Analyzing Drug Use in Pakistan: A Comprehensive Overview of Prevalence, Patterns, and Socio-Demographic Factors

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In 2012, Pakistan conducted an extensive study to map drug use patterns across its population aged 15 to 64. The National Health Behaviour Survey 2012, complemented by a district study on Problem Drug Users, aimed to provide a comprehensive overview of drug use and its socio-demographic implications. The study involved interviews with over 51,000 individuals, including drug users, treatment center representatives, and key informants, to gather detailed data on substance use. Findings reveal that 6.7 million people, or 6% of the population in the specified age range, reported using illicit drugs in the past year. Of these, 4.25 million individuals are identified as suffering from drug use disorders, highlighting a severe public health challenge. Cannabis was found to be the most widely used drug, with 3.6% of the population reporting use. The demographic profile of cannabis users is predominantly male, averaging 33 years old, with only primary education, and engaged in full-time or part-time employment. Despite the high rate of daily use, treatment-seeking behavior is low, with only 7% of regular users seeking help in the past year. The study also indicates that 76% of regular opiate users began with cannabis, suggesting a gateway effect. Opiate use, including heroin and opium, affects about 1% of the population. Heroin is more prevalent than opium, with users averaging 34 years of age. This chronic addiction often leads to severe economic hardship, with some resorting to extreme measures to sustain their addiction. Poly-drug use is common, with 20% of drug users using multiple substances, and regional disparities in drug use patterns are evident, with higher rates in Balochistan compared to Sindh. Stimulant use, including amphetamines and cocaine, is emerging but remains low. Non-medical use of prescription drugs, such as opioids and sedatives, is significant and often associated with mental health issues. Inhalant use, although less documented, is notable among street children. The study's findings underscore the complexity of drug use in Pakistan, marked by high rates of cannabis and opiate use, emerging stimulant trends, and significant non-medical use of prescription drugs. The rise in injecting drug use and HIV infection rates highlights the urgent need for targeted public health interventions and comprehensive support programs tailored to regional and demographic specifics. Addressing these challenges will require a multifaceted approach, incorporating increased treatment access, prevention programs, and enhanced mental health support.

Keywords: Cannabis, Drugs, Mental Health Issues, HIV Infection.

Introduction:

In 2012, Pakistan undertook a comprehensive national study to elucidate drug use patterns and prevalence among its population aged 15 to 64. This extensive survey aimed to establish a reliable baseline of drug use data, incorporating a diverse range of participants to ensure broad representation. The study covered all four provinces and Pakistan-administered Kashmir, involving interviews with 4,533 high-risk drug users, consultations with 58 drug treatment center representatives, discussions with 1,198 key informants, and participation from

51,453 randomly selected individuals from the general population. This rigorous methodology was designed to capture a nuanced understanding of drug use and its variations across different demographics and regions [1][2].

The findings from this national study unveiled significant patterns in drug use. Cannabis emerged as the most commonly used drug, with a prevalence rate of 3.6% of the population, translating to approximately four million users nationwide. Misuse of prescription opioids, tranquilizers, and sedatives was also notably prevalent, alongside the use of opiates such as heroin and opium [1]. The study highlighted a pronounced gender disparity: men exhibited considerably higher levels of drug use compared to women [3]. Women, although generally using drugs at lower rates, were more likely to misuse prescription opioids and sedatives. Furthermore, drug use was observed to be more common among individuals aged 25 to 39, suggesting a peak in drug use during middle adulthood rather than among the younger age group of 15 to 24 [1].

A critical finding of the study was the high level of drug dependence among users. Out of the 6.7 million individuals who reported using any illicit substance in the past year, approximately 4.25 million were classified as drug-dependent. This high prevalence of dependence underscores the urgent need for effective treatment and care interventions. Despite a strong desire for treatment among three-quarters of regular opiate users, barriers such as limited access and affordability remain significant obstacles [4]. The severity of drug dependence highlighted by the study points to the necessity for scaling up low-threshold services and enhancing support mechanisms [1].

The study also identified significant concerns regarding HIV risk behaviors. High-risk behaviors were prevalent among people who inject drugs (PWID), many of whom were unaware of their HIV status and, consequently, were not taking precautions to prevent transmission. The general population's knowledge about HIV transmission was alarmingly low, with only 13% accurately identifying three modes of transmission [5]. This lack of awareness exacerbates the risk of a burgeoning HIV epidemic and emphasizes the need for robust public health education and awareness initiatives [1]. Despite the comprehensive nature of the study, there are acknowledged limitations. The study suggests that drug use among women may be underreported, potentially skewing the understanding of drug use patterns within this demographic. Additionally, recreational or casual drug use might be more prevalent than reported, possibly due to underreporting and social stigma [1].

The insights from this national study provide a crucial foundation for developing and implementing effective drug prevention, treatment, and care services in Pakistan. These findings highlight the necessity for evidence-based, targeted interventions to address the diverse nature of drug use and its associated risks [6][7]. Policymakers and health professionals can leverage these insights to improve treatment access, enhance public health education, and formulate strategies tailored to the specific needs of different population groups. The study represents a significant step toward mitigating the health, social, and economic impacts of drug use and improving public health outcomes in Pakistan [1].

Methodology:

To analyze the drug use landscape in Pakistan, a comprehensive approach was employed utilizing data from the National Health Behaviour Survey 2012 and a district study on Problem Drug Users. This methodology ensures a thorough understanding of drug use patterns, prevalence, and associated socio-demographic factors across different regions [8][9].

Data Collection:

The primary data source was the National Health Behaviour Survey 2012, complemented by localized district studies focused on Problem Drug Users. The survey gathered extensive information on drug use behaviors from a representative sample of the population aged 15 to 64 years. The data collection process involved structured interviews and

questionnaires to capture self-reported drug use, patterns of use, and socio-economic background [10].

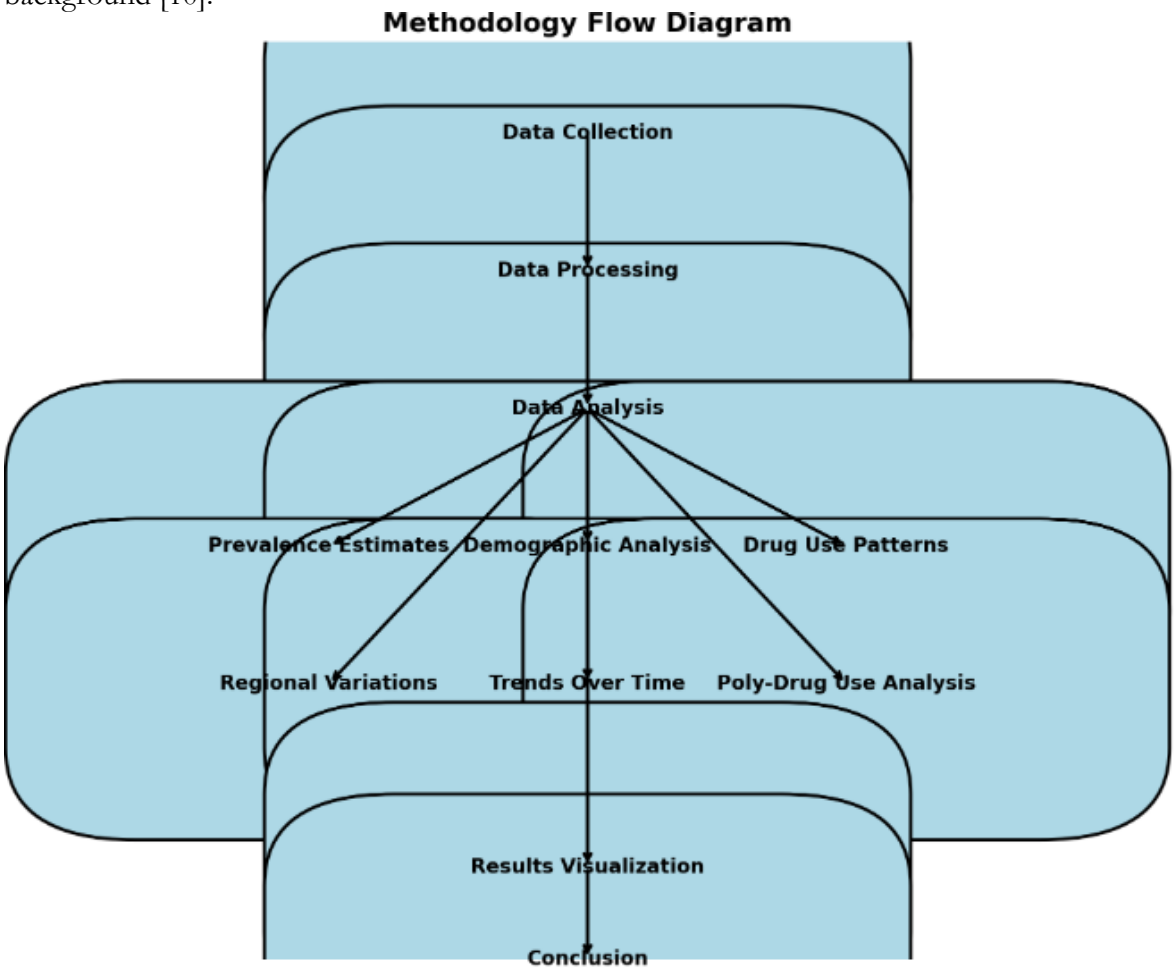

Figure 1: Flow diagram of methodology.

Data Analysis:

- **Prevalence Estimates:** The survey data was used to estimate the prevalence of various drugs, including cannabis, opiates (heroin and opium), stimulants (amphetamine-type stimulants and cocaine), and non-medical use of prescription drugs. Prevalence rates were calculated based on the proportion of individuals reporting drug use within the past year relative to the total population in the specified age range.
- **Demographic Analysis:** Detailed demographic analyses were conducted to profile drug users. Variables such as age, gender, education level, employment status, and marital status were examined to characterize typical users of each drug type. The data revealed that cannabis users are predominantly male, with a typical user profile of a 33-year-old male with primary education, while opiate users showed varied demographics with significant differences between heroin and opium users.
- **Drug Use Patterns:** Drug use patterns were analyzed to determine the frequency and severity of use. For instance, the survey data indicated that a substantial portion of cannabis users consumed the drug daily, while opiate users exhibited a long history of drug use with significant rates of poly-drug use. Patterns of poly-drug use among cannabis users and the prevalence of drug dependence were assessed to highlight the complexities of substance abuse.
- **Regional Variations:** Regional analyses were conducted to identify geographical disparities in drug use prevalence. The data highlighted significant regional differences,

with Khyber Pakhtunkhwa showing the highest overall drug use rates, while Balochistan had notably high rates of opiate use [11]. Regional prevalence maps were created to visually represent these disparities and identify areas with critical needs for intervention.

- **Trends Over Time:** Historical data from 2002 to 2012 were analyzed to identify trends in drug use, focusing particularly on opiates and injecting drug use. The increase in injecting drug use and its association with rising HIV infection rates were highlighted, using data from the HIV/AIDS Surveillance Project to show the escalation in HIV prevalence among people who inject drugs.
- **Poly-Drug Use Analysis:** Analysis of poly-drug use involved identifying the overlap between different substances, such as cannabis, heroin, and opium. The extent of poly-drug use among various user groups was examined to understand the patterns and implications of using multiple substances concurrently.

The methodology employed provides a robust framework for understanding the drug use landscape in Pakistan. By integrating survey data with detailed demographic and regional analyses, this approach offers valuable insights into the prevalence, patterns, and socio-economic factors associated with drug use[12][13]. The findings underscore the need for targeted intervention programs and highlight the importance of addressing both drug dependence and the associated health risks, including the rising rates of HIV among injecting drug users.

Results:

The National Health Behaviour Survey 2012, alongside a district study on Problem Drug Users, provides a comprehensive overview of drug use in Pakistan. According to the survey data, approximately 6.7 million people, or 6% of the population aged 15 to 64, reported using illicit drugs in the past year. This total includes both occasional and regular users. Out of these, 4.25 million individuals are estimated to be grappling with drug use disorders and dependence, characterized by significant difficulties in controlling or reducing their drug use and experiencing adverse personal consequences [14].

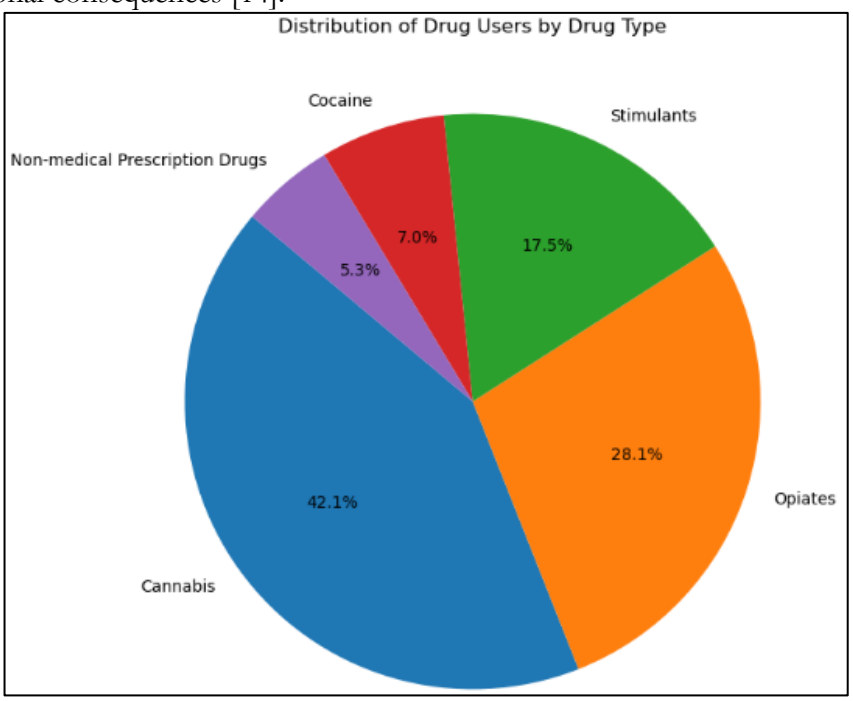

Figure 2: Distribution of Drug Users by Drug Type

Cannabis emerges as the most commonly used drug in Pakistan, with 3.6% of the population—equivalent to 4 million people—reporting its use in the past year. This prevalence is consistent across various reports and is corroborated by key informant perceptions. Users are

predominantly male, and a typical cannabis user is a 33-year-old male with education up to primary school or less, who is employed either full-time or part-time. Half of the cannabis users are married [15][16]. The frequency and severity of cannabis use are notably high, with one-third of users consuming it daily. Despite this, only 7% of regular cannabis users sought drug treatment in the past year. It is noteworthy that 76% of regular opiate users first used cannabis, with most being introduced by friends or family, often during social events such as weddings. The average age of initiating cannabis use is 21 years [17].

The survey also highlights the substantial prevalence of opiate use in Pakistan. Approximately 1% of the population, over 1 million individuals, are regular users of opiates, including both heroin and opium. Among these users, heroin is more common, with 80% reporting its use compared to 33% for opium. Opiate users are generally older, with opium users averaging 38.2 years and heroin users 33.8 years. Rural living is more common among opium users, whereas heroin users are more likely to reside in urban areas. The economic hardship faced by many opiate users is evident, with a significant portion resorting to activities such as donating blood, exchanging sex for drugs or money, or begging to support their addiction [18]. The average duration of opiate use among respondents is 16 years, reflecting the chronic nature of opioid addiction. Poly-drug use is prevalent among opiate users, with 74% using additional substances like cannabis, tranquilizers, or prescription opiates [19][20].

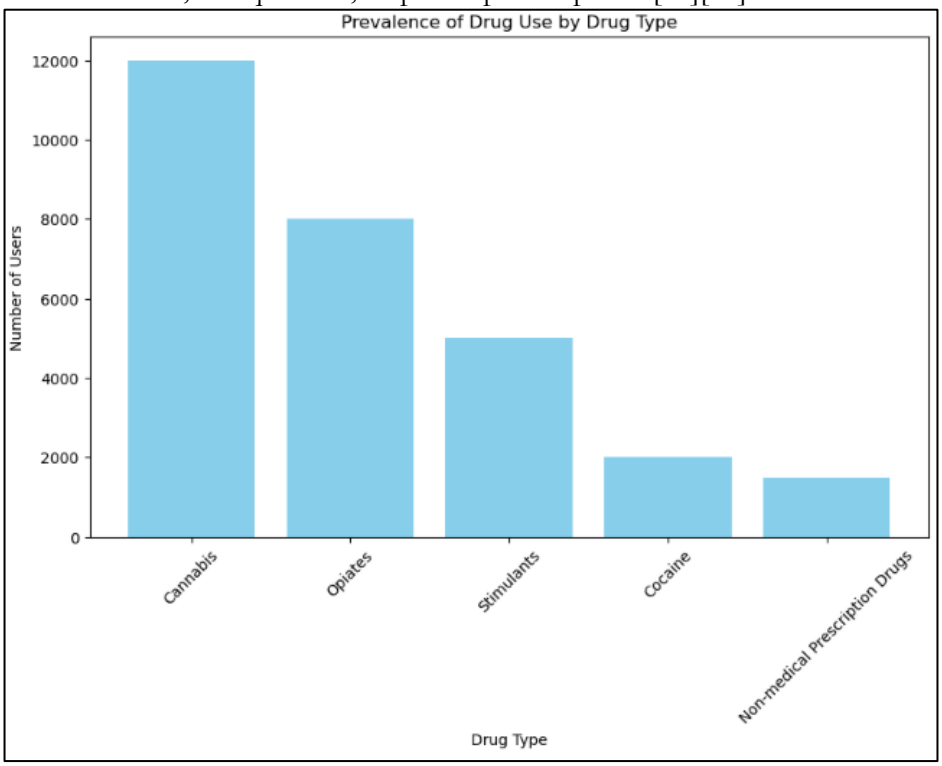

Figure 3: Prevalence of Drug Use by Drug Type

Stimulant use, including amphetamine-type stimulants (ATS) and cocaine, shows emerging trends. The prevalence of ATS is recorded at 0.08%, with methamphetamine usage at 0.02%, representing a growing but still relatively low part of the drug use landscape. Methamphetamine users, estimated at 19,000, are typically married males with moderate education levels [21]. The use of prescription amphetamines is slightly more common, with 0.07% of the population reporting their use. Cocaine use remains minimal at 0.01%, with typical users being moderately educated males in their mid-thirties.

Non-medical use of prescription drugs is notably high. Prescription opioids are misused by 1.5% of the population, equating to 1.6 million people. Similarly, 1.4% misuse tranquilisers and sedatives, affecting 1.5 million individuals. The misuse of these drugs is often associated

with higher usage rates among those with mental health issues, such as anxiety or depression. Non-medical use is more frequent among individuals who have been hospitalized for mental health conditions, indicating potential self-medication practices. Solvent or inhalant use, while less documented, is reported to be significant among street children under 15. For the population aged 15 to 64, the prevalence is estimated at 0.03%, translating to around 35,000 individuals.

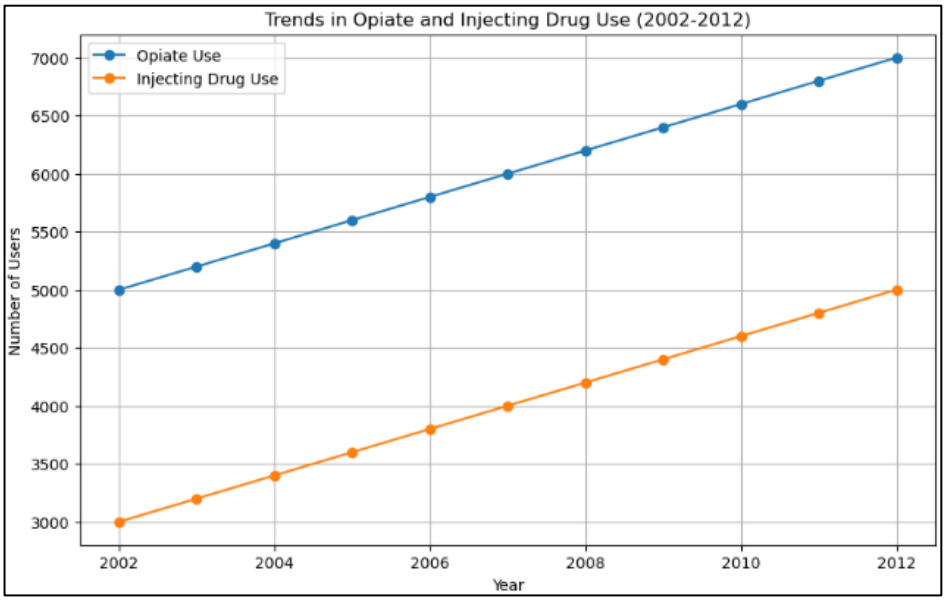

Figure 4: Trends in Opiate and Injecting Drug Use (2002-2012)

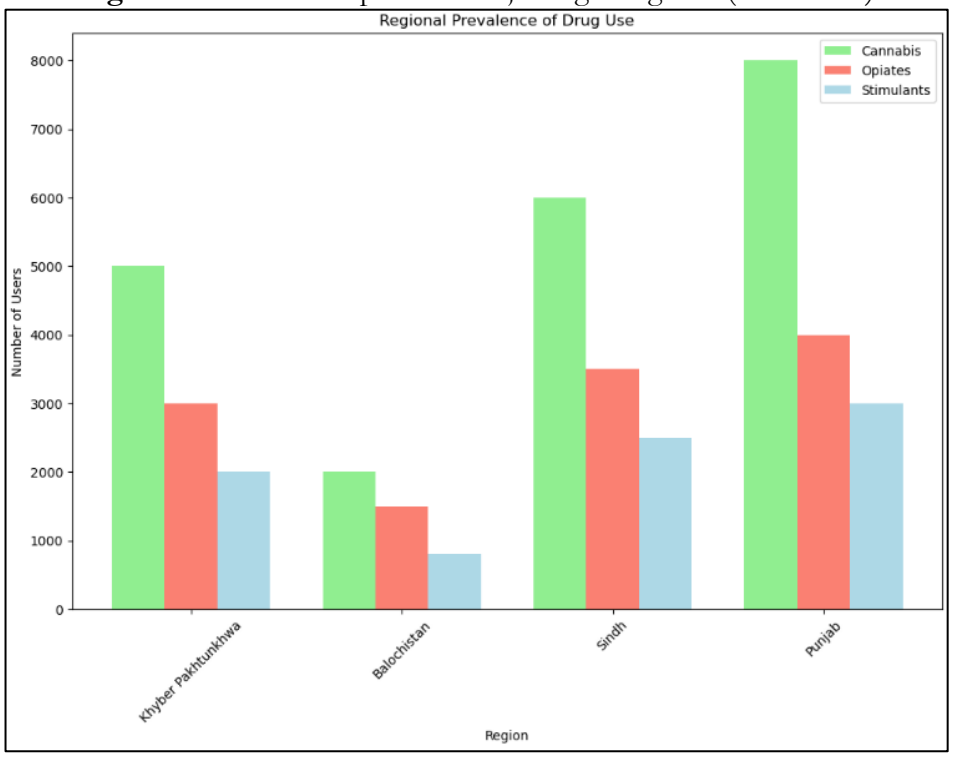

Figure 5: Regional Prevalence of Drug Use

Poly-drug use is a common phenomenon, especially among long-term users. About 20% of the estimated 6.7 million drug users engage in the use of multiple substances. For instance, among cannabis users, 560,000 also use heroin, 265,000 use opium, and 220,000 use all three substances. The prevalence of poly-drug use varies by province, with the highest rates in Balochistan (25%) and the lowest in Sindh (16%).

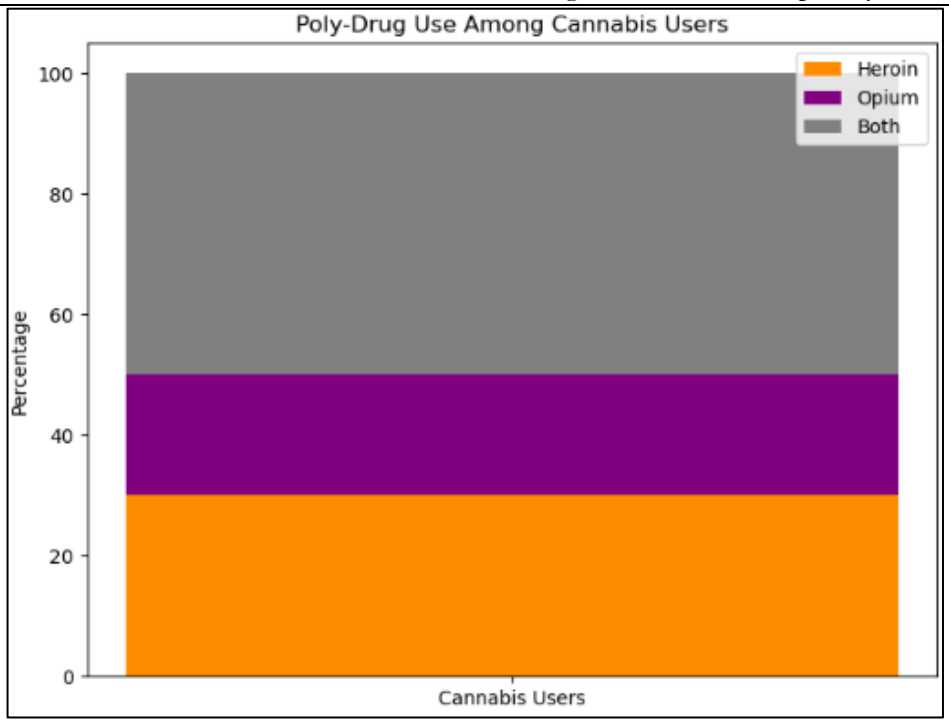

Figure 6: Poly-Drug Use Among Cannabis Users

Trends over time indicate an increase in both opiate and injecting drug use from 2002 to 2012. Notably, injecting drug use is associated with high risks of HIV and other bloodborne infections. Recent data from the HIV/AIDS Surveillance Project shows a disturbing rise in HIV infection among people who inject drugs, with rates escalating from 10.8% in 2005 to 37.8% in 2010. Regional differences in drug use prevalence are also significant. Khyber Pakhtunkhwa has the highest drug use rate at 10.9%, with notable levels of cannabis, opioid, and sedative use. Balochistan shows high rates of opiate use, particularly opium, and significant misuse of tranquilisers and sedatives. Sindh has the second highest prevalence of cannabis use and a substantial number of injecting drug users. Punjab, being the most populous province, has the highest number of drug users and people who inject drugs, with considerable rates of heroin and prescription stimulant use.

In summary, drug use in Pakistan is widespread, with significant variations across drug types and regions. The data reveals a complex landscape of substance use, with high rates of cannabis and opiate use, increasing patterns of stimulant use, and considerable non-medical use of prescription drugs. The prevalence of poly-drug use and the rise in injecting drug use further underscore the need for targeted intervention and support programs.

Discussion:

The results from the National Health Behaviour Survey 2012, combined with a district study on Problem Drug Users, offer a thorough analysis of drug use patterns in Pakistan. This comprehensive dataset reveals several critical insights into the prevalence and characteristics of drug use within the country, which has significant implications for public health and policy-making. Firstly, the survey indicates that approximately 6.7 million individuals, representing 6% of the population aged 15 to 64, have used illicit drugs in the past year. This substantial figure highlights the widespread nature of drug use across Pakistan. Out of these users, 4.25 million are identified as having drug use disorders, suggesting a severe public health challenge. These individuals face significant difficulties in managing their drug use, leading to severe personal and social consequences, including health deterioration and socio-economic impacts.

Cannabis is the most prevalent drug in Pakistan, with 3.6% of the population—about 4 million people—reporting its use within the past year. This prevalence is consistent across

various studies and corroborated by informant reports. The demographic profile of cannabis users is notably homogeneous: predominantly male, with a typical user being a 33-year-old male with only primary school education, employed either full-time or part-time, and married. This profile underscores the socio-economic and educational factors associated with cannabis use. Despite the high prevalence and frequency of use, with one-third of users consuming it daily, the treatment-seeking behavior is remarkably low, with only 7% of regular users seeking help in the past year. This low engagement with treatment services suggests barriers to accessing care or a lack of awareness and availability of drug treatment services.

Interestingly, 76% of regular opiate users reported initial cannabis use, often introduced by peers or family during social events. This indicates a potential gateway effect where initial exposure to cannabis may lead to subsequent use of more harmful substances like opiates. The average age of first cannabis use being 21 years suggests that interventions targeting younger individuals could be crucial in preventing the escalation to more severe drug use. The prevalence of opiate use is also significant, with approximately 1% of the population—over 1 million people—being regular users. Among these, heroin is more common than opium, with 80% using heroin compared to 33% using opium. The demographic profile of opiate users reveals an older population, with opium users averaging 38.2 years and heroin users 33.8 years. This age disparity, along with the higher prevalence of rural living among opium users and urban residence among heroin users, suggests distinct patterns and possibly different socio-economic drivers for each type of opiate use. The chronic nature of opiate addiction is reflected in the average duration of use, which is 16 years. This long-term use often results in severe economic hardship, with users resorting to extreme measures to support their addiction, such as exchanging sex for drugs or begging.

The prevalence of poly-drug use is another notable finding, with 20% of drug users engaging in the use of multiple substances. Among cannabis users, a significant number also use opiates and other substances, indicating complex patterns of substance abuse that require multifaceted intervention strategies. Regional variations in poly-drug use are also evident, with higher rates in Balochistan (25%) compared to Sindh (16%). This regional disparity may reflect differences in local drug availability, socio-economic conditions, and cultural factors. Stimulant use, including amphetamines and cocaine, is emerging but remains relatively low, with prevalence rates of 0.08% for amphetamine-type stimulants and 0.01% for cocaine. The growing trend in stimulant use, particularly methamphetamine, although currently limited in scope, warrants attention due to the potential for rapid escalation in use and associated health risks. Non-medical use of prescription drugs is significant, with 1.5% of the population misusing prescription opioids and 1.4% misusing tranquilisers and sedatives. This misuse is often linked with mental health issues, such as anxiety or depression, and is more frequent among those with a history of hospitalization for mental health conditions. This highlights the need for integrated mental health and substance abuse treatment approaches.

Solvent or inhalant use, while less documented, is significant among street children, reflecting a critical area for targeted intervention. The low documented prevalence among the broader population suggests that this issue, though less visible, remains important, particularly for vulnerable groups. Overall, the findings underscore the complexity of drug use in Pakistan, marked by high rates of cannabis and opiate use, emerging stimulant trends, and significant non-medical use of prescription drugs. The rise in injecting drug use and the associated increase in HIV infection rates further highlights the urgent need for comprehensive public health interventions. Addressing these issues requires a multifaceted approach, including increased availability of treatment services, targeted prevention programs, and enhanced support for individuals struggling with addiction. The regional variations and patterns of poly-drug use suggest that interventions should be tailored to specific local contexts to be most effective.

Conclusion:

The National Health Behaviour Survey 2012, combined with the district study on Problem Drug Users, provides a thorough and revealing portrait of drug use in Pakistan. The study highlights that drug use is a widespread issue, affecting approximately 6.7 million individuals within the age group of 15 to 64, with 4.25 million classified as suffering from drug use disorders. This substantial prevalence underscores a significant public health challenge and points to the need for more robust and accessible treatment and intervention strategies. Cannabis is identified as the most prevalent drug, with a notable demographic profile of users predominantly being middle-aged males with low educational attainment. Despite the high frequency of use, the low rate of treatment-seeking behavior among regular cannabis users signals potential barriers to accessing care or gaps in treatment availability. This observation is compounded by the gateway effect where initial cannabis use often precedes the use of more severe substances, such as opiates.

The study also reveals a troubling picture regarding opiate use, which affects about 1% of the population. Heroin use, in particular, is widespread and associated with significant socio-economic consequences. The chronic nature of opiate addiction, along with high rates of poly-drug use and severe economic hardship among users, demands comprehensive and sustained intervention efforts. Emerging trends in stimulant use and the significant non-medical use of prescription drugs add further complexity to the drug use landscape. The rise in injecting drug use and the associated increase in HIV infection rates further exacerbate the urgency for targeted public health responses. Regional variations in drug use prevalence highlight the need for localized strategies tailored to specific demographic and socio-economic contexts.

In conclusion, the findings of this extensive study call for a multifaceted approach to address drug use in Pakistan. Effective strategies should include expanding treatment services, enhancing public health education, and implementing prevention programs tailored to regional and demographic needs. Addressing the diverse nature of drug use and its associated risks is crucial for mitigating the health, social, and economic impacts of drug use and improving overall public health outcomes in Pakistan. The insights from this study provide a critical foundation for policymakers and health professionals to develop targeted interventions and support systems aimed at reducing drug dependence and its related consequences.

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