

2. REVIEW OF LITERATURE

Alcohol, opium and cannabis have been the traditional drugs of use in India with moderate consumption being ritualised in social gatherings. Associated major health or social problems are not obvious since several informal social controls against abuse are in place. Traditional use continues today (Ganguly et al 1995). The current drug abuse problem in India needs to be examined against this backdrop.

2.1 General Population Surveys

Research conducted on extent and patterns of drug abuse published in the mid-1970s and early 1980s showed that cannabis, opium, methaqualone, barbiturates and minor tranquillizers were the most often abused substances (Box 2.1). Some abuse of amphetamines, LSD and cocaine was also reported (Channabasavanna 1989, Ministry of Welfare 1992 and Siddiqui and Britto 1997). Heroin abuse was first reported in treatment centres in 1985, among subjects who had been initiated to heroin in 1981 (Mohan et al 1985).

Several researchers documented drug abuse among various sections of the society, including school and college students, non-student youth, psychiatric patients and the general population.

Though no single factor was found, social scientists viewed drug abuse as a sign of the breakdown of traditional family values and social cohesion (Sharma 1995).

In the absence of a national survey, information on drug abuse in the country in the recent past can be obtained from local surveys and surveys carried out among identified drug users in the community. Additionally, studies for which data was collected from treatment centres, supplement the information on the extent and magnitude of the problem. These studies found that the drug users were mostly men (98-99%) and that alcohol, cannabis, heroin and opium were the common drugs of abuse in the country. In general population surveys, the prevalence of alcohol abuse varied between 4.2 and 30.7 percent, cannabis abuse between 0 and 5.8 percent, heroin abuse between 0 and 1.3 percent and other opiates between 0 and 10.2 percent. It was apparent that there were regional variations as regards the prevalence of the problem. Heroin abuse was frequently reported from Manipur and Kohima and was around 1 percent (Singh et al 1992, Mohan et al 1997 and Mohan et al 1998). A high prevalence of raw opium abuse was reported from Jodhpur (Mohan et al 1993, Mohan and

Box 2.1

Main Drugs of Abuse: 1970s and 1980s

- Cannabis
- Methaqualone
- Amphetamines
- Minor Tranquillizers
- Heroin - introduced early 1980s

Box 2.2

**RAS DATC:
Key Elements and
Findings**

- Study carried out in 9 urban sites
- 1,271 drug users interviewed
- Commonly abused drugs: alcohol(43%), heroin(38%), opium (9%) and cannabis(6%)
- Mean age: 33 years
- Age of first drug use: 19-23 years
- IDU: 19%
- Drugs used for injecting: heroin and buprenorphine
- Regional variations seen

Source: Mittal and Ch'ien 1998

Dhawan 2001 and Mohan and Dhawan 2002) and that of cannabis from Uttar Pradesh and Manipur. Few users of tranquillizers were reported. None of these studies reported abuse of hallucinogens, amphetamines or cocaine.

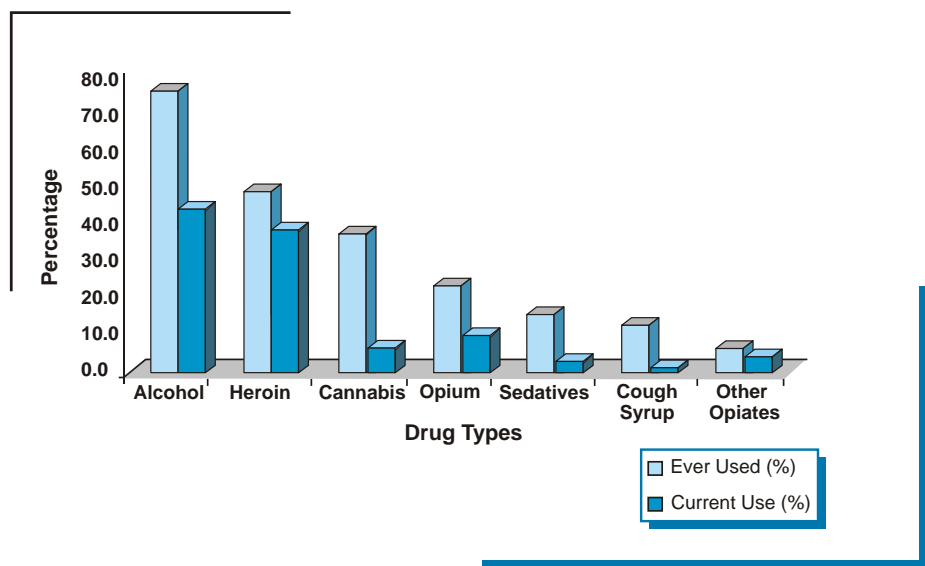
2.2 Surveys Among Target Populations

The second kind of study was assessments of drug abuse among identified (non-probability sample) drug users. One such study, “Developing Community Drug Rehabilitation, Rapid Assessment Study of Drug Abuse in Target Communities in India (RAS DATC)” (Mittal and Ch'ien 1998) was conducted in nine urban sites namely Bangalore, Chennai, Imphal, Jodhpur, Kolkata, Lucknow, Mumbai, Patna and),

Pune. It was reported that among a total of 1,271 drug users, commonly abused drugs in the previous year in descending order were: alcohol (43%), heroin (38.2%), opium (9.3%), cannabis (6.1%) and other opiates (4.3%) as seen in Figure 2.1.

The frequency of lifetime use for these substances was, however, higher. The mean age of the subjects was 33 years, 98 percent were males, 57 percent were married, 50 percent were living in joint family and 91 percent were living with their family members and only about 9 percent did not have any fixed residence. About 28 percent reported having had other family member who were drug users. About 26 percent were unemployed and most of the employed persons were transport workers, watchman, hawkers and vendors. The age of first drug use for

Figure 2.1
Commonly Abused Drugs in % (N=1271)



Source: Mittal and Ch'ien 1998

the various substances varied, however, most were introduced to these substances between the age of 19 and 23 years. About 19 percent were injecting drug users (IDUs) and reported that they were using the primary drug through an injectable route. An additional 6 percent reported the use of a secondary drug via injecting. The highest incidence of IDU was reported from Imphal (80%) followed by Chennai (43%) and Kolkata (38%). Other than heroin, there were reports of use of buprenorphine through the injecting route. Needle sharing and other unsafe practices were common among drug users. Overall, the pooled data reflected that alcohol and heroin were the most commonly abused substances. In this regard too, regional variations were observed. Abuse of heroin was reported mostly from Mumbai, Kolkata, Imphal and Patna. Key informants interviewed in these sites reported that there had been an increase of drug abuse in all sites during these years.

A second such study, called the multi-centred Rapid Assessment of Injecting Drug Use in India, was conducted in 5

sites (Kolkata, Chennai, Delhi, Imphal and Mumbai). The study reported that the main drugs being abused through the injecting route were heroin and pharmaceutical preparations like buprenorphine, chlorphenamine, diazepam, propoxyphene, pentazocine and promethazine. The authors (Dorabjee and Samson 2000, Kumar et al 2000) reported that in the preceding few years injecting drug use was far more visible in India and the number of IDUs were increasing. In most centres, 90 percent of the IDUs had, however, used heroin through inhalation before switching to injecting. The sharing of injecting equipment was common and varied between 52 and 81 percent. About 50 percent of the subjects from Chennai reported sex with multiple sex partners including sex with commercial sex workers (about 30%). About 30 percent were positive for Hepatitis B (HBsAg) and about 80 percent were positive for Hepatitis C (HCV) (Kumar et al 2000). The study projected the estimated number of IDUs along with HIV sero-positivity among these subjects as provided in Table 2.1.

Box 2.3

Rapid Assessment of Injecting Drug Use in India - Key Elements and Findings

- Study carried out in 4 metros and Imphal
- Focus on IDUs
- Drugs injected: heroin, buprenorphine, chlorphenamine, diazepam and propoxyphene
- Data suggested rising proportion of IDUs
- Sharing of needles: 52-81%

Source: Dorabjee and Samson 2000, Kumar et al 2000

Table 2.1
Estimated number of IDUs at various sites

No.	City/ State	Estimated Number of IDUs	HIV Sero-positivity(%)
1	Imphal	9,000-12,000	80.7
2	Chennai	10,000-15,000	15-19.5
3	Mumbai	38,000 (mean)	7.43
4	Kolkata	10,000-15,000	2
5	Delhi	25,000-30,000	44.5

Source: Dorabjee and Samson 2000, Kumar et al 2000

2.3 Data from Treatment Centres

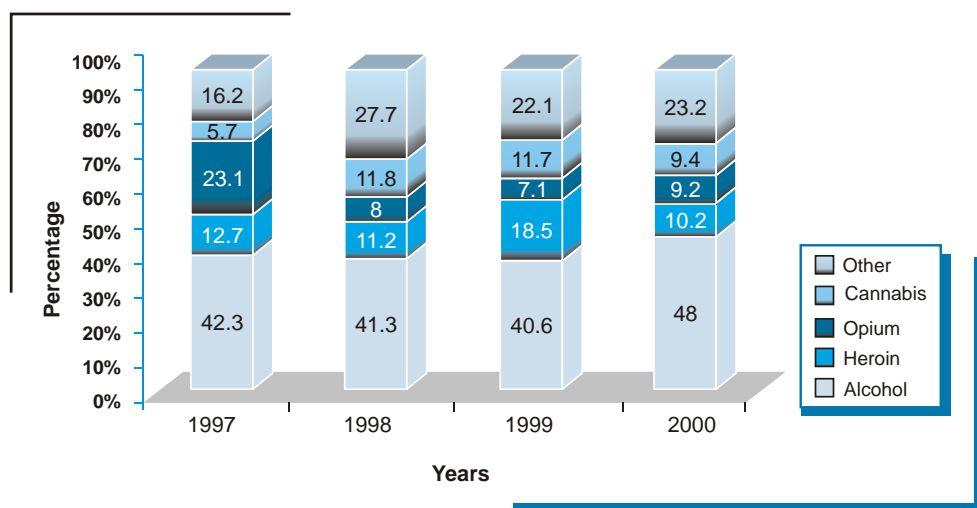
Data from non-government treatment centres funded by the Ministry of Social Justice and Empowerment (MSJE) revealed that subjects with alcohol, opiate and cannabis abuse were most commonly reported. The annual reports of the MSJE showed that during the four years 1997-2000, the proportion of subjects seeking treatment for alcoholism varied between 41 and 48 percent. The corresponding figures for heroin were 10 and 18 percent. The proportion of subjects with opium dependence decreased to 9 percent (2000) from 23 percent (1997). Subjects with other opiate and cannabis abuse remained more or less similar over three years (Figure 2.2). A small percentage of subjects using amphetamines, cocaine and tranquillizers reported for treatment

in these centres. Data from the government treatment centres (GOs) supported by the Ministry of Health and Family Welfare (MOHFW) showed that 41.9 percent were suffering from alcohol dependence, 47.3 percent were opiate dependent, 6.1 percent were dependent on other substances and 4.7 percent were dependent on multiple drugs. Nineteen of these centres reported IDUs to varying degrees although ten of these centres were from states other than the North East (Mohan et al 2002). In other words, at the time, IDUs had been reported from both general population surveys and data from treatment centres from states other than North Eastern states of India.

Some others (Shetty et al 1997) reported that abuse of medicinal substances like propoxyphene, buprenorphine, cough

Figure 2.2

Changing Patterns of Drug Users in NGO Treatment Centres (%)



Source: MSJE Annual Reports

syrup and sedatives, which are cheap and easily available, had increased. Charles et al (1994) reported that in rural India, opium and cannabis were the most common drugs of abuse. Poly drug use was also commonly observed.

Most of the above-mentioned studies indicated that many drug users belonged to the low socio-economic group, were illiterate or semi-illiterate and lived in slums. However, both epidemiological studies and data from treatment centres failed to describe the extent of drug abuse amongst the hidden population which did not seek treatment. Finally, information on the changing pattern of drug abuse in smaller towns and rural India was inadequate and had not been documented through systematic data collection.

The International Narcotics Control Board in its report for the year 2000 (INCB 2001) noted that the abuse of licit manufactured narcotics and psychotropic substances like codeine-based cough syrups and benzodiazepines had been observed in India. The growing abuse of pharmaceuticals contributed to poly-drug abuse in South Asia. The board also warned that smuggling of amphetamines tablets might contribute towards abuse of amphetamine type stimulants in India.

The World Drug Report for 2000 (UNODCCP 2000) noted that most countries in the world including India showed minor increases in cannabis abuse. The report further noted that in India there had been some increase in the abuse of heroin and other opiates in 1998. Almost two-thirds of all users of

opiates were found in Asia. The largest number of opiate users in absolute terms was found in India, though the prevalence was less than 0.5 percent of the population aged 15 years and above (UNODCCP 2000 and UNODCCP 2001a).

2.4 Consequences of Drug Abuse

In India, although statistics are available on infectious diseases, no separate data is available for persons with alcoholism and drug abuse. These are thus grouped together with psychiatric diseases for coding and tabulation purposes.

Health damage commonly reported among drug users in India has been cellulitis, thrombophlebitis, tuberculosis and HIV/AIDS. Many of these ailments are linked to a specific route of administration and are commonly seen among IDUs. Other observed diseases were skin diseases, poor dental hygiene and respiratory disease. In one study from Kolkata, it was observed that amongst IDUs, about 50 percent had abscesses, 22 percent tested positive for Hepatitis B and 4 percent were positive in the VDRL test (serum test for syphilis) (ICMR 1997). The point estimate for HIV infection among the adult population in the year 2001 was 3.31 million.* The number goes up to 3.97 million keeping in mind the unaccounted numbers of IDUs and other age groups. The National AIDS Control Organisation (NACO) between August and October 2001 carried out the HIV sentinel surveillance ('unlinked anonymous' i.e. blood samples were

* Note: According to NACO's new estimates, 2.5 million people in India are living with HIV.

collected from all the patients attending selected clinics between August and October 2001), for HIV testing, which was not linked to the routine clinical care of the patients. The sample was obtained from a total of 320 sites, out of which 170 were antenatal clinics (ANCs), 135 were STD clinics, 13 sites among IDUs and 2 sites of MSM. Data obtained from the ANC sites showed the sero-prevalence varying between 0-1.8 percent. Information available from 10 IDU sites showed that HIV positivity among IDUs varied between 1.4 percent (Meghalaya) and 56.3 percent (Manipur). According to UNAIDS about 80 percent of all new HIV infections occurred through sexual transmission, about 8 percent through perinatal transmission, about 6 percent through injecting drug use (IDU) and another about 5 percent through blood transfusion (UNAIDS 2000). NACO proposed that districts and/or states of India could be categorised as high/low prevalence (www.naco.nic.in). During the time of carrying out this survey, UNAIDS projection showed that sero positivity among adults in India was 0.7 percent (www.unaids.org).

Deaths due to drug overdose were also reported from areas where IDU is common. While no national statistics on drug-related deaths are available, some studies have reported poisoning and overdose as seen in the casualty or emergency rooms of large hospitals. In 1993, in a study of 235 subjects, 5 percent of admissions were due to benzodiazepine overdose and 2 percent due to cannabis (Aggarwal et al 1994).

At the All India Institute of Medical ing

Sciences, New Delhi, a National Poisons Information Centre (NPIC) has been established. Information collated by this centre showed that while household pesticides were the most common agents for poisoning in India, drugs of abuse accounted for 16 percent of the cases. The report also noted that poisoning due to drugs is on the rise and poisoning due to benzodiazepines was around 11.5 percent and those due to antihistamines was around 9.2 percent of all the poisoning due to various drugs (NPIC 2001).

Psychological symptoms, which include depression, anxiety, memory defects, sexual inadequacy and personality problems have also been reported as health consequences of drug abuse. Research has also shown that social, economic and domestic violence in families of drug dependent persons is quite common. Unemployment among drug dependent persons ranged from 4 - 68 percent (Mittal and Ch'ien 1998). Frequent absenteeism due to drug abuse has also been reported.

Thus various reports suggested that in India cannabis was the most often abused illicit substance followed by opiates - heroin, opium, buprenorphine and propoxyphene. At the national level, abuse of cocaine, amphetamines and hallucinogens was marginal. Abuse of medicinal substances such as buprenorphine, propoxyphene, pentazocine and diazepam, generally used together and by means of injection, had increased. By and large, most reports suggested that young, under employed males and marginalised populations were prone to drug use.