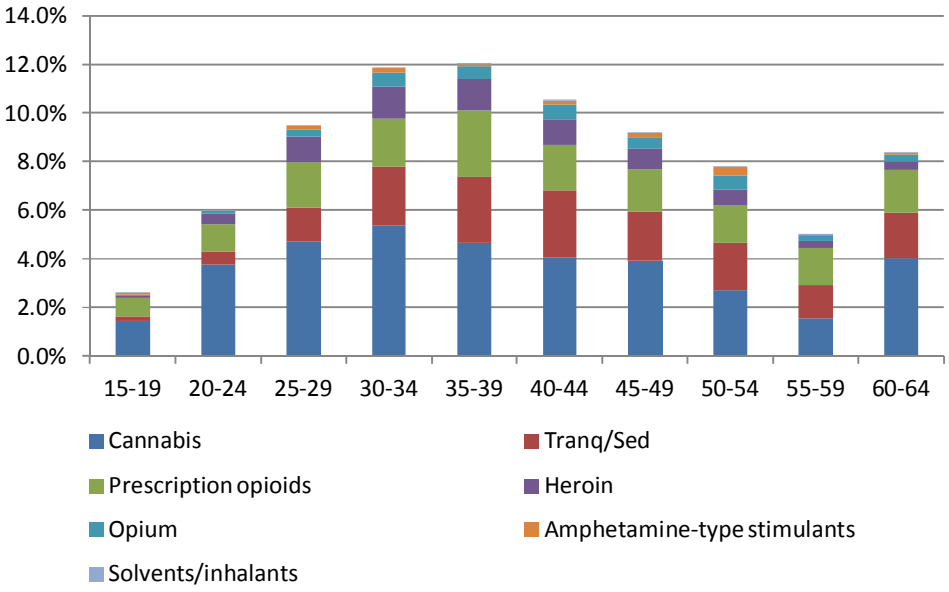
Figure 3: Employment status among regular opiate users and those with no past-year drug use (males only).



2.5.3 Drug use and age, by drug type

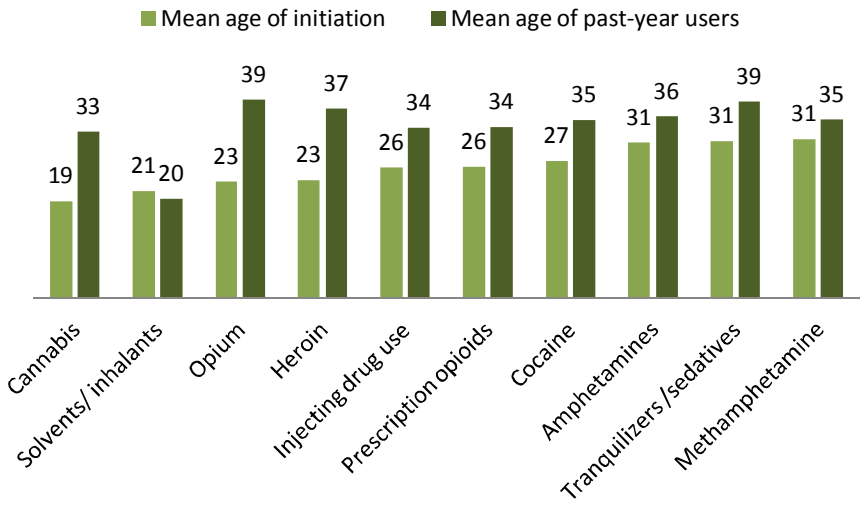
Amongst cannabis users, the highest proportion of use was found among those aged 30 to 34 years. From 35 years, cannabis use appears to decrease with age, however between the ages of 60 and 64 the prevalence rises again, suggesting equivalent levels of use between those aged 40 to 44 and 60 to 64. Heroin use was most prevalent among those aged between 30 and 39, whereas opium use was more common among 40 to 44 year olds as well as 50 to 54 year olds. Tranquiliser or sedative use shows a similar pattern to cannabis, where use peaks around middle age (35 to 44 years), descends, and then increases again for those aged 60 to 64 years. Past-year users of opium and tranquilisers or sedative were the oldest drug-using population, with an average age of 39. This compares to current solvent or inhalant users who are the youngest users with an average age of 20. Prescription opioid use appears to peak among users aged between 35 and 39 years, declining steadily until a significant increase is observed between the oldest age cohort of users: those aged 60 to 64 years (Figure 4).

Figure 4: Prevalence of drug use within age group, by drug type.



For all drug types, the average age of initiation was between 19 and 31 years of age. Cannabis initiation was the earliest (19), on average, and methamphetamine the latest (31). The mean age of past-year users and the mean age of initiation are both several years younger among prescription opioid misusers compared to sedative or tranquiliser users, at 34 and 26 years respectively for the former and 39 and 31 years for the latter, indicating a long duration of use (Figure 5).

Figure 5: Mean age of past-year drug users and age of initiation among ever-users.



2.6 Perceptions around drug use and associated behaviours

2.6.1 Levels of perception and awareness around drugs and prevalence of drug use

The respondents in the household survey were asked which drugs they were aware of and how they had first heard of them. Almost all respondents knew of cannabis while less than 10 per cent of respondents had heard of hallucinogens, ecstasy, and methamphetamine. While respondents had heard of almost all the drugs listed via local networks through word of mouth, respondents had heard of solvents, inhalants, cocaine, and ecstasy via radio and television (Table 11).

In some regions, notably in the provinces bordering poppy-producing Afghanistan, the degree to which women denied knowledge of certain drugs was surprising. For example, in Khyber Pakhtunkhwa, 18 per cent of women interviewed denied any knowledge of heroin and in Balochistan, only 68 per cent of women interviewed admitted having heard of the drug.

Table 11: Awareness of drugs in the general population and initial source of information.

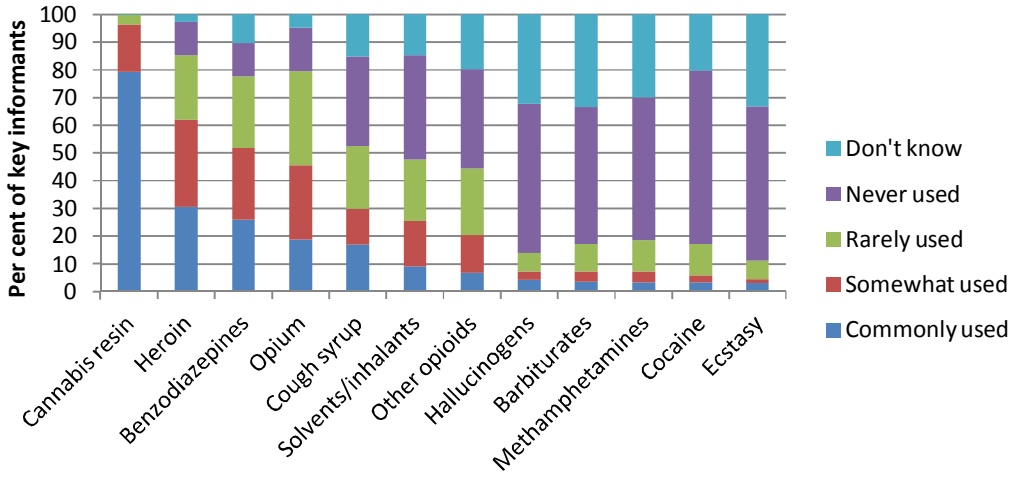
	Proportion of respondents having heard of given drug/substance	Most commonly mentioned source where they had heard about drug for the first time
Cannabis resin (charas)[61]	94	Neighbourhood, community
Cannabis bhang[62]	91	Neighbourhood, community
Heroin	85	Neighbourhood, community
Solvents/inhalants	22	TV/radio, neighbourhood, community

[61] Cannabis charas is also known as hashish.
[62] Cannabis bhang is a traditional drink made from cannabis herb.

Cocaine	14	TV/radio
Hallucinogens	3	Neighbourhood, community
Ecstasy	3	TV/radio, neighbourhood, community
Methamphetamine	1	Neighbourhood, community

Key informants from Sindh, Punjab, Balochistan, and Khyber Pakhtunkhwa collectively considered cannabis resin, or charas, to be the most widely and commonly used drug in their province (Figure 6). However, they also perceived the use of charas, heroin, and tranquilisers to be high, mirroring the actual national prevalence estimates. In Pakistan-administered Kashmir, key informants did not perceive any use of bhang, opium or prescription drugs. In Sindh, Punjab, Balochistan, and Khyber Pakhtunkhwa, solvent or inhalant use among individuals under the age of 16 was perceived to be common. Key informants from the four provinces in Pakistan considered prescription opioids to be much less commonly used than other illicit drugs and tranquilisers and sedatives, while actual prevalence estimates reveal 1.5 per cent of people are misusing prescription opioids (painkillers). This immense underestimation by key informants might suggest widespread ignorance around the harms associated with using opioid-based painkillers for non-medical purposes, highlighting an urgent need for increased awareness around the associated harms (Figure 6).

Figure 6: Key informants' perception of commonly used substances in their community – nationally aggregate data (per cent)



Cough syrup: readily available, hallucinogenic, and lethal

In Lahore in late November 2012, 20 people died and many others suffered serious adverse reactions after consuming a cough syrup containing the principal pharmaceutical ingredient Dextromethorphan. A few weeks later, 40 more people died in Gujranwala after taking the same cough syrup. The syrup was sold under the brand name Tyno, a locally-produced product. Under their Information Exchange System, WHO issued an alert in January 2013 (WHO Alert No. 126 *Contaminated Dextromethorphan Active Pharmaceutical Ingredient*) reporting that all victims and survivors had a history of narcotic drug use or pharmaceutical misuse, and all had regularly consumed cough syrup in quantities higher than the recommended therapeutic dose in the past without suffering serious adverse reactions. Pending analysis, the production and distribution of Tyno was suspended and products recalled. Analysis revealed that the syrup contained

Levomethorphan, a potent opioid analgesic currently under international control of the *Single Convention on Narcotic Drugs* 1961.

In her book *The Dancing Girls of Lahore* (2005), author Louise Brown writes extensively around the widespread misuse of Corex and sedatives by women working in Lahore's red light district. Corex and Corex-D, cough syrups composed of the active ingredient Dextromethorphan as well as Ephedrine, were responsible for six deaths in Sri Lanka in 2012. These same cough syrups are produced for distribution in Pakistan. Although the Sri Lankan Ministry of Public Health imposed a ban on the manufacture, sale, and distribution of Corex in Sri Lanka in late 2012, according to drug users Corex remains widely available in Pakistan and several other South Asian countries.

In this study, regular opiate and cannabis users were asked about their frequency of cough syrup use. Only 7.8 per cent reported ever drinking cough syrup, and of those half - or four per cent of regular drug users - had used it in the past year. Of those who used it in the past year, one in three used it at least once a week, and one in five reported daily use. Although the number of users is low, the frequency of use and the quantity consumed is likely to be significantly in excess of recommended therapeutic doses. In combination with other drugs such as heroin, cannabis, and tranquilisers or sedatives, the misuse of cough syrup presents a considerable health risk.

2.7 Knowledge and awareness around HIV and other blood-borne diseases

Among the general population, only half of those surveyed had ever heard of HIV. Awareness was higher in urban areas compared with rural areas and higher among men compared to women. Further, respondents were asked to name one, two, or three modes of HIV transmission, and overall, only 13 per cent of the population could accurately name the three modes [63] (Table 12). Awareness of HIV and transmission behaviours among the general population may correspond to safer sexual practices. In this study, those who could name three modes of HIV transmission were 2.7 times more likely to report condom use during sexual intercourse compared to those with less awareness of the modes of transmission.

Table 12: Percentage of residents who are aware of HIV and could name up to three valid* modes of transmission.

	Overall		Among males		Among females		In urban areas		In rural areas	
	% Yes	% No	% Yes	% No	% Yes	% No	% Yes	% No	% Yes	% No
Have you heard of HIV?	49	51	61	39	40	60	67	33	42	58
Do you know how HIV is transmitted?										
One valid response	31	69	43	57	22	78	45	55	24	76
Two valid responses	21	79	28	72	14	86	32	68	15	85
Three valid responses	13	87	17	83	9	91	20	80	9	91

*Valid modes of transmission were: (1) infected blood product transfusion, (2) unprotected sexual intercourse with an a person infected with HIV, (3) use of contaminated needles and other injecting equipment or sharing of such equipment with persons infected with HIV, and (4) perinatal HIV transmission from infected mother to child.

HIV awareness strongly improved with higher education levels. Respondents from the household survey were more likely to have heard of HIV as their level of education increased. In the general

[63] Valid modes of transmission were: (1) infected blood product transfusion, (2) unprotected sexual intercourse with an a person infected with HIV, (3) use of contaminated needles and other injecting equipment or sharing of such equipment with persons infected with HIV, and (4) perinatal HIV transmission from infected mother to child.

population approximately 50 per cent of people had heard of HIV, while this proportion increased to 85 per cent among men and women that had completed higher secondary or professional level education. At the same time, of those who had received no education at all, only 29 per cent of men and 17 per cent of women had heard of HIV (Table 13).

These findings may suggest that while those with access to education may learn about HIV transmission risk factors, there may be a dearth of community and rural-based programs operational in other domains. As a result, a large proportion of the uneducated and rural-based population remain unaware of HIV and, potentially, other blood-borne viruses.

Table 13: Awareness of HIV, by gender and education level.

	Males		Females	
Education level	***% Aware of HIV***	***% Unaware of HIV***	***% Aware of HIV***	***% Unaware of HIV***
None	29	71	17	83
Primary to secondary	67	33	56	44
Higher secondary or professional	89	11	86	14

2.8 Causal factors of drug use

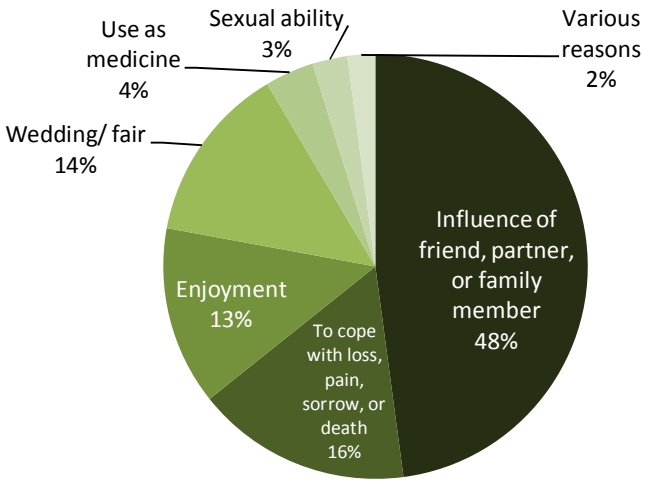
2.8.1 Reasons for initiating and continuing drug use

In Pakistan the risk factors for initiating drug use are evidently multi-fold. Peer pressure can be seen as a powerful factor, especially among youth.[64] In this study the mean ages of initiation for solvents or inhalants, cannabis, and opiates fall within the age ranges for youth. This suggests, as a common occurrence globally, young people are more vulnerable to experimentation with drugs since adolescence is a period where young people are exposed to new ideas and behaviours. Peer pressure is particularly strong during the pre-teen, teen, and adolescence stages when there is a heightened search for identity, increased insecurity about identity, and a need to be accepted in a group.

Regular drug users were asked why they started using and with which drugs. Almost half, or 48 per cent, claimed it was due to the influence of others. Further, 16 per cent maintained they used drugs for the first time to cope with personal difficulties resulting from bereavement or loss of some other kind. Thirteen per cent used drugs for enjoyment or to get high, while 4 per cent had initiated drug use as a form of self-medication – probably as a coping mechanism to deal with. Three per cent of regular users first used drugs believing it would enhance their sexual performance (Figure 7).

[64] For statistical consistency, the United Nations defines youth as those aged between 15 and 24 years.

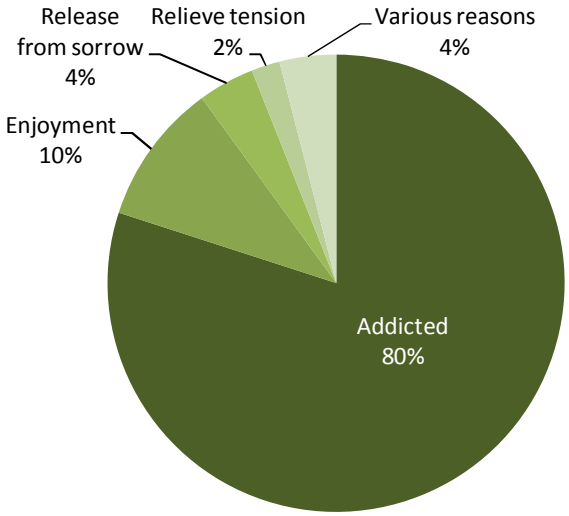
Figure 7: Reasons for drug use initiation among dependent opiate users.



Problem drug users were asked why they continued to use drugs. An overwhelming majority of 80 per cent reported physical or psychological dependency to drugs after their first exposure, while 10 per cent claimed they continued because they enjoyed the drug use. Six per cent continued to use drugs to cope with sorrow or relieve tension or stress (

Figure 8).

Figure 8: Reasons for continued drug use after initiation (among dependent opiate users).

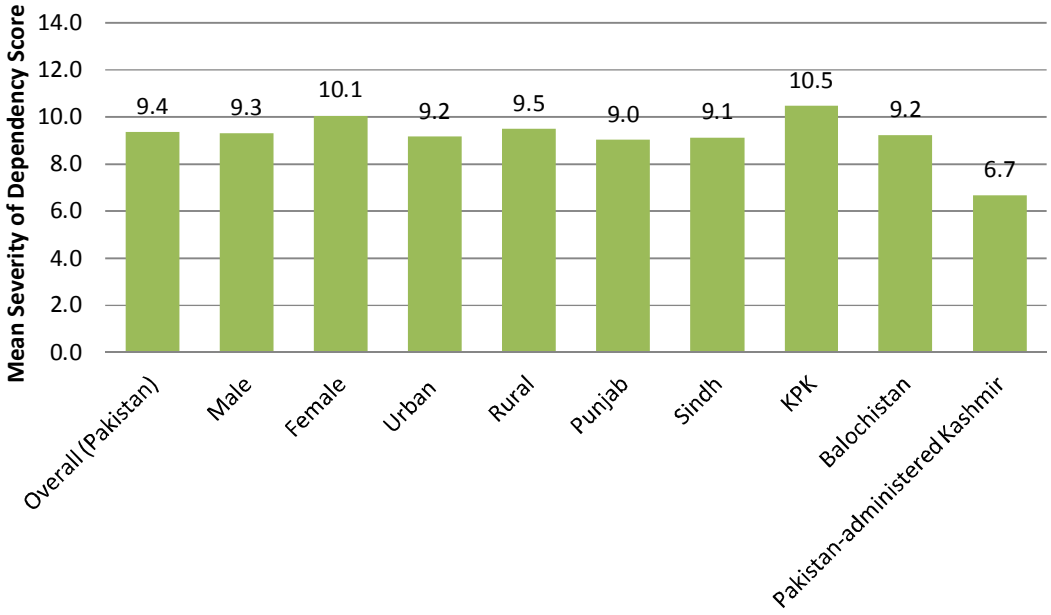


2.9 Health consequences of drug use

2.9.1 Dependence and severity of dependence among past-year users

The Severity of Dependence Scale (SDS)[65] is a tool used to establish the degree of dependence among drugs users; the higher the score, the higher the level of dependence. Cut-off values for SDS scores vary according to drug type. For opiates the value is five or more, and for cannabis it is three or more.[66] Severity of dependence among this sample was calculated by gender, urban or rural area, as well as by region. Nationally, the study uncovered an overall mean SDS score of 9.4, where women demonstrated a higher level of dependence to opiates (10.1) compared to men (9.3). Regular opiate users from rural areas demonstrated a higher level of dependence (9.5) compared to those from urban areas (9.2). The level of severity of dependence among users from Khyber Pakhtunkhwa was calculated as the highest in the country at 10.5, while in Pakistan-administered Kashmir levels of severity were lowest at 6.7 (Figure 9).

Figure 9: Average Severity of Dependence Score among regular opiate users.



2.9.2 Proportion of dependent users, by drug type

Although all opiate users by definition are considered dependent users, in this study, opiate users were most likely to be dependent or suffering from drug use disorders (97 per cent) followed by methamphetamine users (92 per cent), cocaine users (85 per cent), and solvent or inhalant users (83 per cent). Among misusers of prescription drugs, tranquiliser or sedative users were far more likely to be dependent or suffering from drug use disorders (75 per cent) than prescription opioid (30 per cent) or amphetamine users (26 per cent). See Table 14.

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[65] Gossop, M., Griffiths, P., Powis, B. and Strang, J. 1992. "Severity of dependence and route of administration of heroin, cocaine and amphetamines." *British Journal of Addiction* 87: 1527-1536.

[66] Swift, W., Copeland, J. and Hall, W. 1998. "Choosing a diagnostic cut-off for cannabis dependence." *Addiction* 93: 1681-1692. Martin, G., Copeland, J., Gates, P., and Gilmore, S. 2006. "The Severity of Dependence Scale (SDS) in an adolescent population of cannabis users: Reliability, validity and diagnostic cut-off." *Drug and Alcohol Dependence* 83: 90-93.

Table 14: Proportion of drug users who qualify as dependent or suffering from drug use disorders[67], by drug type.

Drug type	Per cent dependent
Opiates	97
Methamphetamine	92
Cocaine	85
Solvents or inhalants	83
Tranquilisers or sedatives	75
Cannabis	74
Prescription opioid	30
Amphetamines	26

2.9.3 Drug-related high-risk behaviours

A wealth of research and literature exists indicating that people who inject drugs (PWIDs) are at increased risk of drug-related harm, including the acquisition of blood-borne viruses such as HIV, hepatitis B, and hepatitis C. Pakistan is currently in the midst of a concentrated HIV epidemic, notably among PWIDs. According to the 2011 report of *HIV Second Generation Surveillance*, carried out by the National AIDS Control Programme, the overall prevalence of HIV among PWIDs is 37.8%. The prevalence of HIV varies between different cities: Faisalabad has a prevalence of 52.5 per cent, Karachi has 42.2 per cent, and Sargodha has 40.6 per cent. The Programme also reports that among those who have received an HIV test in the past 12 months only 9.1 per cent know their results[68] – indicating that a very high proportion of people who inject drugs are unaware of their HIV status, leading to a degree of complacency to change behaviour and therefore posing high risk of HIV transmission to other injectors and partners.

[67] Users include the combined populations from the household and problem drug use surveys, weighted for the number of users estimated from each who qualify for dependence based on either ICD-10 criteria (household survey) or the severity of dependence scale (problem drug user survey).
[68] UNAIDS. 2012. *Country Progress Reports 2012: Narrative Report.*

What factors explain the increase in the estimated number of people who inject drugs?

The number of people who inject drugs (PWIDs) estimated in 2012 is higher than previously reported. Several factors have contributed to this increase, namely there has been an increase in the population, an increase in the overall number of regular opiate users as well as the proportion who report currently injecting. Additionally, this study included household estimates of PWID that are injecting drugs other than heroin. Previous estimates had not included these injectors.

The updated prevalence estimates of PWIDs were influenced by the following factors:

1. From 2000 to 2012 ***the*** *estimated* ***number of opiate users doubled****.*
2. From 2000 to 2012 ***the per cent of opiate users who inject doubled****.*
3. There was ***increase in the reference population*** used to estimate PWID in 2006 and 2012.
4. And finally, ***a small number of non-opiate injectors are now included in the estimate***.

Sources: *Drug use in Pakistan*: Results from the 2000 National Assessment, *Problem Drug Use in Pakistan*: Results from the 2006 National Assessment, Drug use in Pakistan 2013 (current study)

Year	Number of opiate users	% of opiate users who inject	Prevalence of injecting drug use	Number of PWID	Reference population (15-64 in millions)
2000	500,000	15%	0.10%	75,000	68.5
2006	628,000	20%	0.14%	130,000	89
2012	1,060,000	33%	0.40%	430,000	111.3

2.10 Socio-demographic characteristics of people who inject drugs

A total of 430,000 people, or 0.4 per cent of the population, are estimated to be currently injecting drugs in Pakistan. Of those, approximately 78 per cent are injecting heroin. Past-year users also frequently reported injecting tranquillisers as well as prescription drugs. Men are more likely to inject than women. Of the low number of non-heroin users reporting past-year injecting drug use, the majority were injecting prescription opioids or tranquilisers and sedatives. Among these, 45 per cent were women. Among past-year users the mean age of initiating injecting drug use is considerably young at 26 years, while the mean age for an injecting drug user is 34. By examining the difference between the mean ages of initiation of heroin use and injecting, most move from initiating heroin use to injecting in approximately three years. The majority of people who inject drugs reported injecting two to four times daily, and the most common locations to inject in are parks, closed streets or abandoned buildings.

Among regular opiate users interviewed by in the problem drug use survey, more than one third reported a history of injecting.[69] Of past-year injectors, less than 2 per cent had received no formal education and around three-quarters had been educated for more than four years, suggesting that the likelihood of injecting does not necessarily correlate to level of education. However, non-injecting opiate users are more likely to be in employment compared to ever or past-year injectors. Unemployment rates among never-injectors were 38 per cent compared to 44 per cent among ever injectors and 43 per cent among past-year injectors. Approximately 30 per cent of people that inject drugs are married (Table 15).

[69] 34.5 per cent lifetime and 32.4 per cent in the past year.

Table 15: Social and demographic features of opiate user, by injection status.

		Never injected	Ever injected	Injected in past-year
Education	None	2%	2%	2%
	1-3 yrs.	16%	21%	22%
	4-7 yrs.	42%	40%	40%
	8-10 yrs.	34%	32%	31%
	11-19 yrs.	6%	5%	5%
Age	24 and under	13%	15%	15%
	25 to 34	39%	44%	44%
	Over 35	49%	42%	41%
Employment	Full-time	10%	5%	5%
	Part-time	9%	6%	7%
	Daily wages	34%	37%	37%
	Unemployed	38%	44%	42%
	Student	1%	1%	1%
	Others	8%	7%	8%
Marital Status	Unmarried	41%	50%	50%
	Married	43%	29%	29%
	Divorced	6%	8%	8%
	Separated	5%	7%	7%
	Widowed	5%	6%	6%

Note: columns may not sum to 100 due to rounding.

2.11 Vulnerability to risks of blood borne infection

The shared use of syringes and other injecting equipment among PWIDs is widely recognised as being associated with the transmission of HIV and other blood-borne viruses.

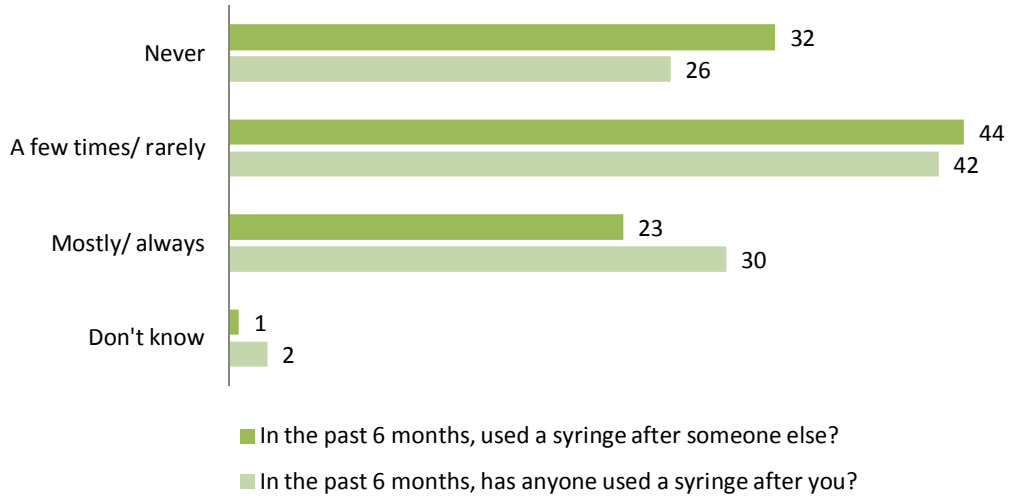
Among regular opiate users who inject drugs, 73 per cent reported using syringes either before or after someone else (Figure 10). The average number of times a PWID uses a syringe is three; this suggests the average user uses just about one new syringe per day rather than one new syringe per injecting episode. However it is not clear if the new syringe used is sterile. PWIDs reported the methods used for cleaning injecting equipment: while 35 per cent used boiling water and 19 per cent used alcohol or spirits, only 16 per cent used bleach. A concerning 90 per cent used methods that are considered unlikely to sterilize needles and syringes. Except for the use of bleach, none of the methods would protect against HIV and hepatitis infection.

When people who inject drugs (PWIDS) were asked why they shared injecting equipment, 85 per cent responded it was due to the unavailability of sterile equipment and 70 per cent additionally reported influence from peers. The practice of sharing can be strongly influenced by the context in which it occurs: the result of group norms and rituals. Pakistan's 2011 HIV surveillance report[70] showed 80.9 per cent of PWIDs inject with friends or family. An exceptionally high proportion (70.3 per cent) reported having sought help in injecting from professional injectors or street doctors,

[70] National AIDS Control Programme, Government of Pakistan. 2011. *HIV Second Generation Surveillance in Pakistan – National Report, Round IV – 2011.*

during the past month. Such social situations, where PWIDs prepare and use drugs together and for each other, are more likely to lead to sharing practices, increasing vulnerability to infections such as HIV. Previous injectors who did not inject in the past six months were asked several follow-up questions about why they didn't inject. Only 11 people answered, and the most common response was "*Didn't have any veins or places left to inject*" – therefore non-injecting was a forced options for them.

Figure 10: Per cent of PWID who either use syringes before or after another injector.



2.11.1 Sexual high-risk behaviours

Based on self-reported data, sexual risk behaviours among regular opiate users are significantly high, particularly among women and within correctional settings. This places opiate users at increased risk of becoming infected with, and transmitting, HIV and other communicable diseases.

Among opiate users, the average age of the first sexual encounter among men was 17.7, but much younger among women (14.7 years old) and transgender (13 years old). One in five male opiate users, or 21 per cent, reported that their first sexual encounter was with another man, 31 per cent with their wife, 31 per cent with a girlfriend, and 5 per cent with a sex worker (either male, female, or hijra). Among women, 57 per cent reported their first sexual encounter to be with their husband, 23 per cent with a boyfriend, and the remaining did not specify.

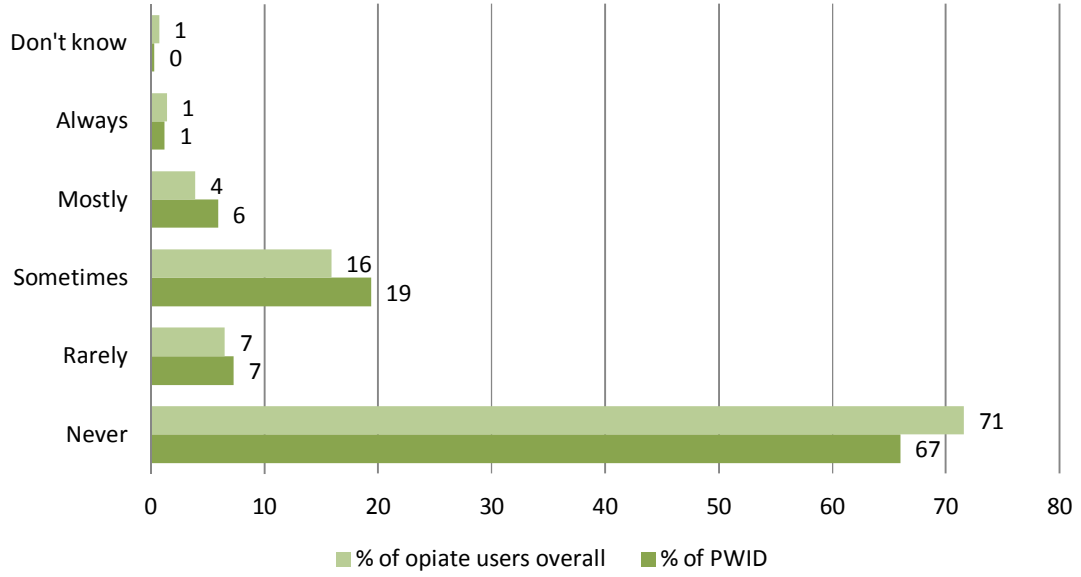
Opiate users and PWID have reportedly very high risk behaviours for sexual transmission of HIV. The one risk factor that stands out beyond all others is the per cent of PWID who also have partners who inject drugs, increasing their odds of acquisition through sexual transmission of HIV in addition to the risk they have as an injector themselves. Although the per cent of people who have a steady sex partner who have been told they are HIV positive is low, it is falsely deflated because so many who have HIV are not aware of their status (Table 16).

Table 16: High-risk sex-partner characteristics among PWID and regular opiate users.

	Among PWID with a steady sex partner		Among regular opiate users with a steady sex partner	
As far as you know, have any of your steady sex partners…	% yes	% no	% yes	% no
…used drugs in the past year?	32	68	29	71
…injected drugs in the past year?	20	80	5	95
…ever had sex with other men/ women?	29	71	23	77
…been told they are HIV positive?	2	98	2	98

Condom use is unusual among opiate users. PWID are slightly more likely to use condoms than non-injecting opiate users, perhaps because they are more likely to access a drop in centre where condoms may be available. Due to the previously discussed high rate of infection of both HIV from sero-prevalence studies and self-reported hepatitis c virus among PWID, sexual transmission of both viruses is more likely to occur without barrier protection. The proportion who report condom use when they buy or sell sex is equally low (Figure 11). However this proportion also needs to be seen in the national context of low prevalence of condom use and other contraceptives.

Figure 11: Frequency (% of total) of condom use among opiate users and PWID in the past six-months.



Notwithstanding the small number of respondents, the majority of regular female opiate users interviewed reported having sexual intercourse in the past six months. Of these, 38 per cent had sex with other drug-using partners or spouses. Not a single female respondent reported 'always' using a condom. Female opiate users were 3.6 times more likely to receive money or drugs in exchange for sex (Table 17). On average, men who report engaging in sex for trade do so approximately 4-6 times per year. Four out of five respondents who engage in transactional sex report never or rarely using condoms (Table 18).

p

Table 17: Proportion of regular opiate users who exchange drugs or money for sex

During the last six months did you…	Male		Female	
	% yes	% no	% yes	% no
… receive money to have sex?	9	91	32	68
… receive drugs to have sex?	9	91	35	65
… give money to have sex?	37	63	0	100
… give drugs to have sex?	23	77	0	100

Table 18: Frequency of condom use among regular opiate users during sex in exchange for drugs or money

During these encounters, did you or these partners use condoms?	Male (% of total)	Female (% of total)
Never/rarely	80	81
Sometimes/mostly	15	16
Always	1	0
Don't know/ refused	4	3

Among the opiate users who have had sexual intercourse in correctional settings, only one person in our survey reported using condoms 'most of the time'. This suggests that nearly all male drug users who reported having sex in correctional settings are not using protection, placing themselves and their sex partners at high risk of contracting or transmitting HIV and other sexually transmitted infections.

Presenting a particularly high risk to the general population, one third of PWIDs reported having donated or sold blood. Seventy five per cent of all blood donors in Pakistan that donate to public and private sector blood banks for transfusions are covertly remunerated.[71] This encourages drug users to donate blood. While the majority of blood banks in the public sector screen blood for HIV, hepatitis, and other Transfusion Transmittable Diseases (TTIs) - as standard policy - effective screening in the private sector is reportedly lacking. As a result, inadequately screened blood provided by PWIDs could likely be contaminated, placing blood transfusion recipients at higher risk of contracting TTIs.

[71] National AIDS Control Programme, Ministry of Health, Government of Pakistan. 2007. *National Blood Policy & Strategic Framework 2008-2012 for Blood Transfusion Services in Pakistan.*

2.12 Self-reported prevalence of HIV and hepatitis among drug users

The overall prevalence of self-reported HIV among problem drug users in this study was 32 per 1,000; among past-year injectors the prevalence was 56 per 1,000. Among all regular opiate users, self-reported HIV-positive status is highest in Punjab and Sindh while self-reported hepatitis positive status is highest in Sindh and Balochistan. Of regular opiate users from Sindh, 27.5 per cent reported hepatitis -positive status, which is significantly higher than levels found in other provinces. Almost 40 per cent of those same users from Sindh who have a history of injecting are hepatitis positive (Table 19).

Table 19: The prevalence (self-reported) of HIV, HBV, and HCV among regular opiate users and those who have ever injected drugs.

Self-reported status among regular opiate users	Pakistan	Punjab	Sindh	KPK	Balochistan
Hepatitis B	14.0	12.7	20.5	11.0	17.7
Hepatitis C	12.5	13.6	27.5	2.3	7.5
HIV	3.2	4.4	3.8	0.6	2.1
Self-reported status among opiate users who have *ever* injected drugs	**Pakistan**	**Punjab**	**Sindh**	**KPK**	**Balochistan**
Hepatitis B	17.2	16.1	15.9	13.3	28.1
Hepatitis C	20.1	18.8	39.2	2.0	14.8
HIV	5.6	6.1	9.1	2.0	0.8

Self-reported HIV prevalence among PWIDS in this study reveals a major discrepancy between the estimated prevalence of HIV from sero-prevalence studies and the prevalence of who actually know they are infected. This gap in self-reported HIV status and HIV prevalence estimates could be due to the high levels of stigma associated with HIV-positive status, leading respondents to hide their status from the interviewer. It is however, more likely due to the use of unlinked anonymous testing in sero-prevalence studies or low testing levels for HIV among PWIDs in Pakistan. Unlinked anonymous testing is a practice used to estimate population prevalence of HIV without informing the participant of their status. Instead, the participant is referred to other testing services.[72]

Using known risk factors for HIV transmission and other socio-demographic variables, we evaluated which factors[73] were most strongly associated with HIV infection among opiate users (n=3,330). In a model predicting HIV infection (self-reported), sharing syringes due to peer influences was associated with a 4.4-fold increased risk of HIV, after adjustment for marital status, age, severity of dependence, and trading sex for drugs or money, which was also a significant predictor of HIV infection, conferring a 2.5-fold increased risk (Table 20). In other words, sharing syringes because another injector was either “someone you trust” or “someone who would get upset if you didn’t use the same syringe” and trading sex for money or drugs were the two strongest predictors of HIV infection among opiate users. These factors should be considered in the broader context of the implementation of outreach programs and interventions.

[72] Archibald, P. and others, “Geographical and temporal variation of injecting drug users in Pakistan.” *Sex. Transm. Infection,* Supplement 2:ii18-ii28, (2013)

[73] Binary logistic regression model predicting HIV infection (1=yes, 0=no),adjusting for marital status, age, syringe sharing modality, sex trade, SPSS v.20.

Table 20: Predictors of self-reported HIV infection among opiate users.

	Odds ratio		
	adjusted odds ratio	95% confidence interval	p-value
Married	0.64	0.41-0.99	0.043
Age (continuous in years)	1.05	1.02-1.07	0.000
Severity Of Dependence (continuous)	1.11	1.02-1.21	0.020
Trades sex for drugs or money (binary)	2.53	1.63-3.91	0.000
Shared syringes due to peer influences (binary)	4.41	2.50-7.79	0.000

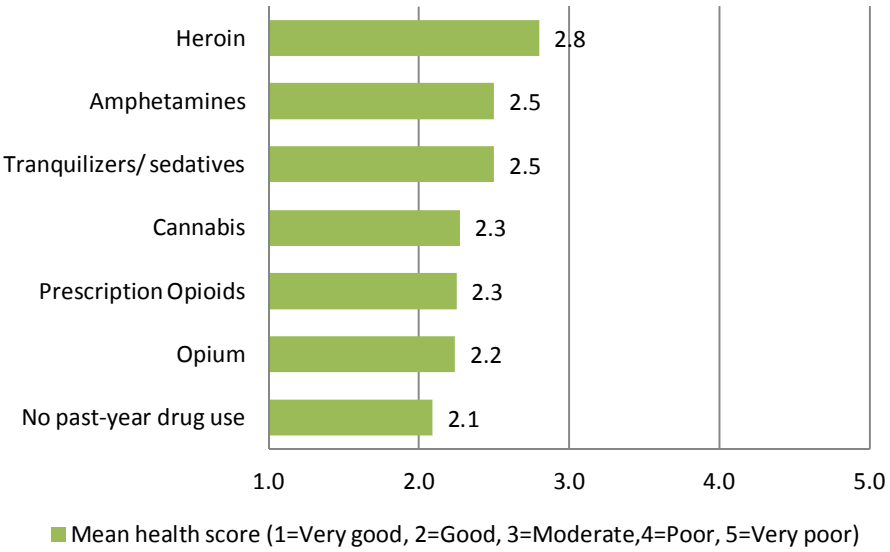
Note: p-values of less than 0.05 are considered statistically significant.

2.13 Personal health and drug use in the general population

2.13.1 Self-reported health status, by drug type

Past-year users of illicit substances were more likely to report poor health compared to non-users. On a self-rated scale of very good (1) to very poor (5), on average heroin users reported the poorest health compared to any other category of drug user, including those using prescription drugs for non-medical purposes. Those who had no past-year drug use had an average health score of 2.1, or were likely to report "good health". Those who used heroin in the past-year were closer to "moderate health"(Figure 12).

Figure 12: Average self-rated health score, by drug.



2.14 Correlations between health problems, hospitalisation, and prescription drug misuse

There is evidence to suggest populations that experience trauma and violence also experience an increased incidence of mental health issues.[74] Such populations may be at increased risk of misusing pharmaceutical drugs, rather high level of psychiatric co-morbidity is found among dependent drug users. Vulnerable groups, such as these, require an increased level of specialist mental health treatment and support. Such treatment and support should include effective early warning and monitoring systems to identify signs of dependency to prescription medication. Benzodiazepines are widely used to treat anxiety, insomnia, and panic-related disorders. Since the risk of dependency on these tranquilisers is high, close medical supervision and follow up is required.

Analyses conducted evaluating health history and drug use information in the survey reveal high levels of non-medical use of prescription drugs among men and women who were hospitalised in the past year for mental health issues. Non-medical use was high among those hospitalised for anxiety, depression, and stress, after adjusting for age, gender, urban or rural area, and literacy level. The findings reveal a 13-fold increased risk of tranquiliser or sedative misuse - predominantly of benzodiazepines - among this group which may point to self-medication following discharge from inpatient facilities. This also points to the findings that a high proportion of drug dependent persons are diagnosed with psychiatric comorbidity.

Risk factors that would likely lead to prescription drug misuse were explored with respondents reporting past-year hospitalisation in the survey. Those admitted for gastro-intestinal and abdominal problems were considered at risk of misusing painkillers given the three-fold increased risk of past-year use. Medical conditions such as these are often extremely painful, requiring urgent and strong pain relief. As such, it is highly likely that during their period of illness many patients will use prescription drugs without medical supervision prior to or following hospitalisation. Self-medication of prescription drugs for chronic pain is well documented, especially among those with a history of substance use.[75]

In summary, these findings can be supported by wider global-level epidemiology, which finds that "non-medical use of prescription drugs is typically greater among patients than in the general population and the gap widens further for those patients who are mentally ill".[76]

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[74] Khalily, MT. "Mental health problems in Pakistani society as a consequence of violence and trauma: a case for better integration of care." *International Journal of Integrated Care*. Oct-Dec;11 (2011) e128

[75] Ives, TJ, et al. 2006. "Predictors of opioid misuse in patients with chronic pain: a prospective cohort study." *BMC Health Services Research*, vol. 6, issue 46 (2006)

[76] UNODC. 2011. *The non-medical use of prescription drugs: policy direction issues, discussion paper.*

3 Provision of structured treatment and other services for drug users

3.1 Availability of structured treatment and low-threshold interventions

Broadly speaking, structured treatment can be categorised as: (1) Residential rehabilitation programmes: community-based structured psychosocial interventions and counselling, or (2) inpatient or outpatient opioid substitution therapy services. So far, the annual capacity to provide drug dependence treatment is for 1,990 people per year throughout Pakistan, with low threshold services providing the capacity to service 26,550 people, or 6 per cent of the estimated 430,000 people who inject drugs nationwide (Table 21: Estimated provision of interventions for drug users in Pakistan, 2012-2013).

Such services are unable to cope with the estimated 4.25 million dependent users in the country. Furthermore, of those drug users who report receiving treatment, the average number of times they receive treatment is 1.8. Considering that drug dependence is a chronic, relapsing disorder, most clients require long term medical and psychosocial care before they can achieve a status of improved quality of life and abstinence. Therefore a major rethinking and vast scale up of drug dependence treatment and other services is urgently required.

Table 21: Estimated provision77 of interventions for drug users in Pakistan, 2012-2013

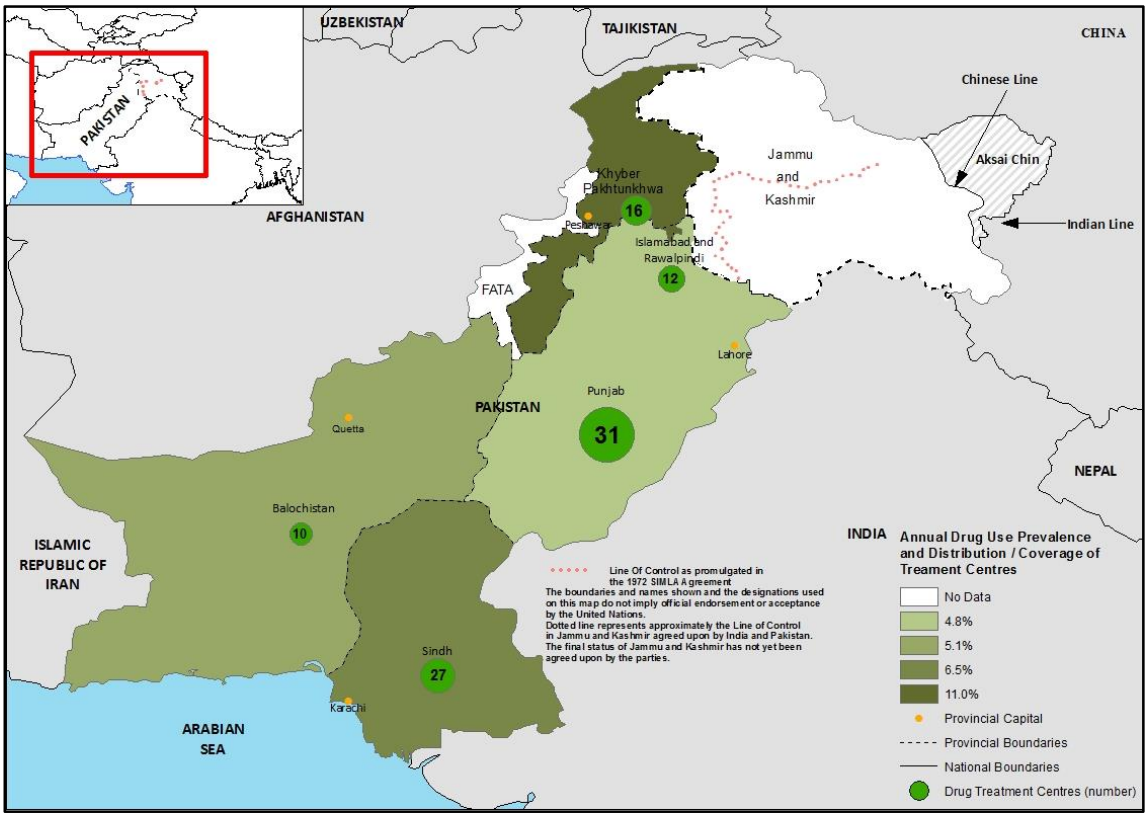
Province or region	Structured drug treatment						Low threshold services for drug users and PWIDs		
	Government	NGO	Private	Private, not registered[1]	Sub-total	Annual capacity	DICS	Sub-total	Annual capacity
Sindh	8	7	8	4	27	334	14	14	7,000
Punjab	7	12	8	4	31	779	23	24	18,050
Khyber Pakhtunkhwa	5	6	1	4	16	552	1[2]	1	500
Balochistan	4	2	0	4	10	141	2[3]	2	1,000
Islamabad and Rawalpindi	1	2	5	4	12	184		0	0
Pakistan-administered Kashmir									
FATA									
TOTAL	**25**	**29**	**22**	**20**	**96**	**1990**	**33**	**34**	**26,550**

[1]Exact locations unknown although anecdotal information supplied confirms total number distributed evenly across Pakistan [2]Services due to open by mid-2013 [3]Services due to open by mid-2013

When key informants were asked whether there were drug treatment services in their locality, around one-third of informants in Punjab, Balochistan, and Khyber Pakhtunkhwa reported availability of local drug treatment services. In Sindh, only 17 per cent of key informants cited a drop-in centre in their area. No key informants in Pakistan-administered Kashmir were aware of services for drug users in the region. Findings from the problem drug user assessment also revealed insufficient treatment service capacity and coverage, with less than half of all opiate users aware of an operating drug treatment centre in their area. More than three-quarters of regular opiate users across all regions of Pakistan identified the need for drug treatment centres as 'urgent'.

[77] Owing to the high probability of relapse, many clients in structured treatment require multiple treatment episodes before reaching a permanent period of abstinence, therefore number and capacity in this table is presented at minimum level.

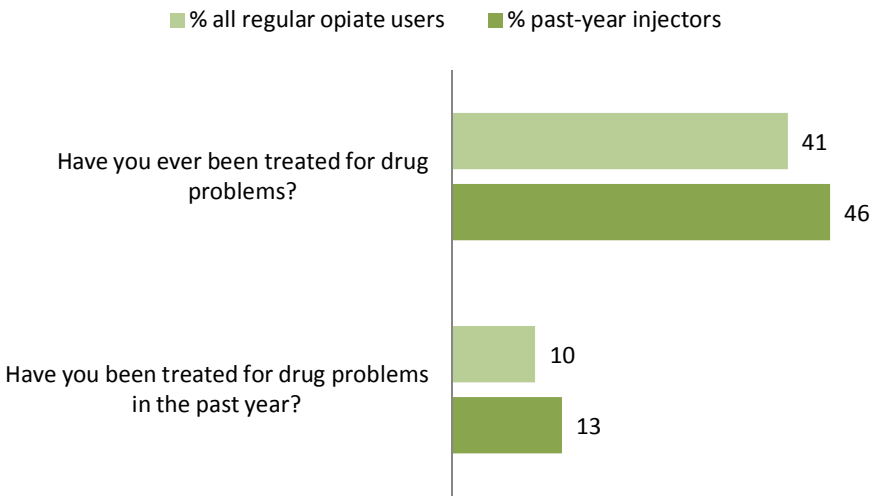
Map 10: Distribution of treatment centres in Pakistan, 2012



3.2 Utilisation of treatment and low-threshold services

Of regular opiate users, 41 per cent had been in treatment during their lifetime and 10 per cent in the past year. Overall, 46 per cent of people who inject drugs (PWIDs) had been treated for drug problems in their lifetime (Figure 13).

Figure 13: Per cent of regular opiate users and PWIDs who have received treatment ever and in the past year.



Low-threshold interventions generally describe services for drug users, and in particular PWIDs, that offer advice and information around drug use, motivational interventions, and harm-reduction interventions aimed at reducing the risk of transmitting and contracting HIV and other blood-borne viruses. Only 16 per cent of PWIDs interviewed were in contact with an outreach worker in the past six months (Table 24) and 11 per cent of past-year PWIDs had accessed a drop-in centre in the last 12 months. Of these, 16 per cent of PWIDs attended a drop-in centre for an HIV test and 10 per cent for a hepatitis B or C test (Table 22).

Table 22: Utilisation of drop-in centres among PWIDs.

Drop-in centre services	Among past-year injectors	
	% yes	% no
Is there a local drop-in centre or similar services for HIV prevention in your area?	24	76
Have you used the services of a drop-in centre in the past 12 months?	11	89

Table 23: Services utilized by PWIDs who had used services in the past 12-months

Drop-in centre services	Among past-year injectors	
Among those who utilized a drop in centre, did you receive the following services?	% yes	% no
Needle/syringe exchange	0	100
Condoms	22	78
Prevention kit (chlorine)	2	98
Leaflet/booklet on HIV prevention	23	77
Overdose prevention	14	86
Pre/post-test counselling	13	87
Counselling for behaviour change	12	88
HIV testing	16	84
Testing for hepatitis B or C	10	90
Testing for STI	3	97
Referral for drug treatment	3	97
Referral to specialist	3	97

While a wealth of evidence suggests outreach services can be more effective in engaging hard-to-reach drug using populations such as people who inject drugs (PWIDs), this study finds that a similar proportion of PWIDs receive services through outreach (23 per cent) than they receive them through drop-in centres (24 per cent).

However, of those who were in contact with outreach services in the past 6-months, two-thirds per cent were in touch more than 2 times per week. Additionally, utilisation of harm reduction interventions is considerably higher among PWIDs accessing services through outreach compared to those attending drop-in services. This may be due to more effective targeting approaches adopted by community-based outreach teams or reduced motivation among PWIDs to travel to and access fixed-site drop-in services.

Table 24: Utilisation of outreach services by opiate users and PWID

	Among PWID	
	% yes	% no
Is there an outreach worker in your area?	23	77
Have you been in contact in the past 6 months?	16	84

Table 25: Among those in contact in past six months, what services did you receive?

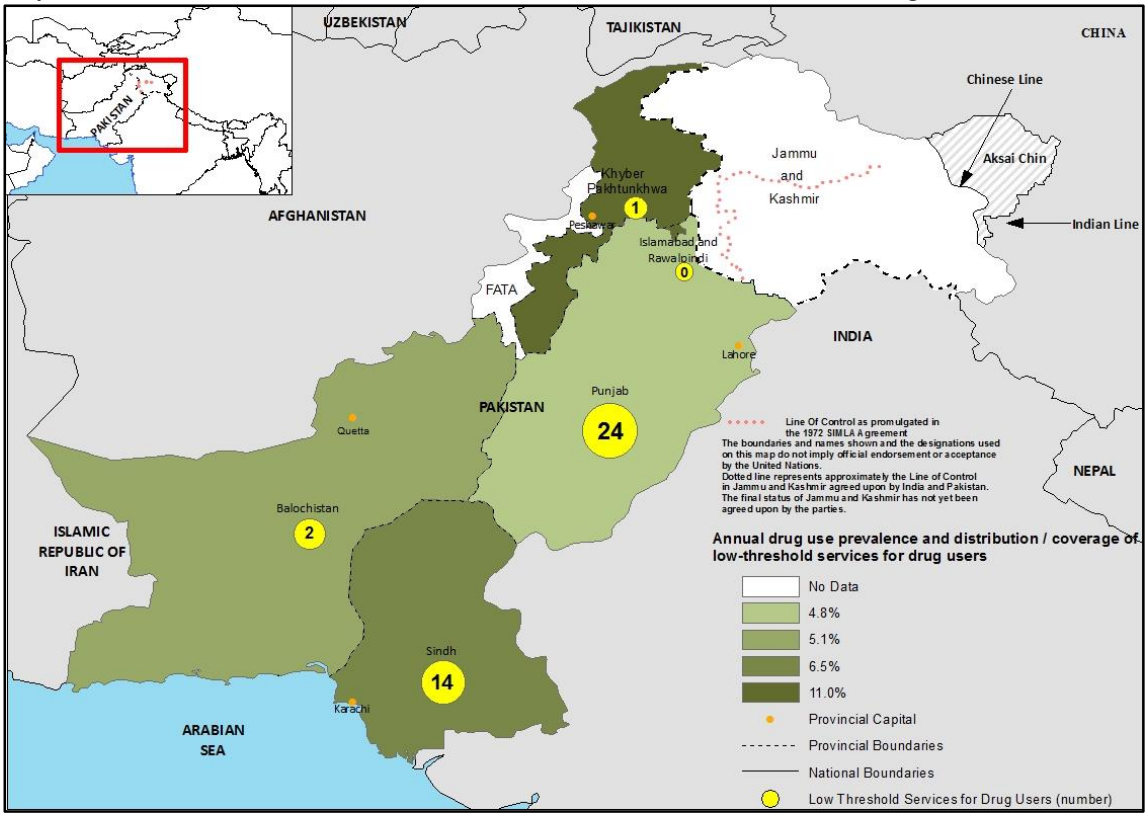
	Among past-year injectors	
	% received	% did not receive
Needle/syringe exchange	16	84
Condoms	39	61
Prevention kit (chlorine)	58	42
Leaflet/ booklet on HIV prevention	45	55
Counselling for behaviour change	44	56
Overdose prevention	39	61
Referral to a drop-in centre	45	55
Referral for other services	48	52
Bandaging/painkillers	10	90

Note: Because these services are not exclusive of each other these categories will not sum to 100

According to recent research,[78] drug treatment services are running without a solid evidence base and protocols. Current information management systems are poor and there is a scarcity of data on treatment effectiveness and treatment centre locations do not necessarily correspond to potential demand.[79] The quality of treatment and interventions provided is also low, partly due to low capacity and scarcity of trained human resources and ineffective referral systems.

[78] UNODC. 2012. *Assessment of the National Drug Treatment and Rehabilitation System of Pakistan*.
[79] *Ibid.*

Map 11: Distribution of low-threshold interventions and other services for drug users and PWIDs.



3.3 Barriers to access support and services

Findings from this study reveal a lower level of uptake of drop-in centre services by PWIDs compared to community-based outreach services. When asked what factors were most likely to hinder access to drop-in centres, a range of prohibitive factors was identified. The chaotic lifestyle of many regular opiate users often makes utilisation of existing services difficult and erratic. They may be mistrustful of services and might assume they will be treated punitively. Thus, the development of strategies that seek to address such perceptions and especially the issues of stigma and discrimination are urgently needed to improve the utilisation of harm reduction services.

Table 26: Among regular opiate users, reasons for not accessing a drop-in centre [Note: Because these categories are not exclusive the percentages will not sum to 100]

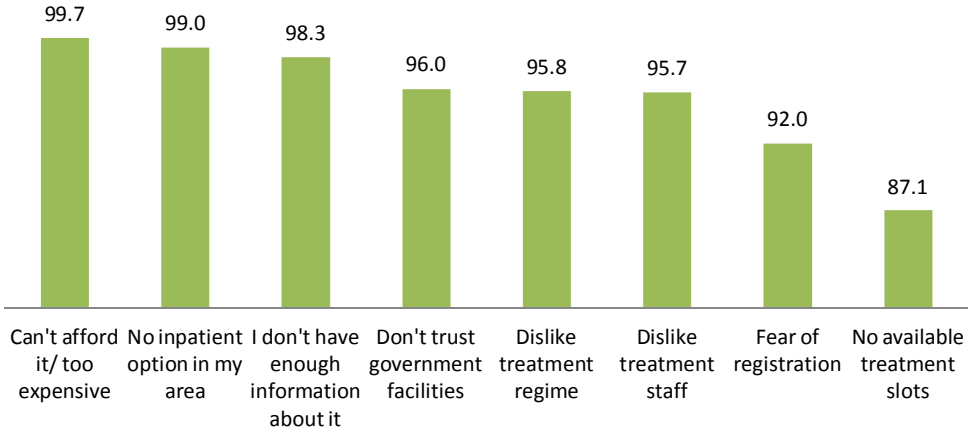
Of the times you did not use the DIC, what was the reason?	% regular opiate users	% regular heroin users	% past-year injectors
Too far, inconvenient	68	67	65
Don't want people to see you	77	79	73
Services are too complicated, too many rules	80	82	76
Unhelpful staff	88	90	88
Afraid of being registered	76	75	73
Afraid of police	73	74	71

Of opiate users surveyed, ten per cent had received treatment in the past-year. PWIDs were significantly more likely to have received structured treatment, in the past year (13 per cent vs. 9 per cent of non-injectors). The majority who had not received treatment noted an inability to pay that prevented them from seeking treatment, but also noted many other barriers such as lack of

availability, mistrust for government facilities, fear of registration, and lack of available slots in local treatment facilities (Figure 14).

Figure 14: Among regular opiate users who want to seek help but are unable to, response to the question, "What prevented you from getting help?"

[Note: Because these categories are not exclusive the percentages will not sum to 100]



Of the available types of drug treatment in Pakistan, key informants were surveyed regarding their perception of the quality of services provide. Private treatment centres were ranked highest, but only 32 per cent consider them “very effective” at generating favourable treatment outcomes. Government hospitals received the worst rankings, with half of respondents considering them less effective in generating favourable treatment outcomes, and only twenty per cent considering them adequately accessible (Table 24). Also many respondents considered drug treatment services as not meeting the diverse needs of the clients through the range of services offered and ensuring their retention in the programmes.

Table 27: Perceptions of key informants regarding the quality of drug treatment services.

Treatment centre effectiveness factor: for clients	Accessibility and coverage	Ability to meet needs	Provision of a range of services, treatment options or modalities	Meet client satisfaction and level retention	Generating favourable treatment outcomes[80]
Drop-in centre					
Very effective	24%	23%	20%	18%	27%
Somewhat effective	46%	47%	35%	40%	35%
Less effective	30%	30%	44%	42%	38%
Government treatment centre					
Very effective	27%	23%	23%	22%	20%
Somewhat effective	43%	53%	51%	41%	44%
Less effective	30%	24%	26%	38%	37%
Government hospital					
Very effective	22%	22%	19%	16%	15%
Somewhat effective	45%	42%	42%	37%	36%
Less effective	33%	36%	39%	47%	49%
Drug treatment and rehabilitation (NGO)					
Very effective	30%	29%	28%	24%	22%
Somewhat effective	40%	43%	45%	40%	40%
Less effective	30%	28%	28%	36%	38%
Private treatment centre					
Very effective	38%	41%	46%	36%	32%
Somewhat effective	40%	43%	40%	43%	44%
Less effective	21%	17%	14%	21%	24%

[80] In terms of health and quality of life

4 Social and economic consequences of drug use

4.1 Perceived social consequences, by key informants

The impact of drug use on community life can be profound and often leads to a host of socio-economic problems with respect to family, society, employment, criminality, and direct and indirect costs arising thereof. Drug use is seen as both a "problem *of* the family" and a "problem *for* the family".[81] Key informants in this study were asked to list what social problems, relating to drug use, are most prevalent in their communities. The social problems reported were: family and marital disputes, high rates of unemployment, high risks of transmitting HIV and other communicable diseases, as well as crime and police corruption, that is when police ask for bribes from drug users so the user can avoid arrest or be released from police custody without charge.

For each drug type, key informants were asked to indicate if in their area, the drug caused: major problems, some problems, no problems, don't know or it isn't used. Heroin was ranked by 88 per cent of key informants to cause major social problems. The next most problematic drug was cannabis charas, with three-quarters rating it to cause major social problems. It is of note that cocaine was described by 43 per cent of key informants to cause major social problems in light of the low prevalence detected in this study, indicating estimates provided here may not have captured the extent of the cocaine problem nationally (Table 28).

Table 28: Per cent of key informants who said that drug was causing "major social problems" in their area

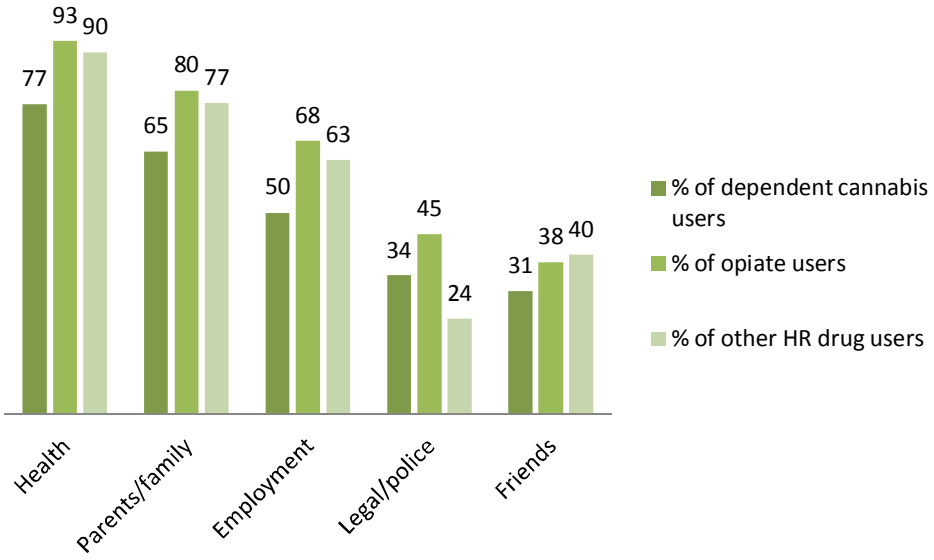
% Of key informants reporting major social problems caused by drug	
Heroin	88
Cannabis charas	75
Other opiates	54
Opium	49
Cocaine	43
Benzodiazepines	40
Ecstasy	34
Solvents/inhalants	33
Methamphetamines	33
Cannabis bhang	31
Hallucinogens	28
Barbiturates	27
Cough syrup	22

4.2 Self-reported social consequences, by drug users

When asked which areas of their lives are most affected by drug use, most high-risk drug users will first report health, then parents and family. Employment was noted to be affected by over half of users, depending on the user type. Opiate users were most likely to mention trouble with the police as compared to other high-risk drug users, and approximately one-third of high-risk drug users reported problems with their friends (Table 29).

[81] Bancroft A, and others, "Support for the Families of Drug Users: a Review of the Literature." (2002) Edinburgh. Scottish Executive Interventions Unit. Available http://www.drugmisuse.isdscotland.org/eiu/pdfs/eiu_litreview.pdf, accessed 9 October 2012.

Table 29: Per cent of high-risk (HR) drug users who report having problems with the following areas of their lives because of their drug use



Note: Categories will not sum to 100% due to multiple answers per respondent

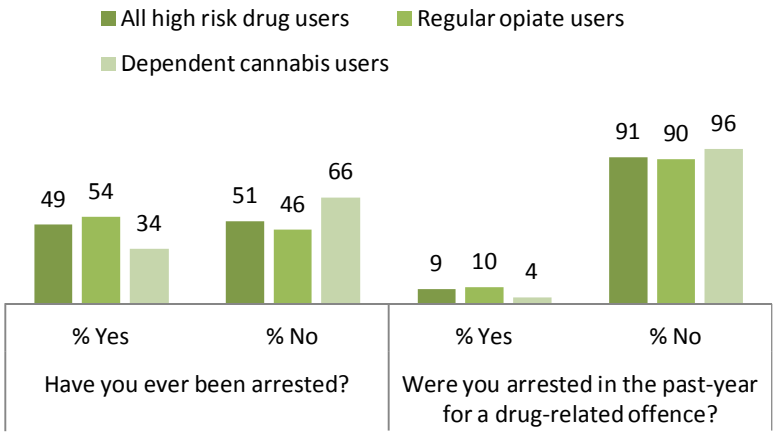
4.2.1 Legal consequences

Many problem drug users commit crimes to fund their drug dependency, often through acquisitive crime such as theft, burglary, robbery, drug dealing, and fraud. As a direct consequence of the crimes they commit, many drug users are likely to enter the criminal justice system and have imposed a sentence to be served in a correctional setting.

4.2.2 Criminal history

Over half of the regular opiate users interviewed had been arrested, with 10 per cent arrested for drug-related offences in the past year (Figure 15). Further, most drug users that reported any history of arrest had also spent time in prison. The average age of first arrest was 26.5 years and the average number of years from initiating drug use to first arrest was 3.4 years. Nearly two-thirds of those arrested were arrested for using drugs.

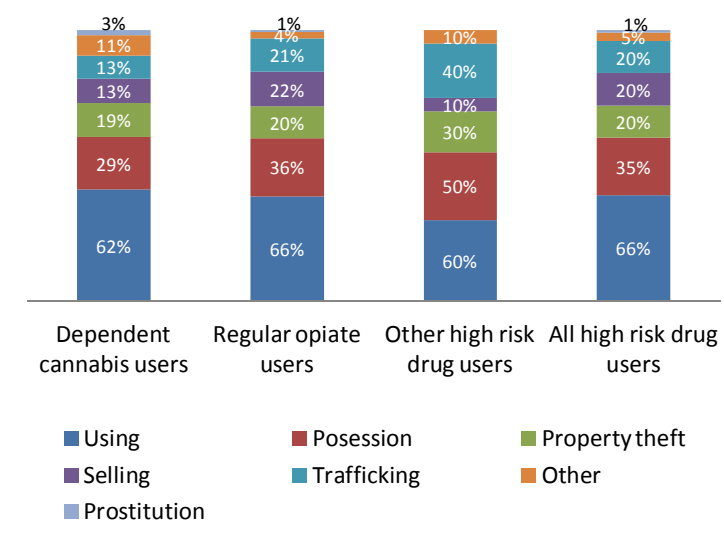
Figure 15: Proportion (%) of high-risk drug users who have been arrested and arrested in the past-year for a drug related offence



Of those respondents ever arrested for drug-related offences, three-quarters reported arrest for drug use, with opiate users having the highest likelihood of arrest (Figure 15). Significant numbers reported arrest for possession, dealing, and trafficking, while almost 10 per cent reported arrest for other acquisitive crimes such as theft, burglary, and prostitution (

Figure 16). Based on self-reported data, rates of violent or sexual crimes were low, although reasons given for other crimes include severe crimes such as murder (seven killings and four attempted killings), and one case of rape and kidnapping. Most of the opiate users who had been arrested reported facing legal problems, while many of them also claimed that they had been beaten or mugged by police or generally intimidated by them.

Figure 16: Types of offences committed among those ever arrested [Categories will not sum to 100 due to repeat offenders] [82]



[82] Sums to more than 100% because most respondents were arrested more than once.

4.3 High-risk drug-related behaviours in correctional settings

Of all regular opiate users reporting any history of arrest, 18 per cent had spent time in a correctional setting. The mean period spent in prison was 61 days or two months, and just over 60 per cent continued to use drugs while in prison. Of these, 14 per cent injected drugs (Table 27). Correctional settings remain a high-risk environment for the transmission of HIV and other blood-borne viruses, compounded by findings that of the 124 men to report having had sex in prison, only one respondent reported using a condom 'most of the time'. This suggests that nearly all opiate users having sex in prison only sometimes use protection against HIV and other sexually transmitted diseases – at best. Further, nearly 40 per cent reported that they 'never' use condoms. This behaviour places them at risk and potentially contributes to HIV epidemics in the communities to which prisoners return on release.

Table 30: Risk behaviours among high-risk drug users with a history of incarceration (per cent responding "yes")

When you were in prison, did you…	Among dependent cannabis users		Among regular opiate users		All high risk drug users	
	% yes	% no	% yes	% no	% yes	% no
… have sex?	7	93	11	89	10	90
… use drugs?	44	56	66	34	63	37
… inject drugs?	4	96	15	85	14	86
… get new needles?	5	95	21	79	19	81

For drug users who are incarcerated, the prison setting can provide an opportunity to engage them in effective drug dependence treatment as well as harm reduction programs. Drug treatment and interventions for people who inject drugs users are barely existent across Pakistan's criminal justice system and prisons.[83] There is a much greater need for an evidence-based, individual-focused system offering consistent treatment in all correctional settings in Pakistan, not to mention aftercare in the community upon release.

[83] UNODC, Country Office Pakistan. 2010. *Assessment of prison system of Pakistan*.

5 Way forward

The report reveals that 6.0 per cent of the population, or 6.7 million people, in Pakistan aged between 15 and 64 used drugs in the last 12 months. One in five used more than one substance. Cannabis was most commonly used, with 3.6 per cent of the population or four million people using the drug. Opiates, namely opium and heroin, are used by almost one per cent of all drugs users, equivalent to just over one million people.

Another key finding of the study is the emergence of methamphetamine use in some areas of the country. Around 19,000 people are estimated to have used this stimulant in the last 12 months, equivalent to a prevalence estimate of 0.02 per cent. Another major finding is the high national prevalence of non-medical use of prescription drugs, particularly among women. Almost all women who reveal they used drugs resort to misusing opioid-based painkillers and to a lesser extent tranquilisers or sedatives that are readily available in pharmacies. Further, there is compelling evidence to suggest men and women with a past history of mental health issues or hospitalisation for chronic illnesses are at greater risk of misusing prescription drugs.

In total, 430,000 drug users are estimated to be injecting drugs in Pakistan, which equates to 0.4 per cent of the adult population. This is a higher estimate than reported previously. The vulnerability of people who inject drugs to the spread of blood-borne diseases such as HIV and hepatitis is considerable, especially since three-quarters of people who inject drugs have reported sharing injecting equipment.

Over 4 million people using different substances in Pakistan are considered to be suffering from drug use disorders or are dependent requiring some form of intervention to address their drug use. On the other hand, the national capacity to provide treatment is limited to no more than 30,000 slots annually. Also many problem drug users expressed the desire but could not access or afford treatment. This gap in unmet need for treatment interventions at different levels would need to be addressed as a priority.

The *Anti-Narcotics Policy* (2010) of Pakistan defines the priorities and methods of implementing drug control, including drug supply and drug demand reduction. The Policy is translated into practical measures in the Government's *Drug Abuse Control Master Plan* for the period 2010-2014, which aims "to reduce the health, social and economic costs associated with drug trafficking and substance abuse in Pakistan". In particular, the Master Plan places emphasis on sustained, continuous prevention programs for schools and communities, improved effectiveness of treatment delivery, and scaling up of treatment services. In addition, the Master Plan envisages expanding the Government's capacity to collect and maintain data related to drug use.[84]

Supporting the objectives of the *Drug Control Master Plan* requires a consolidated and coordinated approach from Government, civil society, the private sector and other national and international stakeholders. The successful implementation of the *Master Plan* would also require sustained commitment by the stakeholders. However in light of the survey findings, certain areas -- in particular control of prescription drugs, prevention of drug use, treatment of drug dependence, HIV prevention and care and monitoring and evaluation -- would require a critical review to adopt approaches that are more effective in addressing the drug problem in Pakistan.

5.1 Supply reduction

Anti-Narcotics Force is the leading Drug Law Enforcement Agency to check the drug supply at international borders, sea-ports, airports, dry-ports and interprovincial highways. ANF is globally

[84] Ministry of Narcotics Control, Government of Pakistan. 2010. *Drug Abuse Control Master Plan 2010-2014*.

recognized as leading drug law enforcement agency in drug seizures, prosecution and money-laundering. Sustained efforts to reduce the supply of illicit drugs and related precursor chemicals should be made and supported nationally though with a focus on the provinces of Balochistan and Khyber Pakhtunkhwa, where trafficking routes are most active. The law enforcement agencies in these regions also need to be better equipped and manned for an effective interdiction of drugs and chemical precursors. There is also a correlation between areas with high levels of opiate use and close proximity to trafficking routes. The law enforcement agencies needs to be better equipped and manned to check drug trafficking. The emergence of synthetic drugs, especially amphetamine-type substances and alleged diversion of precursors chemical from the licit markets, also requires immediate attention by law enforcement agencies and other regulatory authorities in the country.

5.2 Control of narcotic drugs and psychotropic substances

National governments that are party to the International Drug Conventions recognize that the medical use of narcotic drugs continue to be indispensable for the relief of pain and suffering, and that adequate provisions must be made to ensure their availability and that of other psychotropic substances for such purposes. The conventions also call for adequate measures to be put in place to prevent their misuse.

With regard to preventing the misuse of narcotic drugs and psychotropic substances, recommendations on understanding and reducing misuse have been made internationally.[85] These recommendations can help create legal and social structures that are aware of and responsive to the harms of misuse of prescription drugs, reduce unsupervised self-medication and ensure their availability for psychological and medical needs. Some of these recommendations to be implemented by competent national authorities and other stakeholders include:

- Establishing a medication management system that ensures that pain medication and psychotropic substances are available to those who need it, while monitoring for and preventing possible diversion at different levels i.e., production, storage, health-care (prescribing physicians and pharmacists), patients, and the Internet.
- Raising awareness among policymakers and clinicians, parents, young people, and teachers on the consequences of misuse of prescription drugs.
- Training health-care professionals on an on-going basis on how to prevent, recognize and manage the non-medical use of prescription drugs and related consequences;
- Collecting basic epidemiological data, on an on-going basis, regarding the extent and patterns of non-medical use of prescription drugs and their consequences;
- Taking an official stance by addressing the issue of non-medical use of controlled prescription drugs directly in drugs legislation - these are provided for in the national and provincial drug laws and require their application in true spirit.

5.3 Drug use Prevention

The primary objective of drug prevention is to help people avoid or delay initiation of use of drugs or if they have started already to avoid developing drug use disorders. The general aim of drug prevention however is much broader in that it strives for healthy and safe development of children

[85] UNODC - The non-medical use of prescription drugs: Policy direction issues. (2011) http://www.unodc.org/docs/youthnet/Final_Prescription_Drugs_Paper.pdf [accessed 2 October 2013]

and youth to realise their talents and potential becoming contributing members of their community and society.[86]

Therefore, effective prevention programmes are those that address these risk and protective factors at different levels. Among the different prevention programmes, evidence suggests that programmes with a focus on parenting, families and life skills education at different levels of children's development, i.e., infancy, early and middle childhood, adolescence and adulthood, and needs are more effective than others. [87] [88] These interventions could particularly be effective given the strong family networks that exist in Pakistan. On the other hand media campaigns, and raising public awareness, are often the first and/or only interventions delivered by policy makers as prevention - since they are highly visible and have a potential to reach a large number of people. However evidence suggests that these campaigns are least effective in preventing drug use.[89] Therefore current and future prevention programmes in Pakistan need to be designed considering the evidence of their effectiveness to make the best use of available resources.

Risk and Protective Factors to Drug Use

Prevention science in the past 20 years have advanced considerably and there is a better understanding of what makes individuals vulnerable to initiating use of drugs. Evidence points to the following among the most powerful risk and protective factors to drug use.

Risk factors: biological processes, personality traits, mental health disorders, family neglect and abuse, poor attachment to school and community, favourable social norms and conducive environments and growing up in marginalised and deprived communities.

Protective factors: psychological and emotional well-being; personal and social competence; strong attachment to caring and effective parents, and to school and communities that are well resourced and organised.

5.4 Treatment and care services

In order to meet the diverse needs of the population suffering from drug use disorders, the scope and coverage of treatment and care services should be expanded nationally and mainstreamed in the health care delivery system at different levels and not only restricted to highly specialized residential drug treatment services. These need to include interventions such as early "Screening (for substance use) and Brief Interventions", the provision of pharmacologically assisted psychosocial treatment for opioid dependence that may include opioid maintenance therapy and motivational interviewing, cognitive behavioural therapy, contingency planning, as well as addressing psychiatric and other co-morbidities among dependent users and effective aftercare for recovering users. Such expansion of services would require developing capacity of health care providers for a broader understanding of the nature and extent of drug use and disorders, and interventions to address these. Efforts should focus on the provinces of Balochistan and Khyber Pakhtunkhwa, as a priority, considering their high prevalence rates of opiate use and the severity of dependence. Further information on resources for drug dependence treatment can be found at https://www.unodc.org/unodc/en/drug-prevention-and-treatment/publications.htm

Given the high levels of arrest among drug users, especially those committing acquisitive crimes, as well as considering the high levels of prison-based drug use and high-risk injecting and sexual behaviours recorded in this study, it is critical to introduce structured treatment and harm reduction

[86] UNODC – International Standards on Drug Use Prevention https://www.unodc.org/unodc/en/prevention/prevention-standards.html
[87] UNODC – International Standards on Drug Use Prevention
[88] Evidence based family skills training programs http://www.unodc.org/unodc/en/prevention/familyskillstraining.html [accessed 2 October 2013]
[89] UNODC – International Standards on Drug Use Prevention https://www.unodc.org/unodc/en/prevention/prevention-standards.html

interventions across criminal justice settings, especially in prisons. Such services should be delivered jointly and as a result of improved partnership between criminal justice agencies -- such as the police, the courts, and the prisons -- and health care system, with linkages to community based services for continuum of care for those leaving the prisons. Favourable outcomes can be found across Europe and the United States where drug intervention programs tailored to drug-misusing offenders have been implemented. Drug users receive the treatment, interventions, and support they require, while the communities with which they interact experience less crime and anti-social behaviour. At the same time, criminal justice and health costs are dramatically reduced.

5.5 Prevention of HIV and other infections among people who inject and use other drugs

Prevention of the negative social consequences of drug use is critical for both drug users and society at large. Considering that the HIV epidemic in Pakistan is driven by high-risk injecting behaviours among drug users it is important that service coverage for HIV prevention is expanded for those injecting drugs. Within the same context, there is also a strong need to increase HIV and hepatitis education and prevention efforts among the general population and other at risk groups.

UNODC as well as all international stakeholders endorse the provision of a comprehensive package of services for prevention, treatment and care of HIV both for people who use drugs in the community[90] and in prison settings.[91] The comprehensive package of services for prevention, treatment and care of HIV among people who inject drugs comprises the following nine interventions.

1. Needle and syringe programmes
2. Opioid substitution therapy and other drug dependence treatment
3. HIV testing and counselling
4. Antiretroviral therapy
5. Prevention and treatment of sexually transmitted infections
6. Condom programmes for IDUs and their sexual partners
7. Targeted information, education and communication for IDUs and their sexual partners
8. Vaccination, diagnosis and treatment of viral hepatitis
9. Prevention, diagnosis and treatment of tuberculosis

Further resources on implementation of evidence based HIV prevention programmes for people who inject drugs and other vulnerable populations can be accessed at https://www.unodc.org/unodc/en/hiv-aids/publications.html?ref=menuside.

5.6 Monitoring and evaluation of programmes and interventions

Regular monitoring of drug use in Pakistan would aid policy efforts in implementing evidence informed programmes and interventions in the country as well as evaluate their effectiveness. A national drug monitoring system [92] that periodically collects data on different drug use and supply

[90] https://www.unodc.org/documents/hiv-aids/idu_target_setting_guide.pdf [accessed 2 October 2013]
[91] https://www.unodc.org/documents/hiv-aids/HIV_comprehensive_package_prison_2013_eBook.pdf
[92] UNODC, Developing an Integrated Drug Information Systems https://www.unodc.org/documents/data-and-analysis/statistics/Drugs/GAP_module_1.pdf

indicators (such as survey on drug use, extent of high risk drug use, morbidity and mortality related to drug use; drug seizures, prices and purity; cultivation, production and manufacturing of illicit drugs) would be highly beneficial for understanding the true extent of drug problem in the country, trends over time and for measuring improvements in population health that may result from implementation of evidence based programmes in the country.

5.7 Cooperation within national and international stakeholders

Efforts to address the drug problems including the supply of illicit drugs, as well as diversion from licit markets and their use will require expanded engagement, cooperation and coordination among different national and international stakeholders including civil society organisations. Pakistan requires a closer connection to source and destination countries to counter trafficking of narcotics and precursor chemicals both to, and through, Pakistan. This will also require stocktaking of the local manufacture of controlled substances to ensure their availability for licit purposes and preventing their diversion. In addition, federal and provincial-level stakeholders in Pakistan need to be fully aware of international and regional commitments.

The education and health sectors, especially at provincial and district levels, along with civil society organisations and other service providers, need increased support to design and implement prevention and treatment programs that are evidence based and consistent with international best practice as described in the earlier sections.

6 Annex

6.1 Organizational leadership and implementation of surveys

The national survey on drug use was implemented through the involvement and support of the following:

Strategic Committee ensured successful implementation of the national survey on drug. The committee was mandated to approve the work plan and ensure a smooth implementation of the activities. The Strategic Committee comprised of:

- The Secretary of the Narcotics Control Division (NCD) or an alternate (Chairperson)
- The Director-General of the Anti-Narcotics Force (ANF) or an alternate
- The Director-General of the Pakistan Bureau of Statistics (PBS) or an alternate
- The Representative of the United Nations Office on Drugs and Crime (UNODC) Country Office for Pakistan or an alternate

Technical Committee provided technical support to the selected national implementing partner(s) in the implementation of the national drug use survey. The Committee also reviewed and approved the methodology (including sample design, questionnaire, testing, guides for field staff), monitor the implementation of field operations, define a tabulation plan, and review the draft analytical report. The technical committee comprised of:

- Narcotics Control Division
- Federal Bureau of Statistics, Government of Pakistan
- UNODC
- Other relevant partners

Narcotics Control Division was the lead agency and steered the implementation, data collection and finalisation of the drug use survey.

Anti-Narcotics Force identified the high prevalence drug use districts in the country, undertook the monitoring and evaluation of field work and reviewed the survey report.

Statistics Division (Pakistan Bureau of Statistics) were responsible for the entire implementation of the household survey that included: the household survey sample and methodology design, training of the field staff, pre-testing of questionnaire, organization and implementation of the field work, ensuring timely and quality data collection, monitoring of field activities, cleaning of the filled forms, and data entry.

Centre for Global Health Pakistan (University of Manitoba) implemented the surveys on problem drug use, key informants, and the audit of drug treatment services, as well as was responsible for cleaning of the filled forms and data entry for these studies. They also conducted the third party monitoring of the national survey on drug use.

UNODC HQ and Country Office: The Research and Trend Analysis Branch (RAB), UNODC HQ provided the overall technical support and guidance, developed the overall survey design, its different components and the survey instruments, as well as the data analysis, and finalisation of the full report of the survey. COPAK undertook cognitive testing and training of enumerators, development of support materials, undertook assessments, mentoring of fieldwork, review of draft report, designed the outlay of final report.

6.2 Full description of methodology

Highly stigmatised and illegal behaviours, such as drug use, can be extremely challenging to survey. Since any single direct or indirect method has inherent limitations in reliably estimating drug use prevalence, a multi-faceted approach was adopted where several methods were combined under the overarching supervision of the NCD with technical support provided by UNODC.

6.2.1 National health survey

The Pakistan Bureau of Statistics, Statistics Division, conducted a *National drug use*, based on a household survey approach. The Bureau designed the sampling methodology and was responsible for carrying out data collection, data entry, and data preparation.

6.2.2 Questionnaire development

The survey instrument was developed for the purpose of understanding personal drug use, including the use of traditional illicit drugs and pharmaceutical preparations that are frequently misused. Because of the sensitivity of these issues, as well as variations in cultural mores regarding drug use, the initial survey was tested among 115 respondents in six different regions to assess:

1) How the respondents felt when hearing or answering the questions.
2) If there are any problems with the questions, such as the wording or the ways of asking.
3) If there would be a better way of posing the questions.

The final survey was modified according to feedback received.

The questionnaire was developed in a manner that it opened with basic demographics, and progressed to ask the respondents about some common chronic health conditions and recourse for medical problems. A series of questions were then posed to understand whether medication had been used without the supervision of a doctor, and to have the respondent specify those medicines. Respondents were then asked whether they were aware of the existence of different illicit drugs. Next, a series of questions were asked starting with illicit drug use among family members in the household, among friends and acquaintances in the area, and finally, by the individual. Of those who reported personal drug use, follow-up questions were posed to understand the level of dependency, treatment history, and behaviours surrounding the drug use.

6.2.3 Survey design and implementation

The sample was selected using a three-stage sampling design, stratified by urban and rural areas, including the four provinces of Balochistan, Sindh, Punjab, and Khyber Pakhtunkhwa, as well as Pakistan Administered Kashmir including Gilgit-Baltistan. FATA was excluded from the survey due to safety concerns. Primary sampling units, defined as enumeration blocks in urban areas and mouzas, dehs or villages in rural areas, were selected with probability proportional to size. That is, small population areas were oversampled. Of the sampling units, secondary units were randomly selected within each primary unit. Each secondary sampling unit was a contiguous cluster of approximately 30 houses, on average, and all households in the unit were enumerated for data collection. A sample size of 61,980 was determined to be an adequate number to obtain reliable estimates of drug use prevalence stratified by province and urban or rural area.

For each household selected per secondary sampling unit, field staff identified and ranked all residents aged 15 to 64, according to age. Using a grid based on the number of the house in the unit as well as household size, one respondent was chosen from eligible household members. This method allowed for the random selection of a household member with built-in variation in the age distribution, with care to avoid oversampling household heads or the spouses of household heads. If the chosen respondent was not available several subsequent efforts were made to reach them in

later visits. Failure to make contact after two to four attempts resulted in a non-response classification.

Field staff were recruited and trained by survey experts from UNODC and the Pakistan Bureau of Statistics. Many of the field staff had recently participated in other household surveys as well as a *Rapid Situational Assessment of HIV*, they spoke local languages, and had prior training with interview techniques and protocols. Several trainings were also provided to ensure an understanding of the questionnaire and methodology for respondent selection. The paper version of the questionnaire was available in both English and Urdu,[93] and was translated in the field by linguistically proficient staff able to use local metaphors or colloquialisms to describe each type of drug or behaviour. Drugs were identified by flash cards with pictures of each drug type. Field staff were deployed in male-female pairs so that respondents could be interviewed by a person of the same sex.

In light of the survey design, that is over-sampling in areas of low population density and under-sampling in higher density areas, the answers from individual respondents were weighted to redistribute the sample population to known ratios of gender, urban and rural population distribution, as well as by province, for increased accuracy of regional and national prevalence estimates.

6.2.4 Problem drug use survey

The Centre for Global Health, Pakistan, conducted the problem drug use survey. In consultation with UNODC, the Centre designed the sampling methodology in line with that of the household survey, and was responsible for carrying out data collection, data entry, and data preparation.

The purpose of carrying out interviews with problem drug users was two-fold. The first was to estimate the size of the heroin and opium using population and to capture their past-year drug treatment history. This was required to calculate a multiplier (100 per cent in treatment in the past-year) for the multiplier-benchmark technique for prevalence estimation. [94] The secondary objective was to elicit information from respondents around high risk drug use including risk factors for HIV and hepatitis B and C transmission, service utilisation, arrest history, and treatment needs. Problem drug users were defined in this study as “any person regularly using drugs (primarily opioids) for non-therapeutic purposes, at least in the last 12 months as well as the last 30 days and had experienced problems (health, law, family) due to his or her use”.

Selection of the target sites was determined by Centre for Global Health in close consultation with the Ministry of Narcotics Control, the Anti-Narcotics Force, the Pakistan Bureau of Statistics and UNODC. The sample included the four provinces of Balochistan, Sindh, Punjab, and Khyber Pakhtunkhwa, as well as Pakistan-administered Kashmir. FATA was excluded due to safety concerns. Most divisions within these sample areas were selected and within each division the capital district was always selected. This approach ensured 23 districts with both high and low levels of problem drug users were included. Rural communities were selected randomly within a radius of 30 kilometres of the capital district. Accessibility to and within areas was also taken into account, as was security concerns.

[93] The printed copy of the questionnaire was not translated into all of the languages that may be encountered because some are not written languages.

[94] The multiplier (proportion of opiate users in treatment in the past year) is multiplied by the benchmark of the total number in drug treatment in the past year to estimate the total number of opiate users in that area.

6.2.5 Key informant study

Interviews with key informants, specifically individuals in regular contact with drug users as well as those with heightened awareness and knowledge around patterns and trends among drug users, were conducted in the same 23 districts where the problem drug user interviews were carried out.

Key informants were defined as "individuals who by virtue of their role or community position can potentially provide relevant information on the drug using patterns, trends, networks, and community perceptions of the associated problems and suggest interventions". They included respondents from law enforcement agencies, psychiatrists, treatment providers, local leaders, recovering users, community outreach workers, doctors, and others. Over 1,220 interviews were proposed in total, half of which would be conducted in district capitals and the other half in another town. In most districts, 50 interviews were planned. More than 50 were conducted in Faisalabad (60), Karachi (70), Lahore (65), Peshawar (60), Quetta (60), and Rawalpindi (60).

Prior to commencement of the fieldwork for both the problem drug user and key informant interviews, focus group discussions were conducted in all 23 districts to assess the general spread and extent of drug use and also to sensitise key stakeholders to the survey. Results from the focus group discussions helped identify the sampling frame through the identification of hotspots for interviews with drug users and provided reference information ahead of interviews with key informants.

6.2.6 Audit of drug dependence treatment services

Based on a list of registered drug treatment centres across the country, provided by UNODC, drug treatment centres with a minimum of ten-bed capacity were contacted via the key informant interview procedure. Centre representatives were asked to provide the number of drug users treated as well as other information relating to treatment capacity, the forms of interventions and services provided. In addition to these centres, new centres with a minimum capacity of eight beds were also contacted.

6.2.7 Limitations

Despite efforts to recruit women into the study at each sample location, the problem drug user survey elicited responses from only 44 women making up only 1.5 per cent of the sample of regular opiate users. This resulted in a lack of generalizable data on problem drug-using women regarding the severity of use, levels of dependency, and other drug-related behaviours. Drug-using women are often considered a hidden and hard-to-reach population, especially in more conservative Islamic countries and rural areas. In such locations female drug users also face greater stigma than drug-using men.

One major limitation during the household survey arose due to cultural constraints and limited space in many of the households - the inability to isolate and separately interview the selected respondent. In many instances the entire household sat around or at least one household member was present during the interview especially with female respondents. This could have resulted in biased responses in the household survey

Data provided by some treatment centres was also found to be incomplete, likely due to poor information management systems and inefficient treatment outcome data. While the quality of the treatment data overall was considered effective enough to be used in triangulation with other sources to generate overall prevalence, the data has not been used to generate specific treatment-related findings.

6.2.8 Prevalence estimation

Because of the hidden nature of drug use, multiple survey types and auxiliary data sources are needed to develop national prevalence estimates, which may still fail to capture the full extent of drug use. In population-based surveys, many respondents are motivated to conceal their drug use, particularly in regions where this behaviour elicits a high level of social stigma. This can be overcome by relying on testing bio-specimens for recent drug use, but biological samples are difficult to obtain and expensive to test. As a result, indirect estimation techniques have been developed using auxiliary data such as arrest and drug treatment data, as well as small group surveys of regular drug users.[95]

A number of methods were used to develop national prevalence estimates of past-year drug use based on the following surveys:[96] *The national survey on drug use* (n=51,453), the *Problem Drug Use Assessment* (n=4,533 [3,330 opiate users / 1,203 problem cannabis users]), and *The Audit of Drug Treatment Services* (n=58 treatment centre representatives). The goal was to estimate the scope and extent of drug use for common illicit drugs, as well as the number of people misusing prescription drugs, which has been the fastest growing population of drug users globally in recent years.

Step 1.) Estimation of opiate use with the multiplier-benchmark method

1a. From the treatment survey, the number of problem drug users who had attended treatment in the past year was obtained for 58 treatment centres nationwide, and summed for each province.

1b. From the problem drug user survey, the proportion of problem drug users who had been in treatment in the past year was calculated for each province.

1c. The inverse of the proportion - that is, if one out of ten were treated the inverse of the proportion would be 10/1 or ten - who had been in treatment was multiplied with the number who had been in treatment, to estimate the number of problem drug users in those areas.[97] That number was then divided by the population aged 15 to 64 in the surveyed area, to estimate a prevalence which was then applied to the population of that province.

Step 2.) Direct estimation of drug use prevalence self-reported in the National Health Behaviour survey

2a. The household interview (see the full description under *National Health Behaviour Survey*) included questions regarding illicit drug use as well as misuse of prescription medication without a doctor's advice. Information on frequency of use and dependency was also included in the survey.

2b. The prevalence of use in the survey was directly applied to each province and a national estimate was then developed based on the estimated number of users in each province.

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[95] See: UNODC Estimating prevalence: Indirect methods for estimating the size of drug problems https://www.unodc.org/documents/data-and-analysis/statistics/Drugs/GAP_module_2.pdf, and "Estimating the prevalence of problematic drug use: a review of methods and their application." Bulletin on Narcotics 2002: The Science of Drug Abuse Epidemiology. http://www.unodc.org/pdf/bulletin/bulletin_2002_01_01_Art2.pdf [accessed 2 October 2013]

[96] In addition to the surveys reported here, data on arrests were also collected for the purposes of prevalence estimation using the multiplier-benchmark method, but this data was not reliable and so was not used for any estimates reported here.

[97] The multiplier-benchmark indirect method: if 5 per cent of problem drug users in *Town X* had been in treatment in the past year, and 500 people were in treatment in the past year, the estimated number of problem drug users in *Town X* would be (100 per cent divided by 5 per cent) * 500 = 20* 500 = 10,000).

Step 3.) Indirect estimation of cannabis use using the network scale-up method [98]

3a. Because very few people in the household survey admitted to using cannabis, the results were deemed unreliable based on qualitative studies in the area. As a result, responses to the question, 'How many people do you know (friends, acquaintances or other) who use cannabis (charas or bhang)?' were used to derive an estimate based on the principles of the network-scale up method.

3b. The network-scale up method averages the number of users in the networks of all respondents to generate a population prevalence among the networks of surveyed participants. This method has been used in a variety of settings, but because the survey was not designed to use this approach, necessary changes to the method were reviewed by external experts.[99]

Methodology employed to estimate the prevalence of each drug type

Cannabis: Sum of the total number of users identified from the household survey (network scale-up method) and number of problem drug users who also used cannabis.

Prescription drugs: Self-reported from household survey

Opiates (heroin, opium): the multiplier-benchmark method was used to estimate the total number of opiate users. See Step 1 above.

Tranquilisers or sedatives: sum of self-reported use of tranquilisers from the household survey (adjusted for gender) and tranquiliser use among problem drug users.

ATS: sum of amphetamine and methamphetamine use from household and problem drug use surveys.

Amphetamines: self-reported from household survey

Methamphetamines: proportion of problem drug users who were also currently using methamphetamines.

Injecting drug use: based on the number of problem drug users who inject, combined with the population prevalence of people who inject drugs in the household survey.

Total prevalence of any past-year illicit drug use: sum of past-year illicit drug users adjusted for poly-drug use.

[98] Bernard R. et al . 2010. "Counting hard-to-count populations: the network scale-up method for public health." *Sex Trans Infect*. 86 (Suppl 2): ii11-ii15.
[99] Professor Thomas Valente (University of Southern California)

Table A1: Definitions and types of substances reported in the survey

Class of Drug	Type of Drug
Any illicit drug	All illicit drugs and substances under international control, including pharmaceutical opioids, stimulants, tranquillizers and sedatives, that are misused or used for non-therapeutic purposes. *Alcohol and tobacco are not included.*
Cannabis	Marijuana (herb) Hashish (resin, charas)
Opioids	Opiates: Heroin, Opium Pharmaceutical opioids such as buprenorphine (e.g. Suboxone, Subutex), codeine, dextropropoxyphene, fentanyl, oxycodone (e.g. Oxycontin), hydromorphone, methadone, morphine and pethidine
Cocaine	Powder (salt) "Crack" Other types of cocaine such as: coca paste, cocaine paste, cocaine base, basuco, paco and merla
Amphetamine-type stimulants	Amphetamine Methamphetamine Prescription stimulants such as amfepramone, fenetylline, methylphenidate (e.g. Ritalin), pemoline, phemetrazine, phetermine and dextroamphetamine “Ecstasy”-type substances (e.g. MDA, MDE/MDEA, MDMA)
Sedatives and tranquillizers (for non-therapeutic/ non-prescription use)	Benzodiazepines such as alprazolam (e.g. Xanax), clonazepam (e.g. Rivotril), diazepam (e.g. Valium), temazepam and flunitrazepam (e.g. Rohypnol) Barbiturates such as allobarbital, barbital, phenobarbital, pentobarbital, secubutabarbital etc. Gamma-hydroxybutyric acid (GHB) Other sedative hypnotics include meprobamate, methaqualone (Mandrax) and zolpidem
Hallucinogens	Lysergic acid diethylamide (LSD) Other hallucinogens e.g. phencyclidine (PCP), mushrooms with psychoactive properties, tryptamines
Solvents and inhalants	Glues and adhesive (a commong brand in Pakistan Samad Bond)
Other drugs under national but not international control	Including gamma-butyrolactone (GBL), khat, piperazines [e.g. N-benzylpiperazine (BZP)], tramadol and ketamine

Table A2: Lifetime, annual, and past-30 day use prevalence, by drug type.

	Lifetime	Annual	Past-30 Days
Cannabis (resin or herb)	8.0%	3.6%	3.2%
Heroin	0.86%	0.80%	0.78%
Opium	0.4%	0.3%	0.3%
Prescription opioids	2.5%	1.5%	0.8%
Tranquilisers/sedatives	2.6%	1.4%	1.2%
Cocaine	0.02%	0.01%	0.004%
Prescription amphetamines	0.2%	0.07%	0.05%
Methamphetamine	0.03%	0.02%	0.01%

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