

DRUG ABUSE IN INDIA

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OF HEALTH & FAMILY WELFARE
NEW DELHI

DRUG ABUSE IN INDIA

REPORT OF THE COMMITTEE

Appointed by the

GOVERNMENT OF INDIA

**Ministry of Health & Family Welfare
Government of India**

NEW DELHI

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C. GOPALAN
Chairman
Drug Addiction Committee

Dated : October 1, 1977

My dear Minister,

I have great pleasure in submitting herewith the Report of the National Committee on Drug Addiction.

On a careful review of the current prevalence of drug abuse in the country, on the basis of all the data nationally available, we came to the conclusion that there is a hard core of drug addicts among the general population, the drugs most frequently abused being alcohol, tobacco, opium and cannabis. The problem among the students is more complex and difficult and the drugs most commonly abused are alcohol and tobacco. The students use psychotropics to a greater extent than the general population but use less of opium and cannabis. On the whole, the prevalence is more among boys and men than among girls and women. There are, however, disturbing signs that drug abuse may be on the increase. There is no reason to panic but no room for complacency either. We have, therefore, recommended that planned, comprehensive and sustained measures should be taken without delay to prevent and control drug abuse.

Our proposals for this purpose fall in three broad categories : (i) legal and penal measures, (ii) educational programmes and (iii) social action.

(i) *Legal and penal measures* : Our main recommendations include : the creation of a National Advisory Board of Drug Control; the enactment of a single Central Law to deal with the problem in respect of all drugs except alcohol which is a state subject; the evolution of a national policy regarding alcohol in consultation with the states; removing inadequacies and plugging loop-holes that have been noticed in the existing law; prescription of more stringent penalties for violation of legal provisions, especially for export and import of drugs and peddling; establishing a registration service for drug addicts and enabling those who so register themselves to get the needed supplies of drugs; strengthening the implementing machinery; and securing better coordination between central officials and the state police.

(ii) *Educational measures* : We believe that a continuing awareness of the drug problem has to be created among all social groups and especially

the elite and that drug education should be a part of health education at all levels of the society. Carefully designed, factually correct and scientifically evaluated programmes for this purpose need to be developed by the Department of Social Welfare, Education and Mass Communication in consultation with the Department of Health.

(iii) *Social action* : We have suggested several measures to create a rational, educated public opinion on the drug problem. We also believe that a lasting and long-term solution of the problem can only come through a better upbringing of children and youth, strengthening of the family and the peer group, involving youth in challenging programmes and a social transformation which will reduce the need for using drugs or can meet such need through alternative channels. The great strength of our tradition is the large proportion of total abstainers. This must be conserved and increased.

We have suggested that certain measures should be adopted for treatment of drug addicts as a part of general health services and that, to begin with, four to six de-addiction centres should be established in institutions and locations where the needed personnel and facilities are available, with central financial support, and subsequently, one such centre should be established in every state. We also think that rehabilitation of drug addicts should continue to be the responsibility of the family. Voluntary agencies should be involved in the programme and the state can play a useful supportive and supplementary role.

We are all of the view that a National Advisory Board of Drug Control should be set-up immediately so that it can initiate all the necessary action to implement most of our recommendations and also organise scientific studies on the subject in all parts of the country on a continuing basis. I hope that this will receive your personal attention.

Let me thank you finally, both on behalf of my colleagues and myself, for the opportunity you gave us to study the problem and to serve the cause of the nation.

Yours sincerely,



(C. GOPALAN)

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on 28-1-1977

INTRODUCTION

Drug Abuse : Old and New

1.01 The problem of drug abuse is not unique, either to India or to the present times. It has been a feature of all societies in the world since times immemorial and has arisen out of therapeutic and hedonistic considerations or as a means of escape from the reality of life's stresses and strains. The substances used for these purposes have also varied from society to society and from time to time, depending upon the development of science and technology. But three of them seem to have survived from ancient times to this day, viz. alcohol, cannabis, and opium and these still form the hard core of the drug problem. The psychotropic drugs have arrived on the scene very recently and, fortunately, play only a minor role at present in our country.

1.02 The modern industrial society, however, differs from the earlier ones in several respects in regard to this problem :

There is a tremendous increase in the pace and stress of life which under certain circumstances may also increase the need for the use of drugs;

The age-old inhibitions, taboos and attitudes of self-restraint have been crumbling in the face of the new values of rugged individualism, permissiveness and consumerism;

The range of dependence-producing substances available to the people has been considerably increased.

A continuously diminishing universe has made it possible to break down inter-cultural barriers. This implies, not only the introduction of alien drugs (e.g. LSD in India), but also the transfer of social attitudes to drugs from one culture to another (e.g. the increasing trend to regard alcohol as a beverage in the elite social groups in India); and The social concern over drug abuse has increased and the State is called upon to take measures for its prevention and control.

1.03 *Appointment of the Committee and its terms of reference*

Modern Indian society is being rapidly industrialized and urbanized, especially in the post-independence period. The spread of secondary and higher education has also created an elite group which is increasingly adopting the

life-styles and value-systems of the highly industrialized societies of the West. Under such circumstances, it is hardly a matter for surprise if the above trends, which are seen in all industrialized and modern societies, should also manifest themselves in India. Quite naturally, therefore, there has been a growing concern in the public mind about the allegedly increasing and wide-spread abuse of drugs by the young, and especially the students. There has also been an increasing demand that Government should take some action to study the extent and nature of the problem and initiate effective measures for controlling its prevalence and providing curative and rehabilitation measures. It is in response to this demand that the Government of India constituted this Committee on 2nd June, 1976 with the following terms of reference :

- (1) To enquire into the extent of addiction to drugs in the country, particularly amongst the student community;
- (2) To determine the motivation for drug addiction;
- (3) To identify the types of drugs that are misused and the steps that are to be taken to prevent the misuse of the drugs; and
- (4) To recommend suitable de-addiction and rehabilitation programmes that should be initiated in the country.

Programme of work

1.04 In view of the constraints under which we had to operate, it was not possible to undertake any new systematic studies regarding the extent and nature of drug abuse in the country. We therefore confined our work to evaluation of studies already conducted or in progress, and integration of their findings with available knowledge from other sources. We also tried to supplement this data, to the extent possible, through discussions, interviews, questionnaires and specially commissioned papers.

1.05 We held eight meetings in all, one in Bombay and the rest in Delhi. In the course of our work, we also held discussions with leading psychiatrists, law enforcement officials, teachers and representatives of students, the Indian Medical Association and the Association of Chemists and Druggists.

1.06 Our Secretariat elicited valuable information through questionnaires addressed to psychiatrists, law enforcement officials and vice-chancellors. It collected relevant information from a few drug abusers in several cities and prepared a number of papers on different aspects of the problem.

1.07 We had the benefit of special papers written by the experts at the invitation of the Indian Council of Social Science Research. We also

carried out a comprehensive review of the literature available on the subject. These documents are being published separately for public information.

1.08 We have addressed this Report mainly to policy-makers, educationists and administrators. It is also addressed to the public leadership in all walks of life and to the press because it is their responsibility to create a rational and well-informed social opinion on the subject. It is addressed especially to the youth of the country without whose willing co-operation no policy for the prevention and control of drug abuse can be effectively implemented.

1.09 We have designated this Report as 'Drug Abuse in India'. The expression 'drug abuse' has a much wider connotation and includes, not only 'drug addiction' but also other forms such as, experimental or occasional use, or even a type of regular use which has no appreciable harmful effects on the individual and the society. As will be apparent in the course of this Report, these other forms of drug abuse cannot be isolated from drug addiction and it is these which now form the major problem rather than drug addiction as such. We therefore felt that it would be desirable to deal with all forms of drug abuse, including drug addiction.

1.10 *Acknowledgments* : We are grateful to the Indian Council of Medical Research, the Indian Council of Social Science Research and the Department of Social Welfare, Government of India, for valuable assistance in terms of personnel and specially commissioned studies and papers. We thank all those institutions and individuals who made their data available to us and who wrote papers for us, replied to our questionnaires or gave oral evidence before us. We place on record our keen appreciation of the services of our Secretariat, Dr. (Smt.) Vimala Veeraraghavan, Asstt. Secretary, and Kumari Renu Kashyap, Research Assistant. We are also grateful to Shri A. K. Prabhakar, Statistical Officer, Indian Council of Medical Research, who prepared the statistical tables given in the Appendix.

CURRENT STATUS OF DRUG ABUSE

2.01 We shall first ascertain the current status of drug abuse in India. This will involve a discussion of the following issues :

- (1) The dependence-producing drugs;
- (2) The current prevalence of drug abuse in the total population as well as among students; and
- (3) The evidence, if any, to show whether this prevalence is increasing or decreasing over a period.

We shall deal with these issues seriatim in the course of this Chapter.

Dependence-producing Drugs

2.02 The term 'drug' has been defined variously by individual scholars and organisations. We prefer to adopt the definition suggested by the World Health Organisation that a drug is a 'substance that, when taken in the living organism, may modify one or more of its functions'. We are not concerned with all drugs, although almost every drug may lend itself to some abuse. Our enquiry is mainly concerned with dependence-producing drugs whose harmful consequences on individual and social life go beyond a socially or culturally acceptable level.

2.03 The phenomenon of drug abuse has three stages :

- (1) The individual takes a drug for certain specific immediate results which he values, often in spite of a clear awareness of its adverse effects in the long run;
- (2) The individual tends to repeat the drug to re-experience these effects. In some individuals such repetition may create tolerance (*i.e.* a larger dose of the drug is required to produce the same effect) while others continue to experience similar effects at the same dose or frequency.
- (3) If the drug use is continued over a period of time, it leads to complex biochemical relationship in the body of the individual (depending upon the dosage and frequency of use). If the drug is not made available, it manifests this lack in distressing psychological and/or physical symptoms. These are called 'withdrawal reactions' and are usually drug specific.

It needs to be emphasized that not all individuals pass through all the above stages and not all the drugs show the same intensity at each stage. The definition of the term 'drug dependence', in a technical sense, however, encompasses stages (2) and (3) of drug taking and/or drug-individual interaction.

2.04 At the present time, the substances and dependence-producing drugs (*i.e.* drugs having the capacity to interact with a living organism to produce a state of psychic or physical dependence or both) commonly abused in India are the following :

- (1) Cannabis and its products (*e.g.* *Bhang*, *Ganja* and *Charas*);
- (3) Hallucinogens (*e.g.* L.S.D.);
- (3) Tranquilisers, hypnotics and sedatives (*e.g.* meprobamate, diazepam, methaqualone and chloral hydrate);
- (4) Barbiturates (*e.g.* phenobarbital and secobarbital);
- (5) Amphetamines (*e.g.* dextro-amphetamine and methyl amphetamine);
- (6) Tobacco;
- (7) Other narcotic drugs (*e.g.* opium, pethidine, morphine, heroin and cocaine); and
- (8) Alcohol.

2.05 In this report, we shall not deal with tobacco. It does produce dependence and the serious adverse effects, both social and individual, which follow its prolonged use have been documented beyond any doubt. But in view of its large social acceptance, it has to be dealt with, not on any legal or penal basis, but only through the creation of an appropriate social opinion and education. Alcohol is the most commonly abused drug in the country at present and the adverse consequences of its abuse are too well known to need any elaboration here. But we have decided to exclude alcohol also from this Report, mainly because this problem has already been considered by several other committees. Some references to alcohol are however inescapable in a Report of this type because most of the studies on drug abuse consider alcohol as a drug with other drugs. Moreover, we would like to emphasise that all drugs form a continuum with considerable substitutability, that tobacco and alcohol are most commonly used while changing from abstention to drug-taking, that alcohol is often used in combination with other drugs, and that the methods for the prevention and control of drug abuse advocated here would also apply to alcohol, *mutatis mutandis*.

Current prevalence of Drug Abuse in the total population

2.06 We shall now proceed to evaluate the current prevalence of drug

abuse in the total population on the basis of all data nationally available. These fall into four main categories : (1) General studies on the epidemiology of mental illness; (2) Specific studies of drug abuse; (3) Clinical studies and (4) Secondary data which throw some light on the extent or character of drug abuse in the general population.

2.07 We would, however, like to sound a note of caution in this context. The studies available are few. They are mostly cross-sectional and not representative of the population studied. They have several methodological flaws and the investigators have used definitions and parameters which are not strictly comparable. The conclusions to be drawn from them can, at best, be only tentative. This is also true of the data regarding drug abuse among students which will be discussed in a later section.

2.08 *General studies on epidemiology of mental illness* : The first category of studies which provide some data on drug abuse are those which primarily deal with the epidemiology of mental illnesses, including drug dependence or addiction which is a mental illness. In Pondicherry, Surya and others¹ found that 3.6/1000 of the population surveyed was addicted to alcohol. In West Bengal, Elnagar and co-workers² surveyed the rural population and found that 13/1000 were alcohol and drug addicts. In Vellore, Verghese and co-workers³ found that 2/1000 were addicted to alcohol. In a rural community in West Bengal, Nandi and associates⁴ found the proportion of alcohol addicts to be 19/1000; and in Lucknow city, Thackore⁵ found it to be 18.6/1000. In a community survey around Agra area, Dube⁶ found 22.7/1000 individuals addicted to some drug or the other. Of these, 59.4 per cent used alcohol, 17.5 per cent used *bhang* (cannabis) and the rest used multiple drugs.

2.09 *Specific studies of Drug Abuse* : The second category of studies deal specially with drug abuse. Gurmeet Singh and Brij Lal⁷ studied nine largest villages of Sangrur District of the Punjab and found that 299.8/1000 persons of age 10 and over had *ever used* a drug (*i.e.* tobacco, alcohol, opium, cannabis and barbiturates)*

The proportion of current users was 287.7/1000. A further analysis showed that 40 per cent of them used tobacco, 25.6 per cent used alcohol, 18.9 per cent used opium, 6.2 per cent used barbiturates and 2.2 per cent used cannabis. Deb and Jindal⁸ studied the pattern of alcohol use in selected progressive villages around Ludhiana and found a prevalence rate of 741/1000 among the adult males (age 15 and over). Deb⁹ studied a

* The expression 'ever used' means the non-medical use of drugs even once before the date of survey.

sample of general population in Punjab and found that 54.3 per cent of the urban sample and 40.4 per cent of the rural sample abused synthetic drugs such as methaqualone and LSD. Mohan and co-workers¹⁰ studied drug abuse in the rural areas of Punjab. This is the only study which gives information on drugs abused as well as on non-users, past-users, experimental users, regular users and addicts. In view of its significance, the findings of this study have been reproduced in Tables Ia, Ib and 2.

2.10 The data highlight the following significant facts :

- (1) In keeping with the Indian tradition, the proportion of those who never used a drug is very large.
- (2) Alcohol, opium and cannabis are the main drugs abused.
- (3) The proportion of regular users is very small and that of addicts, smaller still (except for tobacco).
- (4) The prevalence of drug abuse is substantially more among males than among females.

TABLE Ia. DISTRIBUTION OF PERSONS ACCORDING TO DRUG USAGE IN RURAL AREAS OF PUNJAB (MALES N-2064)

	Non users	Past users	Experimental users	Regular users
Alcohol	692 (33.5)	168 (8.1)	1089 (52.7)	115 (5.6)
Tobacco	1633 (79.1)	33 (1.6)	18 (0.9)	380 (18.4)
Opium	1865 (90.3)	71 (3.4)	54 (2.6)	74 (3.7)
Cannabis	1999 (98.8)	40 (2.0)	20 (1.0)	5 (0.2)
Painkillers	2049 (99.3)	2 (0.1)	11 (0.5)	2 (0.1)
Amphetamines	2064 (100)	—	—	—
Barbiturates	2058 (99.7)	3 (0.15)	2 (0.10)	1 (0.06)
L.S.D.	2062 (99.9)	—	2 (0.1)	—
Tranquillisers	2060 (99.8)	1 (0.06)	1 (0.06)	2 (0.01)

Experimental user — for less than a month to about once a week

Regular user—several times a week and daily.

Figures in parentheses indicate the percentage.

TABLE 1b. DISTRIBUTION OF PERSONS ACCORDING TO DRUG USAGE IN RURAL AREAS OF PUNJAB (FEMALES N-1536)

	Non users	Past users	Experimental users	Regular users
Alcohol	1510 (98.3)	3 (0.2)	20 (1.3)	3 (0.2)
Tobacco	1471 (95.7)	4 (0.3)	15 (1.0)	46 (3.0)
Opium	1528 (95.4)	1 (0.1)	4 (0.3)	3 (0.2)
Cannabis	1533 (99.3)	3 (0.2)	—	—
Painkillers	1523 (99.1)	— (0.5)	8 (0.4)	5
Amphetamines	1536 (100)	—	—	—
Barbiturates	1536 (100)	—	—	—
L.S.D.	1536 (100)	—	—	—
Tranquillisers	1529 (99.5)	—	4 (0.3)	3 (0.2)

Experimental user — for less than a month to about once a week.

Regular user — several times a week and daily.

Figures in parenthesis indicate percentage.

TABLE 2. NUMBER AND PERCENTAGES OF ADDICTS* ACCORDING TO DIFFERENT DRUGS USED.

Drug	Male (2064)		Female (1536)	
	Number	Percentage	Number	Percentage
Alcohol	81	4.0	1	0.06
Tobacco	261	12.6	30	2.0
Opium	74	3.5	3	0.3
Cannabis	4	0.19	—	—
Painkillers	2	0.1	4	0.26
Amphetamines	—	—	—	—
Barbiturates	—	—	—	—
L.S.D.	—	—	—	—
Tranquillisers	—	—	2	1.13

*Based on expressed craving for the drug.

Number in parantheses shows the total number of persons.

On account of affluence, the prevalence of drug abuse may be assumed to be higher in Punjab than in other rural areas of the country.

2.11 In order to get a precise idea of drug abuse in the general population, what we really need is studies of this type¹⁰ covering both urban and rural population in different parts of the country; and they will have to be periodically repeated to show whether the abuse is increasing, steady or decreasing. The organisation of such studies should form an important programme of future action.

2.12 *Clinical studies* : Some clinical studies also give information on drug abuse. Dube and Handa^{11,12} studied drug habits in normal and mentally ill patients. They observed that drug indulgence was decidedly more in manic depressive psychosis and schizophrenia than in any other diagnostic category. They also observed that the mentally ill tended to abuse drugs indiscriminately while the healthy people abused specific drugs. Sethi and Gupta¹³ analysed 2,000 private and hospital psychiatric patients and found that only 1.0 per cent of the private cases and 0.6 per cent of the hospital cases had been diagnosed as drug-dependent and that all of them were dependent on alcohol. Verma¹⁴ observed cannabis psychosis in 3.2 per cent of a total of 39,001 patients admitted to the mental hospital over a ten year period. In another study by Dube and co-workers¹⁵ cannabis abuse was seen in 23.7 per cent of 566 consecutive hospital admissions. Agarwal¹⁶ in a survey of psychiatric morbidity amongst medical students, found only a single cannabis addict. Several other studies¹⁷⁻²⁰ have also referred to the abuse of drugs in different contexts, sometimes in self-medication for various kinds of disorders as also in suicidal attempts. Chopra and Smith²¹ found that, amongst the patients admitted with psychotic symptoms, 11 per cent were cannabis users. Goyal and D' Netto²² found that 14.4 per cent of the patients admitted to the Forward Military Psychiatric Centre in the Northern Sector had ever taken cannabis and of these, only three took it frequently and three regularly.

2.13 *Secondary data* : The Secondary data on drug abuse throws limited light on some aspects of the problem. For instance, Chopra and Chopra^{23,24} used the indirect data available in excise returns and estimated that the number of habitual users of cannabis in the country is around 300,000. They also felt that the number of such users declined sharply between 1900 and 1935 but not so sharply between 1935 and 1965.

2.14 As narcotics is a state subject, the State Governments maintain registers of opium addicts, who are registered on the strength of medical certificates and statistics regarding their number are intimated to the Narcotics Commissioner. On requisition through the Narcotics Commissioner,

the State Governments get their requirements of opium from the Government Opium Factory, Ghazipur, to meet the needs of the addicts. Non-medical use of opium has been banned since 1st April, 1959 and new additions by the states to the Registers of Addicts have been very few as compared to drop-outs (probably partly attributable to deaths) which are fairly large. Consequently, the number of opium addicts on the registers has fallen from 432,609 in 1959 to about 80,000 in 1975. Obviously, this is an underestimate of the actual number of opium addicts in the country (Statistical Appendix: Table I).

2.15 The National Sample Survey has collected, as part of its data on consumer expenditure, information on the expenditure incurred by households on *pan*, tobacco and intoxicants which are defined to include opium, *ganja*, toddy, country liquor, foreign liquors and similar substances. The major limitations of the data are the clubbed presentation of *pan*, tobacco and other intoxicants and the source of information (head of the household). In spite of these limitations, the data show a direct rising linear relationship, with monthly per capita expenditure on intoxicants in all the strata of society (Statistical Appendix: Table II).

2.16 *Hospital statistics* : It is unfortunate that the existing hospital statistics, which could have become a useful source of information, is extremely inadequate. However, we were able to obtain estimates from various psychiatric units and mental hospitals on their admission rates. They showed that between 1 to 3 per cent of their annual admissions consisted of patients who were drug dependent. The hospital statistics, if improved and regularly monitored, can be a useful source of data on this problem (Statistical Appendix: Table III).

2.17 *Drug production figures* : The data on import and manufacture of psychotropic drugs show that, over a three year period, the import or indigenous production of these drugs has remained fairly stable, except for phenobarbital and methaqualone. The increase in consumption of phenobarbital is at least partly related to its increasing use in various combinations. But methaqualone is definitely dependence producing, and the rise in its import is unlikely to be related to a sudden spurt in medical use (Statistical Appendix: Table IV).

2.18 It may be mentioned in this context that it is possible to improve the secondary data on excise returns, registers of drug addicts, National Sample Survey, hospital statistics, police statistics, import or manufacture of drugs, *etc.* to give a much better picture of drug use or abuse than they do at present. This is another area for fruitful action.

2.19 *General conclusions* : What conclusions about the extent of drug abuse among the general population can we legitimately draw from this limited data (as summarised in Statistical Appendix: Table V)? We can say that the drug problem exists in the population as a whole. The drugs most frequently misused are alcohol, tobacco, opium and cannabis; the psychotropic drugs are just making their entry. Though the proportion of non-users is quite large, it must be admitted that there is only a small hard core of addicts of these drugs, many of whom become mentally ill and some of them are treated in our psychiatric units and mental hospitals or by private practitioners. Within this hard core, the alcohol addicts form obviously the most numerous, and psychotropic addicts the smallest group. Addiction is more common among men than among women.

Current status of Drug Abuse among students

2.20 Drug abuse by students in secondary schools, colleges and universities is a more serious problem because these students form the core from which leadership in all walks of life will eventually emerge. In fact, it is the abuse of drugs by students that is largely responsible for the widespread attention which the problem has begun to receive at present. We shall here deal with only four aspects of the problem, *viz.*, extent of abuse, drugs commonly abused, manner of abuse, and the socio-economic background of drug users.

2.21 Banerjee²⁵ studied drug abuse among Calcutta University students. The sample studied consisted of 1,132 students and the prevalence rate of drug abuse was 37.4 per cent (26 per cent for tobacco and 11.4 per cent for amphetamines). In a journalistic survey for a Delhi newspaper, Dayal²⁶ reported that 5,000 (or about 5 per cent) of Delhi University students were current occasional drug abusers and that about 200 of them were drug dependent. These figures exclude alcohol and tobacco which, it was felt, were much more common. The same estimates were cited in other studies^{6,27}. A sample survey of Delhi University male students²⁸ showed an overall prevalence rate of 50.1 per cent for drug abuse (19.8 per cent for tobacco alone, 18.6 per cent for alcohol alone, 6.6 per cent for tranquillisers, 4.3 per cent for amphetamines, 1.9 per cent for opium and 1.2 per cent for barbiturates). Chitnis²⁹, in a survey of drug abuse among the students of the Bombay University, found a prevalence rate of 19.7 per cent of *ever used* (cannabis 17 per cent, amphetamines 7.1 per cent, barbiturates 5.4 per cent, LSD 3.8 per cent, opium 2.5 per cent, heroin and cocaine 1.4 per cent and morphine 0.6 per cent). Alcohol and tobacco were not included in this survey. In a sample of Punjab University students at Chandigarh³⁰ the prevalence rate of *ever used* was 18.9 per cent. The prevalence rate of current drug users was 3.9 per cent and a further analysis of the data showed that prevalence rates of *single* drug abuse amongst all

students were : amphetamines 4.7 per cent; cannabis 2.0 per cent; barbiturates 2.0 per cent; and methaqualone 5.9 per cent. The drug dependent individuals, according to their criteria (using 30 times or more), were 1.5 per cent. Alcohol and tobacco were excluded from this study also. In a school population survey³¹ involving three senior classes of an English medium boys' school in Delhi, the sample size being 225, the prevalence rate for current drug abuse was 34.2 per cent (tobacco 31.2 per cent; alcohol 26.2 per cent; and cannabis 12 per cent). A replicated survey a year later³², in the same school and sample and by the same technique, showed a prevalence rate of 35 per cent. There was a similar prevalence of drug sub-categories. In a pilot survey of Delhi University students³²⁻³³ the overall prevalence rate of drug abuse was 32.7 per cent. It was twice as high in males as compared to females. Excluding alcohol and tobacco which were the common drugs, the prevalence rate was 18.6 per cent (26.6 per cent in males and 10.6 per cent in females).

2.22 In a study by Sethi and Manchanda³⁴ on medical students in Lucknow, the prevalence rate of drug abuse was found to be 25.1 per cent (*ever used*). The commonest drugs were tranquillisers (53.7 per cent), followed by alcohol. The drug user was defined as a person using drugs once a month or more. The other drugs abused were amphetamines (23.4 per cent), *bhang* (14.9 per cent) and non-barbiturate sedatives (8.5 per cent). A study on 564 non-medical post-graduate and final year medical students in Agra³⁵ showed an overall *ever used* prevalence rate of 56.2 per cent, including alcohol and tobacco. It was three times as large in males as in females. The prevalence was high in male medical students as compared to non-medical ones. All male students frequently abused alcohol, *bhang* and painkillers, while male medical students abused, in addition, barbiturates, hypnotics, sedatives, *charas* and *ganja*. The infrequently abused substances were LSD, heroin and cocaine. A survey on the students of the Punjab Agricultural University by Deb³⁶ found that 29.6 per cent of the sample of 1961 had *ever* taken a drug. Among drug users, 20.6 percent had taken methaqualone/amphetamine, 2.2 per cent opium, 4.3 percent cannabis, 1.6 percent LSD, and 1.3 per cent *bhang*. Of the drug users, 83 used multiple drugs. The results of these studies are summarised in Tables VI and VII in the Statistical Appendix.

2.23 We also had access to data from seven centres spread over the country which are conducting prevalence surveys, under a programme sponsored by the Department of Social Welfare, with comparable sampling systems, size, methodology and common questionnaires³⁷. The centres in this study were not supposed to be a representative sample of the country as a whole, but were selected keeping in view the criteria of metropolitan (Bombay, Delhi, Madras) and non-metropolitan (Jaipur, Hyderabad

and Sagar) cities. Varanasi was selected as an odd representative, mainly as a residential university. The findings from these surveys are summarised in Tables 3, 4, 5 and 6.

TABLE 3. PERCENTAGE PREVALENCE RATE OF DIFFERENT DRUGS AT VARIOUS CENTRES (1976)

Drug	Bombay	Madras	Delhi	Jaipur	Hyderabad*	Varanasi
Alcohol	15.1	9.5	12.2	9.8	9.0	10.4
Tobacco	8.1	15.2	10.5	9.2	6.3	15.1
Painkillers	12.6	1.2	20.9	2.3	5.9	13.8
Tranquillisers	1.0	1.0	2.9	1.2	1.6	2.5
Amphetamines	0.2	0.4	0.3	0.5	0.6	1.3
Barbiturates	0.6	1.4	0.6	0.4	0.4	1.8
Cannabis	0.4	1.5	1.3	0.9	0.7	10.9
LSD	0.07	0.4	0.2	0.2	0.1	0.9
Cocaine	0.05	—	0.03	0.09	0.2	0.06
Pethidine	0.05	0.08	0.2	0.2	0.1	0.9
Opium	0.4	0.03	0.5	0.2	0.2	0.9
TOTAL (N)	4151	3580	3991	4081	1097	3852

*The data analysis was not complete.

TABLE 4. PERCENTAGE PREVALENCE RATE OF DIFFERENT DRUGS ACCORDING TO SEX (1976)

Drug	Bombay		Madras		Delhi		Jaipur		Hyderabad		Varanasi	
	M	F	M	F	M	F	M	F	M	F	M	F
Alcohol	20.6	8.5	13.8	2.9	21.7	2.6	12.1	1.5	15.4	2.8	11.6	1.7
Amphetamines	0.2	0.2	0.7	—	0.4	0.2	0.5	0.3	0.4	0.6	1.5	—
Barbiturates	0.8	0.4	2.4	0.07	1.0	0.1	0.05	0.1	0.9	0.4	2.0	0.2
Cannabis	0.6	0.2	2.5	—	2.4	0.2	1.1	0.1	1.2	0.6	12.1	1.9
LSD	0.1	0.05	0.7	—	0.2	0.05	0.2	0.1	—	—	1.1	—
Cocaine	0.09	—	—	—	0.05	—	0.09	—	0.2	—	0.7	—
Pethidine	0.04	0.05	0.1	—	0.2	0.2	0.2	0.1	0.4	—	0.1	0.6
Painkillers	9.5	16.9	2.1	0.4	21.7	20.1	1.8	3.3	2.8	6.5	14.1	11.5
Tranquillisers	1.2	0.7	1.7	0.2	4.1	1.7	1.1	1.5	1.9	0.6	2.7	0.8
Tobacco	13.6	1.3	24.3	1.4	18.7	2.4	12.0	0.5	10.6	0.8	16.9	1.3
Opium	0.6	0.05	0.7	—	0.8	0.2	0.2	0.1	0.4	—	1.1	—
TOTAL (N)	2334	1817	2157	1423	2000	1991	3092	989	539	558	3391	461

M-Male F-Female

TABLE 5. PERCENTAGE PREVALENCE ACCORDING TO THE TYPE OF DRUG GROUPS IN DIFFERENT COMBINATIONS—TOTAL POPULATION (1976)

Type of Drug usage	Bombay	Madras	Delhi	Jaipur	Hyderabad	Varanasi
Never tried	57.8	76.8	52.6	77.8	77.9	54.6
Tried earlier but discontinued	6.7	3.7	13.0	4.0	5.0	11.8
Tobacco/Alcohol or both	14.8	14.3	8.1	11.6	8.13	9.5
Tobacco/Alcohol or both + drug	6.8	4.4	8.1	3.5	3.0	9.5
More than one drug	0.5	0.3	1.0	0.3	0.4	1.6
No response	2.2	—	1.7	0.2	1.3	0.7
Only one drug	10.7	0.5	15.5	2.8	4.1	12.1
TOTAL (N)	4151	3580	3991	4081	1097	3652

TABLE 6. PERCENTAGE PREVALENCE ACCORDING TO THE TYPE OF DRUG USE AND SEX (1976)

Type of Drug usages	Bombay		Madras		Delhi		Jaipur		Hyderabad		Varanasi	
	M	F	M	F	M	F	M	F	M	F	M	F
Never tried	51.5	66.0	66.1	92.9	42.2	62.9	73.4	91.7	67.6	86.5	51.5	77.8
Tried earlier but discontinued	8.2	4.9	4.1	3.2	16.3	9.6	4.6	2.2	6.0	4.1	12.5	6.9
Tobacco/Alcohol or both	21.5	6.3	21.7	3.2	14.3	1.9	14.9	1.1	15.7	2.0	10.7	0.4
Tobacco/Alcohol or both + drug	8.8	4.3	7.0	0.3	13.4	2.7	4.4	0.7	5.0	1.2	10.7	1.1
Only one drug other than Tobacco/Alcohol	6.9	15.5	0.7	0.1	11.8	19.3	2.5	3.7	2.4	5.5	11.9	13.2
More than one drug other than Tobacco/Alcohol	0.6	0.7	0.3	0.3	1.1	0.9	0.2	0.6	0.5	0.4	1.8	0.4
No response	2.3	2.4	—	—	0.9	2.7	0.09	0.6	2.6	0.2	0.8	—
TOTAL (N)	2334	1817	2157	1423	2000	1991	3092	989	539	558	3391	461

2.24 The following conclusions emerge from these data :—

(1) An overwhelming percentage of students in all the centres have not taken any drugs at all, including socially acceptable drugs like tobacco, alcohol and painkillers (Table 5). The percentage of abstainers ranged between 60–80 per cent in the surveyed population. If the socially tolerated drugs are excluded from consideration the range, then was increased to 90–96 per cent. This is also confirmed by the other studies referred to earlier. (Statistical Appendix: Table VII).

(2) In all the centres, the drugs most commonly abused were the socially acceptable ones, viz., alcohol, tobacco and painkillers (Table 3). The prevalence rate of alcohol range from 15.1 per cent in Bombay (highest) to 9.0 per cent in Hyderabad (lowest). The prevalence rate of tobacco was highest (15.2 per cent) in Madras and lowest (6.3 per cent) in Hyderabad. The prevalence rate for painkillers was highest in Delhi (20.9 per cent) and lowest in Madras (1.2 per cent). The tranquillisers showed a range from 2.9 per cent in Delhi (highest) to 1.0 per cent in Bombay and Madras (lowest). Amphetamines abuse showed a narrower range from 1.3 per cent in Varanasi to 0.2 per cent in Bombay. The habiturates and bypnotic abuse was lowest in Jaipur and Hyderabad (0.4 per cent), similar in Delhi and Bombay (0.6 per cent) and nearly similar in Madras (1.4 per cent) and Varanasi (1.8 per cent). The abuse of cannabis was highest in Varanasi (10.9, per cent) and ranged elsewhere between 0.4 per cent to 1.5 per cent. The cannabis rates in Varanasi were almost equal to that of alcohol, a finding which probably reflects a cultural factor. The abuse of cocaine and LSD was negligible in all centres. The abuse of opiates, in centres other than Varanasi, was between 0.2 per cent to 0.5 per cent. It was higher in Varanasi (0.9 per cent).

(3) Drug abuse is far more common among males than among females (Table 4).

(4) It appears that single drug abuse is rather uncommon and that students prefer multiple-drug abuse (Tables 5 and 6). Alcohol and tobacco provide the base on which other drug use occurs. It may also be mentioned that similar results were obtained in other studies as well^{30,33,35,38}

2.25 *Manner of Drug Abuse* : Some data are available in the above studies regarding the manner of drug abuse. This has been summarised in Table VIII in the Statistical Appendix, which gives data for Delhi, Madras and Jaipur (in the multi-centre study).

2.26 The following points emerge from these data :

(1) Experimental users : A majority of the students abuse drugs in an experimental manner, with a frequency of less than a week and up to once in a month and a year. Wherever alcohol and tobacco have been

included in the study, they also formed the drugs most commonly experimented upon. The range of students experimenting with drugs is well above 80 per cent in the case of dependence producing substances. Amphetamines and barbiturates have been abused in situational contexts like examinations.

(2) Regular uses : The regular users of drugs are those who abuse drugs a number of times per week or even daily. Wherever tobacco and alcohol are considered, they form the bulk of drugs abused by regular users, followed by minor tranquillisers, cannabis and painkillers. A remarkable feature is the absence of regular use of opiates in any of the studies.

2.27 *Socio-demographic correlates* : All the studies clearly demonstrated a difference in drug abuse between boys and girls—a highly significant finding. All the studies also tended to converge in the observation that drug abuse was more common among students who came from affluent upper strata families, and who had parents with high incomes, education and a prestigious occupation^{31-34,38}. Among socially favourable circumstances leading to drug abuse, public school education and hostel-attached institutions seemed to be important. The most vulnerable age for being inducted into drug abuse was around 17 years or immediately after entering the college/university.

2.28 *General conclusions* : In spite of all the limitations of the above data, we may draw the following conclusions :

(1) Drug abuse among students exists at the secondary school stage also but becomes more pronounced at the university stage. It is perhaps a little larger than among the general population.

(2) Drug abuse is more common among boys than among girls.

(3) The drugs most commonly abused are alcohol and tobacco. Psychotropic drugs are more frequently used by students than by the general population, probably because of ready availability. But opium and cannabis are less used than in the general population.

(4) The most common form of abuse is experimental, occasional and situational as at the time of examination. Regular users are few and addicts still fewer.

(5) As in the general population, one is impressed by the large total abstinence rate among the students as well.

(6) A number of well-planned studies will have to be organised to give a truly national picture and these will have to be repeated periodically to understand the dynamics of the situation.

Is Drug Abuse increasing?

2.29 Lastly, let us raise an important issue : Is drug abuse increasing, steady or decreasing? In the absence of longitudinal studies (which we should organise in future), no definite answer can be given to this question. But the factors relating to drug, individual and society which influence the extent of drug abuse are such that it is more likely to increase than decrease. For instance, the variety of drugs that can be abused has increased and they are now more easily available. Individuals, especially the young, want greater freedom and have now taken to a more permissive behaviour. The social conditions are also changing and drugs like alcohol and tobacco are now gaining increasing acceptability. The consequences of these changes, along with an increase in the pace and tempo of life due to rapid urbanisation, industrialisation and modernization, can only point to an increase of drug abuse over a period of time. If the problem is still of a small magnitude in spite of all these factors, the credit largely goes to our traditions. But let us not ignore the fact that these very traditions are being continuously weakened by the aping of western life styles, especially by the elite.

Where do we go from here?

2.30 Our study of drug abuse in the country shows that its extent and nature are very different from that in the affluent societies of the West where the traditions of abstinence have almost disappeared and where alcohol is generally regarded as food or beverage. Drug abuse in India among the general population is limited at present, except for alcohol and tobacco. The extent and nature of the problem among the students however is more complex and serious, especially because there seems to be a shift from abstinence to non-abstinence, particularly in case of tobacco and alcohol. There are also disturbing signs which show that the situation in India is likely to worsen and get out of hand if adequate measures are not adopted to curb the evil. There is certainly no need to panic; but there is no room for complacency either. We therefore recommend that planned, comprehensive and sustained measures should be taken without delay to prevent and control drug abuse in the total population in general and among the students in particular. The details of these will be discussed in the next Chapter.

PREVENTION AND CONTROL

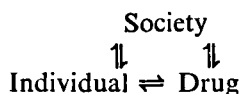
3.01 In the last Chapter, which was mainly descriptive in character we evaluated the current status of drug abuse in India. In the course of this Chapter, we propose to deal with the factors that contribute to drug abuse and the measures needed for its prevention and control. This will involve a discussion of the following three issues :

- (1) The factors that contribute to drug abuse and tend to increase or reduce its prevalence;
- (2) The legal and penal measures currently adopted in the country to prevent drug abuse or to control its spread (including our international obligations in this regard), the extent to which they succeed or fail, the reasons for such success or failure, and the reforms needed in the present system; and
- (3) The educational and social measures for the prevention and control of drug abuse.

We shall now proceed to discuss these issues *seriatim*.

Drug-Individual-Society interaction

3.02 Drug abuse is a behaviour whose manifestation depends upon the complex drug-individual-society relationship and which is deeply rooted in the socio-economic-cultural fabric of the society. There are several ways of looking at this complex relationship and a number of models have been designed from this point of view. We have, however, selected a model which will be explained in detail in paragraphs that follow, because in our opinion, it is comprehensive and provides a good basis for evolving a programme of action to prevent and control drug abuse. The following diagram is a visual illustration of this model :



Drug

3.03 Drugs have a biological dimension, *viz.*, their pharmacological action on the human body which leads to dependence. Drugs, however, differ in their capacity to produce dependence. Some produce dependence

quickly (e.g. opiates), while others may produce dependence after a long period of time (e.g. *ganja*). The risk of dependence is also related to the amount of drug (dose/potency), frequency and intake route (i.e. by mouth, inhaled or injected). The risk of dependence is greatest when a drug is being taken by injection, in large doses and very frequently. Other facts which affect dependence include (1) quality (e.g. the purer the drug, the greater is the potency and risk of dependence); (2) form (e.g. availability of a drug in easily swallowable tablet form increases the risk of dependence, and if it is available as tablets easily soluble in water, the risk of taking it by injection increases still further); (3) availability (e.g. drugs which are more freely available are likely to be more abused); and (4) price (e.g. cheaper drugs are more likely to be misused than costlier ones). Since drugs are usually taken for their specific desired effects, drug substitution becomes possible where the same or similar effect is produced by a variety of drugs. Moreover, drugs often potentiate the action of each other so that multiple drug-use tends to become common. This has more serious effects on the body and also increases the risk of accidental over-dose and death. Finally, it needs to be pointed out that most drugs produce specific effects and have specific withdrawal syndromes. This specificity has led to the formulation of the concept that dependence is an illness which has specific basis in complex biochemical reactions within the body (which are as yet undetermined).

3.04 Another dimension of drugs which provides a rationale for their use is their effects as perceived by the individual. These include :

- (1) relief of pain;
- (2) reduction of uncomfortable or unwanted levels of activity; reduction of unwanted or unmanageable levels of basic drives like sex; overcoming intense feelings of anxiety or nervousness, and inducing sleep;
- (3) increase in levels of activity; overcoming feeling of fatigue, depression or reduction in sleep; desire to feel energetic and powerful;
- (4) desire to explore and to see life in a new way, to get new insights, to increase one's creativity as well as intensity and enjoyment of sensory and aesthetic experiences; and
- (5) intoxication and consequent lightheadedness or exhilaration.

It is these perceived and immediate effects that the individual comes to value; and it is they that induce him to repeat the drug often in spite of a clear knowledge of their long-term harmful effects.

3.05 Individuals manifest varying physiological, psychological and social characteristics. Social attitudes to drugs, which interact with the individual, lead to the formation of a perceptual set in relation to drugs which can also

alter, to some extent, the effect of the drugs themselves. Consequently, the effect of a drug varies from individual to individual and even in the same individual, from time to time or setting to setting. It would, therefore, be more accurate to describe drug effects on individuals as 'probable and variable' rather than as 'certain and invariable'. However, beyond a certain dose level, their effects tend to be certain and invariable.

Individual

3.06 It was stated above that an individual uses a drug, often in spite of an awareness of the dangers involved in the long run, because they serve some of his immediate and valued needs. This statement, however, requires two reservations : (1) not all individuals feel the need to satisfy these purposes, at least to the same extent; and (2) not all individuals use drugs to meet these needs because there are several alternative ways in which they can be satisfied and drug use is only one of them. Consequently, many individuals are able to avoid the use of drugs altogether.

3.07. It has been often stressed that the origin and nature of drug addiction are not determined by the chemical effects of the drug alone but are dependent on the personality structure of the user. Even though a large number of psychological concepts have been suggested as relevant, the concern has centred mainly around one basic issue : whether the majority of persons becoming dependent on drugs can be distinguished from those who do not become drug dependent on the basis of specific personality factor(s) and from this point of view, drug users have been studied extensively by using personality tests like the Minnesota Multiphasic Personality Inventory (MMPI), the Rorschach Test, the Thematic Appreciation Test (TAT), Taylor's Manifest Anxiety Scale, and the Eysenck's Personality Inventory and other specially constructed tests. Findings have been equivocal and it has not yet been possible to identify and state the specific personality factor(s) that predispose an individual towards drug use. A constellation of personality factors that characterise a drug use from other deviant behaviour, much less differential personality patterns in different types of drug users has also not been identified. The findings have been expressed in global terms like 'psychopathic character traits', 'vulnerability', 'deficit coping behaviour' or 'psychic dependence' which have not proved to be of scientific utility. This has led to the emergence of a point of view which stresses that drug usage is not determined by predisposing personality factors alone but is rather due to learning experience within a social context and hence is related more to social determinants like availability of drug and group pressures.

3.08 Attempts have been made to explain drug abuse, which is a form of human behaviour, on the basis of the psycho-dynamic or learning theories.

But neither of these theories can explain it fully and satisfactorily. This is due, not to any drawback of the field of psychology, but to the complexity and multifactorial nature of the phenomena being studied. Personality factors — or for that matter, any single set of factors — seem to explain only a limited amount of the total variance in different categories of users at different points of time, thus making the task of explaining the total problem by a simple theory almost impossible.

Society

3.09 The significance of social factors in drug abuse is now being increasingly recognised. Drug abuse is a behaviour and like all forms of behaviour, it always takes place in a social context so that several social factors affect both the character and extent of drug abuse.

3.10 To begin with, it may be mentioned that certain social groups are more vulnerable to drug abuse than others. For instance, in the Indian society where women generally live under greater restrictions and taboos, males tend to abuse drugs far more than females. Certain occupations (e.g. bus and truck driving) are so physically taxing and strenuous that persons engaged in them are more liable to drug abuse. The same may be said of industrial labour in cities or agricultural and forest labourers in rural areas. Mohan, and co-workers¹⁰ observed during their survey of general population in Punjab, that a variety of drugs was used by rural labour, especially in the harvesting season, which involved a good deal of physical hard work. Opium was especially used for this purpose. This was also observed by Gurmeet Singh and Brij Lal⁷ who found that the occupation of farming and farm labour had a very high risk of drug use, particularly opium, compared to other occupational categories. They conclude that permissive social climate, easy availability and nature of agricultural work are, to a large extent, responsible for high rates of drug abuse in the rural population of Punjab. Plantation labour in Assam and forest labour in Orissa is also reported to be subject to large scale misuse of drugs.

3.11 Caste, religion and local customs also play a significant role in promoting or controlling drug abuse. Dube⁶ noted in Agra, that *Brahmins* (the highest caste) used more *bhang* and *ganja*, while alcohol indulgence (which they shunned on religious grounds) was the lowest among them. *Kayasthas*, on the other hand, were leading alcohol users. The total drug use was highest among *Kayasthas*, lowest among *Khatris* and almost equal amongst others. Religious dictums also vary and the practice of their followers does not necessarily conform to them. Christianity does not ban alcohol and wine is essential for some religious functions. But several Christians are total abstainers. Islam prohibits wine and Sikhism, smoking. But many Muslims drink and some Sikhs smoke. Among the Hindus, some castes

ban the use of drugs while others use them freely. Many *sadhus* use drugs, presumably to deepen their mystical experience.

In some festivals (like *holi* in certain areas), young people are expected to take *bhang* or *ganja*. The diversity of life in India is reflected in drug abuse also.

3.12 The rich and the poor are both prone to drug abuse, although the social contexts are different. Among very poor families, there is a practice in some areas of giving opium to young children so that they sleep and the mother can go to work. Moreover, the poor often use alcohol as a necessity to alleviate fatigue or to overcome frustration or to escape from drudgery. The rich tend to use drugs, partly as a luxury which they can afford, and partly because some drug use (*e.g.* alcohol) is becoming a status symbol.

3.13 There is reason to believe that the extent of drug abuse varies largely from one part of the country to another, because the social and economic factors which have been listed above as influencing drug abuse also vary from area to area. There are, however, no studies on the extent and character of drug abuse in the different states and union territories. This could be a fruitful area for further research.

3.14 Different levels and kinds of acceptability of (or anti-feeling to) drugs are met with in a society. This is understandable because all drugs are not equally harmful. It must be emphasized however that the social acceptability or otherwise of a drug is determined rather arbitrarily in a cultural context and has little to do with its harmfulness. For instance, in the middle and upper classes, it is customary for men to smoke but children and women are not expected to do so. On the other hand, among many poor castes, women smoke as freely as men. In many western cultures, cannabis is socially unacceptable perhaps because it is an alien drug while the same cultures tend to look upon alcohol as a beverage. Similarly, alcohol which was an anathema to the higher castes in India is now becoming fashionable as the educated individuals have begun to ape western life styles. Illustrations of such disparate practices can be easily multiplied; and they show that the socio-cultural attitudes to drugs are extremely variable; they vary from society to society and even in the same society from time to time and from one social group to another. It must also be emphasized that the effects of social attitude to drugs (which exercises a tremendous influence on individual behaviour) are as important as the effects of the drugs themselves and form an equally integral part of the drug problem. When a drug is socially and culturally acceptable and a large number of people use it, few become dependent and they are difficult to identify from the larger social group. On the other hand, the greater the non-acceptability of a drug within a culture,

smaller is the number of people who use it and greater is their deviance which incidentally becomes more easily distinguishable. Drug abuse is also looked upon differently in different societies as a form of deviance, as a crime, or as an illness. This has tremendous implications for the individual who is consequently equated with a deviant, or a criminal or a sick person.

3.15 In the Indian context, reference must be made to one undesirable administrative tradition we have inherited, *viz.*, the close relationship between drug control and revenue raising for the Government. State control in the production and distribution of alcohol, for instance, was introduced with the same objective of raising revenue rather than for controlling drug abuse. This linking of drug abuse with revenue raising is undesirable because it places the State in an ambivalent position. It is high time that we moved away from this position and looked upon drug control as directed solely to the welfare of individuals and Society.

3.16 What we would like to emphasize is the totality of interaction between the drug, the individual, and the society which assumes a definite form in every given society at any given time. In certain situations, the drug plays a positive role in meeting certain individual and social needs. Consequently, certain drugs become culturally and socially acceptable, either generally or on specific occasions, or for particular categories of citizens. However, the balance is very delicate; and when it is disturbed, drug abuse begins to create problems of varying magnitude to the individual, the family and the society.

Theoretical framework for prevention and control of Drug Abuse

3.17 In designing a conceptual model for the prevention and control of drug abuse, five basic issues need emphasis. The first is that no society can ever be drug free. Drugs do serve specific individual and social purposes and so long as these are not met by other and healthier means, drug use or abuse will continue to exist. The second, which follows from the first, is that we should strive to reduce the drug evil to the minimum by attacking it at various points all along the line and not concentrate our efforts at any one point, however significant. The third is that drug abuse, which is a form of deviance, cannot be treated in isolation from other forms of deviance, and that any attempt to create a special machinery for the control of drug abuse alone will be counter-productive. The problem, therefore, will have to be dealt with using the ordinary machinery of administration, with perhaps a little more specialization and emphasis. The fourth point is that one must not lose one's perspective and try to create gigantic and costly structures to deal with the drug problem whose significance is limited in comparison to several other problems facing the country. The fifth and the last point is that all the drugs, as stated earlier, form a continuum and

that the drug problem will have to be treated in its entirety. Over-zealous efforts to control one drug may sometimes increase the use of other drugs, some of which may even be more harmful.

3.18 The measures for the prevention and control of drug abuse usually assume one or more of the following three forms :

- (1) Keeping the drug away from man : This gives a major role to law and law enforcement. The objectives of this policy will be: (a) to identify dangerous drugs; (b) to frame adequate laws for the import, export, production, distribution, possession, and sale of these drugs; and (c) to create an adequate and efficient machinery for the enforcement of these laws.
- (2) Keeping man away from the drug : This will include education, not in the narrow sense of imparting information but in the wider sense of character formation. In other words, the emphasis will shift from penal measures to educational ones; and the accent will be on reducing the individual needs which drugs meet to the minimum and on educating the individual to meet them in ways other than by the use of drugs.
- (3) Improving social conditions : This will include the creation of an environment in which the need to use drugs will be minimized; and an attempt will also be made to ensure that the needs which are currently being served by drugs are served differently and in a better way through means which involve less risk and which have less potential for harming the individual and the society.

Quite obviously, these are not alternative approaches. They strengthen and support each other and must therefore be taken together and pursued simultaneously. If any thing, the second and the third approaches (which are almost totally neglected at present) are even more important than the first (on which we now place an almost exclusive emphasis).

Legal and penal measures

3.19 As stated in para 3.18(1) above, the legal and penal measures whose objective is to keep the drugs away from man fall into three groups *viz.*, policy, legislation and implementation.

Policy

3.20 At the national level, the responsibility for controlling and preventing the abuse of drugs is distributed between various Ministries of the Government of India, either explicitly or implicitly. For instance, the Ministry of Finance is responsible for the control of export and import of narcotic drugs (through the Narcotics Commissioner), the Central Bureau of Investi-

gation is usually entrusted with the investigative aspects of the problem in select cases having inter-state or international ramifications. The Ministry of Health is generally responsible for drugs other than narcotics and for the treatment of drug addicts. The Department of Social Welfare is responsible for social aspects of the problem, research and rehabilitation of drug addicts. The Ministry of Education is responsible for prevention and control of the problem among the students and, in collaboration with the Ministry of Information and Broadcasting, for creating an enlightened public opinion on the subject. Not all these responsibilities are explicitly accepted and many of them are only indifferently performed. Moreover, there is hardly any coordination between these different agencies; and to add still further to this fragmentation of a drug policy, all matters relating to alcohol, the most important and commonly abused drug, are left entirely to the State Governments, which are also largely responsible for the implementation of the central laws for the control of drugs. No well-planned and coordinated national drug control policy can emerge or be implemented satisfactorily in such a fragmented and uncoordinated set up.

3.21 Since fragmentation seems to be inescapable at the level of implementation, the least we can do is to have an integrated machinery, at the central level, for the formulation of a comprehensive and balanced national drug control policy. From this point of view, we recommend that a National Advisory Board on Drug Control should be established immediately. The Minister of Health and Family Welfare should be its Chairman and a senior officer of the Ministry should be its Member-Secretary. It should have representatives of the Ministry of Finance, Ministry of Education, Ministry of Information and Broadcasting, the State Governments, and of the Department of Social Welfare, Central Bureau of Investigation, Indian Council of Medical Research, Indian Psychiatric Association, Indian Council of Social Science Research, Indian Association of Chemists and Druggists and Association of Drug Manufacturers. The Health Secretary, The Chairman, Central Board of Excise and Customs, the Narcotics Commissioner of India, and the Drugs Controller (India) should be its *ex-officio* members. It should also include a few eminent non-officials (psychiatrists, educationists, journalists, politicians *etc.*) interested in the problem. The full Board should meet once a year. But there should be a small Standing Committee which should meet more frequently—say, once a quarter.

3.22 The National Advisory Board on Drug Control shall :

- (1) review periodically the situation of drug abuse in the country;
- (2) sponsor research on different aspects of the drug problem;
- (3) call for, compile, and publish all the relevant statistics on the drug problem;

- (4) submit an annual report to the Government of India on the status of the drug problem in the country; and
- (5) advise the Government of India and the State Governments on all aspects of the national drug control policy and its implementation.

3.23 There should be a special unit in the Ministry of Health and Family Welfare to function as the secretariat of the Board and the necessary funds for the Board, its programmes and staff should be provided on a priority basis.

3.24 We attach the highest significance to this recommendation. The National Advisory Board on Drug Control should, therefore, be established immediately. The Board itself will then be able to take action on several of our important recommendations.

Legislation

3.25 The present legislation on the prevention and control of drug abuse has grown piecemeal over the last 120 years and consists of several laws passed at different times and with different objectives. The Central legislations on the subject includes the Opium Acts of 1857 and 1878, the Dangerous Drugs Act of 1930, the Drugs and Cosmetics Act of 1940, the Medicinal and Toilet Preparations Act of 1953, and the rules made under these laws. India is also a party to the Geneva Convention of 1925, the single convention on Narcotics Drugs of 1961, and the Convention of Psychotropic Substances of 1971. The Provisions of the Customs Act, 1962, are also utilized for the purpose. In addition, there is a good deal of state legislation on the subject (especially on alcohol) and rules made by the State Governments under both State and Central laws. The main weaknesses of the present legislation therefore are multiplicity, lack of focus on prevention and control of drug abuse, and existence of several loopholes and inadequacies which hamper effective implementation.

3.26 It is not our purpose to go into the details of all this legislation and to suggest comprehensive and detailed amendments. But we would like to make a few broad recommendations :

- (1) We are of the view that it would be an advantage to have a single law which would deal with the prevention and control of abuse of drugs—whether narcotic or psychotropic.
- (2) The severity of control and regulation should depend upon the extent to which a drug finds use in medical practice, its potential for abuse, and the gravity of its consequences.

(3) There should be three levels of control in a descending order of severity, viz.:

(a) Prohibited drugs : This category will include drugs which are very harmful and which have little or no medical use :

1. Hallucinogens like LSD;
2. Heroin;
3. Hashish Oil;
4. *Charas*.

(b) Controlled drugs (Category A) : This category will include drugs which have a medical use but also a high potential for abuse :

5. Opium and its alkaloids such as morphine ;
6. Synthetic narcotic drugs (*e.g.* pethidine);
7. Cocaine;
8. Amphetamines;
9. Methaqualone.

(c) Controlled drugs (Category B) : This category includes drugs which are extensively used in medical practice and have a comparatively less potential for abuse. This category would also include *Ganja* which however has no medical use;

10. Minor tranquillisers;
11. Barbiturates, hypnotics and sedatives
12. Chloral hydrate; and
13. *Ganja*.

This list is merely illustrative. Obviously, such lists will also have to be reviewed from time to time.

(4) Under the Constitution, the manufacture, possession, transport, purchase and sale of intoxicating liquors is a state subject. It will therefore not be possible to include alcoholic liquors in the proposed central law. There is, however, an obvious need to deal with alcohol as a part of a comprehensive national drug control policy, partly because of the need to coordinate state policies and partly because all drugs have to be treated as a continuum. We therefore recommend that the Government of India should, on the advice of the National Drug Control Board, lay down a coordinated national policy for prevention, regulation, and control of alcohol.

(5) This law should deal comprehensively with the export, import, production, possession, transport, distribution and sale of all the drugs mentioned above. Its provisions should also be brought in line with our

national commitments under the International Conventions to which we are or may become a party.

(6) In the interest of the well-being of the nation as well as of international community as a whole, smuggling in and smuggling out of drugs, have to be treated as very serious offences calling for deterrent punishment. The punishments at present prescribed in our relevant laws for illicit import and export of narcotic drugs can hardly be considered effective. The position regarding illicit import and export of psychotropic drugs is still more unsatisfactory as there is no specific law to deal with such illicit import and export except the general provisions of the Import and Export (Control) Act. As there is a real danger that the smuggling of drugs in the country will increase in the years ahead, it is necessary to prescribe deterrent and heavy punishments for illicit export and import of drugs as a matter of urgency on a priority basis. It may also be emphasised that many of the other punishments provided under the present legislation are also too small to prove effective. The position needs to be examined in detail and the punishments made more deterrent where necessary.

(7) We are of the view that an addict should be regarded with sympathy as a sick person and that under certain conditions, he should be permitted to have possession of specified drugs in specified quantities and that such possession should not be punishable under law. In case of regular users of drugs, it becomes essential to maintain supplies of the concerned drug on medical grounds. There should, therefore, be adequate provision in the law for notifying *approved centres* where regular addicts can register themselves and on production of prescribed medical certificates, obtain the supplies of the drug required in prescribed quantities. There should be regular system of registering opium addicts as its absence merely tends to encourage illicit movement of opium to satisfy the requirements of addicts who have not been registered. We, therefore, recommend that such *approved centres* should be opened immediately, in both urban and rural areas, for users of all dependence producing substances.

(8) In the treatment of drug addicts, it is often necessary for the psychiatrists to have regular supplies of drugs with which the usual dosage of the patient is gradually reduced. It is therefore necessary to provide that approved psychiatrists or other prescribing authorities may obtain all the supplies of controlled and prohibited drugs needed for treatment purposes.

(9) The most despicable person is the pusher or drug peddler who, for personal gain, is prepared to ruin the lives of young persons by enticing or encouraging them to drug abuse. The proposed law should therefore

provide severe and deterrent punishments for pushers or drug peddlers. In this context, the recommendation (7) made above is very important as it will reduce the dependence of drug addicts on pushers and peddlers. Similarly, adequate action will have to be taken against medical practitioners who are found to over-prescribe or to encourage surreptitious drug abuse and against chemists and druggists who abet the leakage of drugs in the market.

Implementation

3.27 Legislation will not have its desired effects unless the implementation is satisfactory, i.e. unless the average law breaker realizes that he does not have an adequate chance of escape. Our discussions with law enforcement officials (and their responses to the questionnaire) established the following points :

- (1) There are several deficiencies in the existing law which permit leakages at several points and prevent the law enforcement officials from carrying out their responsibilities. In particular, the present law is not adequate to meet the challenge of well-organized gangs of smugglers.
- (2) There is reason to believe that a good deal of opium escapes from the cultivating regions to the other parts of the country. The cases detected are few (vide Tables IX and X in the Statistical Appendix) and they seem to account only for a small fraction of the leakage that actually takes place.
- (3) A good deal of leakage takes place, especially in the case of psychotropic drugs, through hospitals and chemists and druggists. There are, it is said, too many fake prescriptions and too few carefully maintained records to detect any violations.
- (4) Powers given to law enforcement officials are neither adequate nor uniform.
- (5) The machinery for enforcement is inadequate and there is not enough cooperation and coordination between the central and state officials in bringing the offenders to book.

We found that these points were, on the whole, well-founded. We therefore recommend that (a) the existing loop-holes and inadequacies in the laws should be carefully studied and duly plugged and amended in the proposed legislation. (b) the implementing machinery should be strengthened to the extent possible, especially by creation of special squads at crucial points and in important areas, and (c) every effort should be made to secure better coordination between the central and the state officials.

Educational measures

3.28 We shall now turn to the discussion of the second approach described in para 3.18(2), *viz.*, to keep the man away from the drug. This essentially involves educational measures.

3.29 Various explanations are offered for the movement of an individual from abstinence to drug use and addiction. The two basic view points are (1) there is a step ladder sequential progress—from the state of non-use to use of socially acceptable (tolerated) drugs and then to the use of socially unacceptable and later on, to illicit drugs; (2) there is a wide range of experimentation with a large number of available drugs before the individual decides the drug most suitable for him. In either case, the role of socially acceptable drugs such as alcohol and tobacco is well-accepted, as catalysts from non-user to user state.

3.30 *From Abstinence to Addiction* : In this context, it is necessary to understand how and why a person is attracted to drug use and how he finally ends, in some cases, as a drug addict. Data of these motivations are available in several studies. In addition, our Secretariat collected data on the subject from 978 drug users in 13 cities they were able to contact. These data, along with those of two other studies have been given in Tables XI–XIII in the Statistical Appendix. The *non-users* believe (Table XII) that people use drugs for several reasons which include : relief of tensions and relaxation; fun, kicks, and feeling high; removal of depression; various types of peer group pressures; satisfaction of curiosity; heightening of sexual, religious or aesthetic experience; staying awake for studies; and revolt against authority. More relevant are the data in Table XIII which show the reasons for drug use as given by the *users* themselves. These include : satisfaction of curiosity; fun or kicks; peer group pressures; honest belief that it is a medicine without any dangerous effects; sense of power; heightening of pleasure; revolt against authority; resolution of personal problems; and even sheer ignorance. We would like to emphasize, however, that little significance can be attached to the surface reasons given by users as well as non-users and that the problem of the transition from abstinence to addiction is little understood even now.

(1) Stage of abstinence : No individual is born as a user of drugs. In the Indian society, the proportion of non-users is extremely large. Table XI shows the reasons, as given by the non-users, for their abstinence from drugs. These include : lack of curiosity or felt need for a drug or the capacity to do without it; personal hatred for a drug; fear of evil effects; moral and religious principles; healthy influences from friends and family members; lack of availability and high cost. This large prevalence of abstinence is, in fact, our best asset which we should strive to strengthen.

(2) Stage of experimentation : The first introduction of an individual to a drug is thus a conscious decision taken by the individual himself. Obviously, this is done in a spirit of adventure or experimentation. The experiment may be with one drug, or with a succession of drugs, or with the multiple use of drugs. In most cases, this experimentation continues for a variable time; and some experimenters return back to abstinence and normal life. They have tried to experience what such drug use is and have either found it uninteresting or have taken up more interesting, more adventurous and more pleasurable explorations.

(3) Stage of casual or occasional use : Many of the experimenters who do not give up the drug to return to normal life, continue the use of the drug on a casual or occasional basis, without manifesting any serious level of dependence or any serious mal-effects (whether individual or social) of the casual or occasional use.

Two points deserve emphasis in this context. The first is that the experimenters and occasional users do not generally develop into individual or social problems and need not cause serious anxiety. The second is that educational measures through proper counselling and guidance, if sought, are likely to be most effective at these stages only. We must, therefore, concentrate our educational measures intensively at these two points.

(4) Stage of regular use : Some of the individuals who are experimenters or occasional users do give up the drug altogether and return to normal life. Some others continue as casual or occasional users without any serious effect on individual or social life. But some of the casual users go further and enter the third stage of regular use. Some of the experimenters may even get directly into this stage. The quantum of the drug used and its frequency vary from individual to individual. But the main characteristic of this stage is that the drug use does not ordinarily lead to a serious impairment of the individual's health or of his efficiency in work. It also does not create family or social problems of a serious character. In other words, the individual has learnt, at this stage, to live with the drug without any serious damage to his body, mind, or social relations. He sometimes makes an attempt (or attempts) to give up the use of the drug altogether or to reduce its dosage and frequency or even to transfer himself to another and a less costly or less harmful drug. Such attempts some times succeed and sometimes do not. Education has a comparatively minor role to play at this stage in reforming the individual and competent medical treatment becomes more important.

(5) Stage of addiction : The proportion of regular users who return to a stage of abstinence is small. The bulk of regular users continue as

such, either with their personal and social efficiency unimpaired (or only slightly impaired) or, in several cases, with continually diminishing social and personal efficiency which, however, may not go beyond certain minimum acceptable levels. There is also evidence to show that, in some individuals, a regular use of drugs has become essential for maintaining their creativity at a high pitch. All such cases do not become a cause for serious anxiety at the individual, family, or social levels. But unfortunately, quite a proportion of regular users pass on to the final stage of heavy and compulsive use which seriously affects personal efficiency and creates difficult personality, family and social problems. This is the stage of 'addiction' from which recovery is difficult and which often leads to the total destruction of the individual. Education has obviously little role to play at this stage where medical attention assumes paramount significance.

Educational strategies for prevention and control of drug use

3.31 A very large proportion of teachers, educational administrators, the educated and the general public are blissfully unaware of the problem of drug abuse and their role in dealing with it. Some have an exaggerated notion about the prevalence of drug abuse and some blame it mostly on the family and society. We (therefore, attach the highest importance to the education of all the social groups in the society, especially the elite, regarding continuing awareness of this problem. It has to be recognized that drug abuse is a symptom of the wider social situation and is not a special problem of either the educational institutions or other specialised groups. We also recognise that educational programmes specifically designed for drug education in other countries did not have significant impact on the problem of drug abuse and that such programmes usually tended to emphasize the harmful effects in an exaggerated fashion, thereby becoming counter-productive. We feel that drug education should become part of a general health education so that more positive aspects are stressed rather than the adverse effects. This should be a continuing part of health educational activity at all levels of the society.

3.32 We are also of the opinion that carefully designed, factually correct and scientifically evaluative programmes be designed for specific target groups which impart information on drug abuse. Such groups may, for example, involve persons engaged in operation of machinery or vehicles, rural labour, non-student youth and adults. Coming to students themselves, we are of the view that a mere supply of information will not be sufficient. Let us not forget that many students who use drugs are fully aware of the consequences, both good and bad, and indiscriminate supply of information to students may only make the ignorant wise or curious and may even help in increasing the number of experimenters. International experience tends to indicate that lessons in text books, group lectures, preparation and

distribution of pamphlets are ineffective and may sometimes be even counter-productive. The subject of drug education and publicity has therefore to be tackled with great caution. We would strongly suggest that such educational programmes for students be concentrated more at prevention or discouraging the use of socially acceptable drugs such as alcohol and tobacco rather than the total ranges of drugs. It is much easier to correlate the use of these drugs with general health education and especially because total abstainers pass to addiction and to the use of more dangerous drugs *via* the use of alcohol and tobacco which are readily available and have large social acceptance.

3.33 We would also like to emphasize that no useful purpose will be served by creating counselling and guiding services for the drug problem alone. Student counselling and guiding services have been recommended in other contexts and as and when they are set up, drug use should form an area of their activity.

3.34 As majority of our population even in the younger age group is outside the educational institutions, it would be worthwhile developing programmes for non-formal education for out-of school youth in the age group of 15-25 years and for adults.

3.35 The mass media have obviously an important role to play and act as catalyst for social change. We would like mass media in general to play a more objective role in the coverage and reporting of issues related to drug abuse rather than making it sensational. All India Radio, Doordarshan and Films Division have a special and major responsibility in formulating and presenting worthwhile programmes and films. We would suggest that such activities by them should be prepared in consultation with recognized experts.

3.36 We recommend that the Departments of Social Welfare, Education and Mass Communication in consultation with the Department of Health, develop such programmes and set up a machinery to evaluate and advise other voluntary agencies who want to participate in such programmes.

Social action

3.37 This brings us to the last approach mentioned in para 3.18(3) earlier, *viz.*, the social action needed for the prevention and control of drug abuse. The basic assumption underlying this approach is that the misuse of drugs is not a disease in itself, but the symptom of some social malfunctioning; it really implies that there is a failure somewhere in the social processes or the social system. In this approach, therefore, the emphasis is placed, not so much on *treating* the symptom, as on removing the causes of drug abuse

through programmes of social reform. These are not quick or easy solutions. But in the long run, they alone can provide genuine and lasting remedies, not only to the drug problem, but to several other illnesses that the society suffers from.

3.38 An enlightened and rational social opinion will probably go a long way in controlling drug abuse. Some aspects of this have been indicated below :

- (1) Our great tradition of abstinence will have to be conserved and strengthened; and we must realize that the attempts to give social and cultural acceptability to drugs like alcohol will increase not only alcohol use, but all drug use.
- (2) We must also give up the present attitude wherein adults give themselves the freedom to indulge in drugs and expect the schools and the police to wean the young away from them. We must realize that children and youth will try to imitate adult behaviour (which exercises the maximum influence on their growth) in spite of all that we try to teach them in schools. Consequently, the attempt to control drug abuse among the adolescent and the youth will have to begin with self-reform and self-restraint by the adults themselves.
- (3) We must also accept the fact that total prohibition of dependence producing drugs is not feasible. People use drugs because they serve some specific purposes; and so long as these purposes remain (they will perhaps live as long as man himself), drugs will continue to be used. If we prohibit them altogether, they go underground and make the situation even worse. In many cases, total prohibition is also ruled out because the abused drugs are also valuable medicines. There is therefore no alternative to a policy of controlled use of drugs.
- (4) The general tendency is to attach a severe odium to drug use and to look upon the drug user as a criminal. This attitude makes the problem worse because drug use becomes clandestine and treatment and rehabilitation of drug addicts is hampered. We must therefore learn to look upon drug use as an illness and upon the drug user as a sick person and treat him accordingly.
- (5) We must realise that legal and penal measures (with or without moral exhortations) have severe limitations in practice. Punishment and threats of punishment for possession and use of drugs will be effective only to the extent that, and as long as, punishment regularly and speedily follows a sufficiently high proportion

of the cases of possession and use. However, we may never be able to afford a police force which can achieve this. Therefore, while legal and penal measures are needed and have to be pursued to the best extent we can, it is necessary to remember that they can yield maximum results only if they are supported by adequate educational and social action.

3.39 We should continually strive to see that the needs which call for drug use are minimized and that they are met, as much as possible, through some alternative means.

- (1) In individual life, the reasons given by the adolescent and youth for using drugs such as curiosity, getting status with peers, improving social relationships, revolt, increasing creativity, heightening sensitivity and enjoyment, overcoming depression, feeling powerful, relief from stresses and strains of life, *etc.* generally mean that the individual has failed to become a mature adult. This is basically a failure of the concerned social institutions—the family, the school, the peer group and the community. The more we strengthen these institutions, the less will be the incidence of such failures to grow to adulthood and maturity.
- (2) In social life, the peer groups exert a very great influence. Our experience shows that if drugs are available, and if the peer groups approve or require, young men will take drugs. We also have evidence to show that peer groups can exert pressure the other way and help a young person to avoid drugs. It is unfortunate that we do not give adequate importance to peer groups which form an important social institution that enables a young person to relate himself meaningfully to the wider society outside the home, provides him with a safe and supportive atmosphere in which to learn to be independent, and which gives him a much needed group identity and group status. The peer groups also play an important role in helping an individual to gain maturity. It is therefore necessary to strengthen peer groups and to use them more meaningfully for individual and social development.
- (3) Involvement of the youth in programmes which are meaningful to them will greatly reduce the possibilities of drug use. These programmes will naturally vary with the needs of individual young men. Where poverty and unemployment dominate the situation, we need a programme of purposeful training leading on to gainful employment. Where affluence and boredom dominate the scene, involvement in challenging programmes of adventure or social service may be indicated. On the whole,

a massive involvement of the young in programmes of adventure, risk-taking, physical education, games and sports, social service, literacy and recreational activities *etc.* will go a long way in securing healthy social development and curbing delinquent behaviour, including drug use.

3.40 Drug abuse is also encouraged by several aspects of our society which is sharply divided into a small affluent or well-to-do group (which is trying to ape the life styles of western societies) and a large mass of poor people who live below the poverty line. In the former, drug abuse is a status symbol or an escape from boredom and the meaninglessness which often haunt parasitic life. In the latter, it is an escape from fatigue, frustration and drudgery. What is worse is that the society is developing several vested interests in drug abuse. The State itself is largely dependent on the revenue which the drugs yield; our tribe of drug pushers or peddlers is expanding; and some responsibility of drug abuse has also been attributed to the medical profession through wrong or over-prescription. What we need, therefore, is an intensive and sustained effort to remove these evils and to create a more egalitarian society which at least minimises poverty and vested interests in drug abuse.

TREATMENT AND REHABILITATION

4.01 In the preceding chapter, we discussed the measures to be adopted for the prevention and control of drug abuse. While these need the highest emphasis, it was also pointed out that no society has ever been drug-free. We will therefore have to assume that, in spite of all our efforts to the contrary, a proportion of the citizens will continue to use drugs and will become regular or even heavy and compulsive drug users and that there is a need to plan and implement an adequate programme of treatment and rehabilitation for them. In the course of this chapter, we shall discuss the objectives of this programme of treatment and the manner in which it can be organised, economically and efficiently, over the next 10–12 years, fully keeping in view the adequacies or otherwise of such programmes as are currently available.

Existing services

4.02 The existing facilities for the treatment of drug addicts are not adequate. There are no specially organised facilities for the treatment of drug addicts in the country. Most of the drug dependent individuals are treated at Psychiatry Departments, wherever they exist, and if they are referred to these departments. As these facilities are obviously limited, it is presumed that some drug addicts would be treated by general physicians and other health professionals, while quite a large number of them may not be receiving any treatment at all.

4.03 Mental hospitals and in-patients units of Psychiatry Departments do provide admission facilities for such patients. Some of the teaching and training institutions are also in the process of developing small addiction units. The shortage of hospital beds for drug addicts is therefore even greater and more obvious, when seen in the perspective of an overall shortage of hospital beds in the field of mental health in the country.

4.04 This shortage of facilities for the treatment of drug addicts is in line with the shortage in other health problems as well. We are also of the view that it is not desirable to provide specific and separate treatment facilities for drug addicts.

General principles

4.05 *Goals* : The concept of “curing” an addict in the sense that he

becomes a non-user is an ideal devoutly wished for, but extremely difficult and often impossible to attain. This may be attained with an experimental or casual user or even with a proportion of regular users, but less commonly with a drug dependent. It is hence necessary, as a practical measure, to think of alternative goals of medical treatment. These are : (i) to stabilize the individual on a reduced dosage or frequency of the same or other drug so as to reduce the health and social hazards; and (ii) in addition to (i) above, to provide social and/or vocational rehabilitation.

4.06 *Methods of treatment* : The following are the more commonly adopted approaches to treatment :

- (i) To use antagonistic group of drugs which cause severe unpleasant psychological and physical reaction, which deter a person from using drugs *e.g.* use of disulfiram for treatment of an alcoholic.
- (ii) To provide a group of drugs which act as substitutes for dependence producing drugs, but whose administration to the patient can be controlled, such as major/minor tranquilizers and methadone for opiates or heroin.
- (iii) Surgical treatment such as cingulectomy.

The basic problems with the above methods are two : (i) they are non-specific methods of treatment; and (ii) they do not affect the psychological craving for the drug, which usually remains unaltered.

4.07 *Residential vs. Ambulatory treatment* : The need for inpatient care in acute emergencies following prolonged drug use or as a result of accidental or deliberate overdose, withdrawal reactions and related complications due to malnutrition or under-nutrition is well established. Routine hospitalisation for treatment and withdrawal however has not been experimentally shown to be superior to out-patient or ambulatory treatment. The trend over the world is to move away from special residential treatment complexes. The ambulatory treatment, apart from saving on heavy investment of public funds, avoids some of the problems which arise out of long term residential/institutional treatment and also tends to reduce rehabilitation costs.

4.08 *Maintenance treatment concept* : The strategy of maintenance treatment in the West has been tried mainly in relation to opiates and methadone (a substitute drug). Maintenance programmes have also been in operation, both in the West and the East, in places like Hongkong. The main idea behind these programmes in countries where heroin abuse has been widespread is to wean the drug dependent away from this illicit drug and shift him to a legalised addiction, which incidentally is also its biggest

criticism. The major benefit of this strategy seems to be the reduction in social crimes related to procurement of illicit drug supplies and associated medical problems related to the consumption of quality of impure/pure drug in the illicit market.

4.09 In India, we have had considerable experience of this concept of treatment since 1959, when various states used a legal registration system for opium users and those using more potent forms of cannabis such as *charas/ganja*. The fresh registration for these legal sources reduced considerably after 1959, as a result of legal action. We feel that this needs to be reviewed and revived.

4.10 All medical treatment schedules of drug dependence described above have one common weakness, *i.e.*, they do not provide the drug dependent individual a *raison d'etre* for staying away from drugs after the drug withdrawal has been achieved. Some non-medical forms of therapy are therefore being developed. These are based on the premise that drug dependence is a learnt mal-adaptive behaviour, resulting from adverse social and personal environment. It can therefore be altered by providing an individual a structured situation group environment and relearning opportunities which will help him to come back to drug-free life. This forms the basis of therapeutic communities like Synanon on Day-top in the West and the treatment in Buddhist monastery in Thailand. The major criticism which has been levelled against them is their highly selective criteria for clients and lack of adequate follow-up studies to assess their effectiveness. Their major advantage is a relatively low cost.

4.11 Various types of individual and group psychotherapeutic techniques for treatment and rehabilitation (alone or in combination with the above mentioned methods) have also been used in drug dependents. Other techniques which are primarily supportive (from music to Yoga therapy), and even acupuncture have been used in treatment. On a careful review, it is apparent that they are non-specific methods and are, at best, useful adjuncts in the overall treatment plans.

4.12 Should the individual have the option of initiating and controlling his own treatment or should he be treated against his wish? The problem in the voluntary process is that the individual may not feel motivated enough to undergo the treatment or that his motivation may fluctuate (a situation which leads to repeated admission with very unsatisfactory results). We feel that the involuntary treatment, on the other hand, should only be resorted to in exceptional cases, *e.g.*, when an individual has a psychosis resulting from, or associated with drug dependence, though in some countries there is a legal provision for involuntary treatment of drug dependents especially when they refuse to undergo treatment.

4.13 We would like to emphasize one point. In many cases of hard drug addiction, there may be no permanent cure; the addict may be drug free totally or partially for varying lengths of time, may relapse, and may again become drug free partially or totally. This 'revolving door' treatment and cure has its own value and could bring the best attainable results for some individuals.

Directions for future development

4.14 In the light of the above broad findings, we may now indicate how a programme of treatment of drug addicts may be evolved over the next 10–12 years. We must also bear in mind that we have two main assets *viz.*, an adequate pool of talent and a fairly well-organised infrastructure of health services in both the rural and urban areas, and two main weaknesses *viz.* still developing health services in rural areas and lack of resources. The following programme will therefore be both economical and efficient :

- (1) The treatment of drug addicts should be developed as a part of the general health services of the country.
- (2) There is paucity of beds in hospital services in all the areas; hence the creation of special residential treatment facilities for drug dependence would not be a feasible proposition as a general method of treatment. Moreover, as was pointed out earlier, the international trend now is to move away from the residential to out-patient or ambulatory treatment. We should also adopt the same policy.
- (3) It would be desirable to provide these services within the framework of psychiatry departments, wherever they exist or develop, and if possible, with addition of minimal in-patient facilities. As an interim measure, these facilities may also be developed in departments of medicine.
- (4) In urban areas, where current prevalence of drug abuse is large and is expanding into the student body, we suggest that de-addiction centres should be established for the provision of comprehensive services. Such services should cover all dependence producing drugs including alcohol and should have both in-patients and out-patients services, with an accent on the latter. They should also be free to experiment with various treatment modalities on a time-bound basis, with a built-in evaluation system so as to determine the best possible techniques for the Indian setting. These centres should also be charged with maintaining and evaluating the legal registration systems and act as foci for training other health professionals for similar work within India.
- (5) We recommend that between four and six such centres be initially

set up with central finance in the country keeping in view the following major guiding principles : (i) they should be regionally distributed so as to provide foci all over the country; (ii) they should be located in Psychiatry Departments in general hospitals—medical college complexes so that other supporting services from various departments can be provided; (iii) they should have a social work institution to liaise with and (iv) they should be located in centres, where specially trained individuals are available. Subsequently, each state should set up at least one such centre during the sixth plan period with personnel trained from these centres. At the state level, encouragement should be given to all medical colleges to set up such units with additional support in psychiatric/medical units. A model for the main de-addiction centre is described in Appendix III .

Registration of Drug Addicts

4.15 We attach great significance to the programme of registering regular users and drug addicts and saving them from the clutches of unscrupulous peddlers by establishing *approved centres* where they can have their needed quota of drugs at standard prices on production of medical certificates issued by prescribed authorities. We have had rich experience of this system for opium addicts. It is now time to revise the scheme in the light of experience gained and to introduce it not only for opium, but for all the dependence producing drugs whose control has been advocated.

4.16 It will be seen from the foregoing recommendations that our basic approach to the problem of treatment of drug addiction is four-fold : (i) development of services for drug addicts as part of general health services of the country, especially on an ambulatory basis; (ii) establishment of experimental de-addiction centres in four urban areas to begin with, and their gradual expansion over the next 10–12 years; (iii) introduction of a system of registration of regular users and addicts; and (iv) the adoption of a gradualist and humane policy. In particular, we will have to pay due regard to the implications of our drug policy with respect to cannabis which grows wild in several parts of the country and is strongly rooted in rural traditions. (Please see Technical note on Cannabis in Appendix IV). The proposals are practical and within the availability of adequate talent.

Rehabilitation

4.17 There is very little that is now being done by the Government for rehabilitation of drug addicts. Such rehabilitation is a difficult proposition even in developed countries with all their vast resources. What these advanced nations do is to adopt basically social-custodial care methods for

providing a minimum coverage to the total rehabilitation of drug dependents. In the Indian context, it would neither be feasible nor practical to provide such programmes. We, therefore, recommend that the rehabilitation of a drug dependent individual should continue to remain the main responsibility of his family and the social group and that the de-addiction service should at best remain a support and supplement. Efforts should, however, be made to involve the voluntary agencies in this programme.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

5.01 In this concluding chapter, we shall give a summary of our main findings and recommendations for ready reference.

5.02 *Dependence producing drugs* : The focus of this Report is on the following dependence producing drugs and other substances that are commonly misused in India :

- (1) Cannabis and its products (*e.g. Bhang, Ganja and Charas*)
- (2) Hallucinogens (*e.g. L.S.D.*)
- (3) Tranquillisers, hypnotics and sedatives (*e.g. meprobamate, diazepam, methaqualone and chloral hydrate.*
- (4) Barbiturates (*e.g. phenobarbital and secobarbital*)
- (5) Amphetamines (*e.g. dextro-amphetamine and methyl amphetamine*)
- (6) Tobacco
- (7) Other narcotic drugs (*e.g. opium, pethidine, morphine, heroin, and cocaine*); and
- (8) Alcohol.

The Report, however, does not deal explicitly either with tobacco or alcohol (Paras 2.02 to 2.05).

5.03 *Current prevalence of Drug Abuse* : The existing studies on the subject do not cover all the different regions of the country. Even the few studies available, whether on the general population or on students, are mostly cross-sectional and not representative of the population; they have several methodological flaws and the investigators have used definitions and parameters which are not strictly comparable (Para 2.06). However, there seems to be fairly good evidence to draw the following tentative conclusions :

(1) *General population* : The drug problem exists in the population as a whole. The drugs most frequently misused are alcohol, tobacco, opium and cannabis, while the psychotropic drugs are just making their entry. The proportion of non-users is very large; but it is admitted that there is a small hard core of addicts, many of whom become mentally ill and some of whom are treated in our psychiatric units and mental hospitals or by private practitioners. Within this hard core, the alcohol addicts are obviously the

most numerous and psychotropic addicts, the smallest group. Addiction is also more common among men than among women (Para 2.19).

(2) Students : The prevalence of drug abuse among students is limited, although it constitutes a complex and difficult issue that cannot be ignored.

- (a) Drug misuse among students exists at the secondary school stage also but becomes more pronounced at the university stage. It is perhaps a little larger than among the general population.
- (b) The drug abuse is more common among boys than among girls.
- (c) The drugs most commonly misused are alcohol and tobacco. Psychotropic drugs are more frequently used by students than by the general population whilst opium and cannabis are less used than in the general population.
- (d) The most common form of abuse is experimental, occasional and situational as at the time of examinations. Regular users are few and addicts, still fewer.
- (e) As in the general population, one is impressed by the large total abstinence rate among the students as well (Para 2.28).

(3) The prevalence of drug abuse is likely to show an increasing trend (Para 2.29).

All things considered, it appears that the extent of the drug problem is limited at present, except for alcohol and tobacco. However, in the opinion of the Committee, there are disturbing signs which show that the situation in our country is likely to worsen and get out of hand if adequate measures are not adopted to curb the evil. We, therefore, recommend that planned, comprehensive and sustained measures should be taken without delay to prevent and control drug abuse in the total population in general, and among the students in particular (Para 2.30).

5.04. *Research and statistics* : It is necessary to organize systematic studies on the prevalence of drug abuse for all regions of the country, separately for students and general population, and to repeat these studies to get longitudinal data (Paras 2.11 and 2.28). It is also essential to organise systematic research on different aspects of the problem on a continuing basis. The secondary data available on the subject can be improved to give a better picture of the situation (Para 2.18).

5.05 *Drug-individual-society reaction* : Drug abuse is a behaviour whose manifestation depends upon the complex drug-individual-society relationship (Para 3.02).

(1) Drugs vary in their capacity to produce dependence. The risk of dependence is related to the amount of drug and intake route. Other facts which affect dependence are quality, form, availability and price. Substitution of drugs is often possible and multiple drug use is fairly common. The effects produced by drugs are variable and often subjective (Paras 3.03 to 3.05).

(2) Individuals use drugs because they meet some specific needs as perceived by them. It has not been possible to identify any specific personality factor(s) that make an individual prone to drug abuse which cannot also be explained fully in terms of the psychodynamic or learning theories. A view is therefore gaining ground that drug abuse is a behaviour acquired within a social context (Paras 3.06 to 3.08).

(3) The social factors in drug abuse are extremely important. Some social groups are more vulnerable to the evil than others. Caste, religion and local customs play a significant role in drug abuse. There are also regional variations in the prevalence of drug abuse which affects both rich and poor, although for different reasons. The social acceptability of drugs seems to be determined arbitrarily and has little relationship to their harmfulness. In the Indian context, drug control has developed an unhealthy relationship with revenue raising (Paras 3.09 to 3.15).

5.06 *Theoretical framework for prevention and control* : While adopting measures for the prevention and control of drug abuse, the following points will have to be kept in view :

- (1) drugs cannot be eliminated, but their abuse can be controlled and minimized;
- (2) preventive and control measures should be directed at all strategic points and not concentrated on any one point, however significant;
- (3) drug abuse cannot be treated in isolation from other forms of deviant behaviour;
- (4) instead of creating new, isolated and large structures for prevention and control of drug abuse, it would be more economical and efficient to develop the programme as an integral part of the existing administrative machinery; and
- (5) all drugs form a continuum and the drug problem must therefore be treated in its entirety (Para 3.17).

5.07 Against the background of the complex drug-individual-society relationship indicated (para 3.02 to 3.16), the framework for prevention

and control of drug abuse will be as follows :

- (1) Legal and penal measures which try to keep the drug away from man;
- (2) Educational measures which try to keep man away from the drug; and
- (3) Social action which tries to remove conditions which necessitate drug use or to develop alternatives for drug use.

5.08 *Legal and penal measures policy* : We should create, at the central level, an integrated machinery for the formulation of a comprehensive and balanced national drug control policy. From this point of a view, we recommend that a National Advisory Board on Drug Control should be established immediately. The Minister of Health and Family Welfare should be its Chairman and a Senior Officer of the Ministry should be its Member-Secretary. It should have representatives of the Ministry of Finance, Ministry of Education, Ministry of Information and Broadcasting, the State Governments, and of the Department of Social Welfare, Central Bureau of Investigation, Indian Council of Medical Research, Indian Psychiatric Association, Indian Council of Social Science Research, Indian Association of Chemists and Druggists and Association of Drug Manufacturers. The Health Secretary, the Chairman, Central Board of Excise and Customs, the Narcotics Commissioner of India, and the Drugs Controller (India) should be its *ex-officio* members. It should also include a few eminent non-officials (psychiatrists, educationists, journalists, politicians, etc.) interested in the problem. The Board as a whole should meet once a year. But there should be a small Standing Committee which should meet more frequently, say, once a quarter (Para 3.21).

5.09 The National Advisory Board on Drug Control shall :

- (a) review periodically the situation of drug abuse in the country;
- (b) sponsor research, on a continuing basis, on different aspects of the drug problem;
- (c) call for, compile, and publish all the relevant statistics on the drug problem;
- (d) submit an annual report to the Government of India on the status of the drug problem in the country; and
- (e) advise the Government of India and the State Governments on all aspects of the national drug control policy and its implementation (Para 3.22).

(1) There should be a special unit in the Ministry of Health and Family Welfare to function as the Secretariat of the Board and the necessary funds for the Board, its programmes and staff should be provided on a priority basis (Para 3.23).

(2) The National Advisory Board on Drug Control should be established immediately so that it is able to take action on several of the important recommendations (Para 3.24).

5.10 *Legal and penal measures legislation* : We are of the view that it would be an advantage to have a single law which would deal with the prevention and control of abuse of drugs whether narcotic or psychotropic.

(1) The proposed law should deal with the dependence producing drugs and other harmful substances which should be classified into three categories viz. prohibited drugs; controlled drugs (category A); and controlled drugs (category B). The severity of control would be in a descending order, the maximum severity being on the category of prohibited drugs.

(2) This law should deal comprehensively with the export, import, production, possession, transport, distribution and sale of all prohibited and controlled drugs. Its provisions should also be brought in line with our national commitments under the International Conventions to which we are or may become a party. Since this law cannot cover alcohol (which is a state subject) the Government of India should, on the advice of the National Drug Control Board, lay down a coordinated national policy for prevention, regulation and control of drug abuse.

(3) The punishment at present prescribed in our relevant laws for illicit import and export of narcotic drugs can hardly be considered effective. The position regarding illicit import and export of psychotropic drugs is still more unsatisfactory as there is no specific law to deal with such illicit export and import except the general provision of the Import and Export (Control) Act. As there is a real danger that the smuggling of drugs in the country will increase in the years ahead, it is necessary to prescribe deterrent and heavy punishments for illicit export and import of drugs as a matter of urgency on a priority basis. It may also be emphasised that many of the other punishments provided under the present legislation are also too small to prove effective. The position needs to be examined in detail and the punishments made more deterrent where necessary.

(4) In case of regular users of drugs, it becomes essential to maintain supplies of the concerned drug on medical grounds. There should, therefore, be adequate provision in the law for notifying *approved centres* where regular addicts can register themselves and on production of prescribed medical certificates obtain the supplies of the drug required in prescribed quantities. There should be a regular system of registering opium addicts as its absence merely tends to encourage illicit movement of opium to satisfy the requirements of addicts who have not been registered. We, therefore, recommend

that such *approved centres* should be opened immediately, in both urban and rural areas, for users of all dependence producing substances.

(5) In the treatment of drug addicts, it is often necessary for the psychiatrist to have regular supplies of drugs with which the usual dosage of the patient is gradually reduced. It is, therefore, necessary to provide that approved psychiatrists or other prescribing authorities may obtain all the supplies of controlled and prohibited drugs needed for treatment purposes.

(6) The most despicable person is the pusher or drug peddler who, for personal gain, is prepared to ruin the lives of young persons by enticing or encouraging them to drug abuse. The proposed law should therefore provide severe and deterrent punishments for pushers or drug peddlers. In this context, the recommendation (4) made above is very important as it will reduce the dependence of drug addicts on pushers and peddlers. Similarly, adequate action will have to be taken against medical practitioners who are found to over-prescribe or to encourage surreptitious drug abuse as well as against chemists and druggists who abet the leakage of drugs into the market (Para 3.26).

5.11 *Legal and penal measures implementation* : Legislation will not have its desired effect unless the implementation is satisfactory, *i.e.*, unless the average law breaker realizes that he does not have an adequate chance of escape. From this point of view, we recommend (a) that the existing loopholes and inadequacies in the laws should be carefully studied and duly plugged and remedied in the proposed legislation, (b) that the implementing machinery should be strengthened to the extent possible, especially by creation of special squads at crucial points and in important areas, and (c) that every effort should be made to secure better coordination between the Central Officials and the State Police (Para 3.27).

From abstinence to addiction

5.12 An individual passes from the stage of abstinence to addiction, generally through the interim stages of experimentation, casual or occasional use, and regular use without any serious adverse effects. The reasons why some persons become addicts and others stop at various earlier points are not clearly known. But two action points are indicated : (1) We have a strong tradition of abstinence which must be preserved and strengthened; and (2) educational and social measures along with medical treatment can be of use at every earlier stage to prevent addiction (Para 3.30).

5.13 *Educational measures* : We attach great importance to the education of all social groups, especially the elite, regarding continuous awareness of

the drug problem. Drug education should be a part of health education activity at all levels of the society (Para 3.31).

5.14 Carefully designed, factually correct and scientifically evaluative programmes should be designed for specific target groups which impart information on drug abuse. Such groups may, for example, be students, persons engaged in operation of machinery or vehicles, rural labour, non-student youth and adults (Para 3.32).

- (1) Educational programme for students should be concentrated more at prevention or discouraging the use of socially acceptable drugs such as alcohol and tobacco rather than the total ranges of drugs. It is much easier to correlate the use of these drugs with general health education, especially because total abstainers pass to addiction and to the use of more dangerous drugs *via* the use of alcohol and tobacco which are readily available and have large social acceptance (Para 3.32).
- (2) Student counselling and guidance services (which need to be generalized on strong educational grounds) should include drug use within the area of their activity (Para 3.33).
- (3) Programmes of non-formal education on drug use should be developed for out-of-school youth and adults (Para 3.34).
- (4) The mass media have obviously an important role to play and act as catalyst for social change. We would like mass media in general to play a more objective role in coverage and reporting of issues related to drug abuse rather than making it sensational. All India Radio, Doordarshan and Film Division have a special and major responsibility in formulating and presenting worthwhile programmes and films in consultation with experts (Para 3.35).

The Departments of Social Welfare, Education and Mass Communication, in consultation with Department of Health should develop such programmes and set up a machinery to evaluate and advise other voluntary agencies who wish to participate in such programme (Para 3.36).

5.15 *Social action* : The basic assumption underlying this approach is that the misuse of drugs is not a disease in itself, but the symptom of some social mal-functioning and the emphasis is placed not so much on treating the symptom, as on removing the causes of drug abuse through programmes of social reform. These are not quick or easy solutions. But in the long run, they alone can provide the genuine and lasting remedies, not only to the drug problem, but to several other illnesses that the society suffers from (Para 3.37).

5.16 This social action will include :

- (1) measures to create an enlightened and rational social opinion on the subject (Para 3.38);
- (2) helping the adolescent and youth to grow smoothly to adulthood and maturity,
- (3) strengthening of peer groups and using them meaningfully for individual and social development;
- (4) involving youth in meaningful and challenging programmes of adventure, risk-taking, physical education, games and sports, social service, and literary and recreational activities (Para 3.39);
- (5) eliminating vested interests in drug abuse; and
- (6) transforming society on egalitarian lines and abolishing poverty (Para 3.40).

5.17 *Treatment of Drugs Addicts* : At present, there are no specially organised facilities for the treatment of drug addicts in the country. Most of the drug dependent individuals are treated at Psychiatry Departments, wherever they exist, if they are referred to these departments. As these facilities are obviously limited, it is presumed that some drug addicts would be treated by general physicians and other health professionals, while quite a large number of them may not be receiving any treatment at all. Mental hospitals and in-patients units of Psychiatry Departments do provide admission facilities for such patients. Some of the teaching and training institutions are also in the process of developing small addiction units. In the context of inadequate facilities for dealing with health problems, it is not desirable to provide specific and separate treatment facilities for drug addicts (Paras 4.02 to 4.04).

5.18 We make the following recommendations for future development of services for the treatment of drug addicts :

- (1) It would be both economic and efficient if the treatment of drug addicts is developed as a part of the general health services of the country.
- (2) There is a paucity of beds in hospital services in all the areas; hence the creation of special residential treatment facilities for drug dependence would not be a feasible proposition as a general method of treatment. The international trend now is to move away from the residential to the out-patient department or ambulatory treatment. We should also adopt the same policy.
- (3) It would be desirable to provide these services within the framework of Psychiatry Departments wherever they exist or develop.

As in interim measure, these facilities could also be developed in medical specialities.

- (4) In urban areas where the current prevalence of drug abuse is large and is expanding into the student body we suggest that de-addiction centres should be established for the provision of comprehensive services. Such services should cover all dependence producing drugs and should also have in-patients and out-patients services, with accent on the latter. They should also be free to experiment with various treatment modalities on a time-bound basis with built-in evaluations, so as to determine the best possible techniques for the Indian setting. These centres should also be charged with maintaining and evaluating the legal registration systems and act as foci for training other health professionals for similar work within the country.
- (5) Between four to six such centres should be initially set up with central finance in the country. Subsequently, each state should set up at least one centre during the sixth plan period. At the state level, encouragement should be given to all medical colleges to set up such units in medical/psychiatric units (Para 4.14).

5.19 *Registration of Drug Addicts* : We attach great significance to the programme of registering regular users and drug addicts and saving them from the clutches of unscrupulous peddlers by establishing *approved centres* where they can have their needed quota of drugs at standard prices on production of medical certificates issued by prescribed authorities. The scheme should be introduced for all dependence producing drugs whose control has been advocated (Para 4.15).

5.20 *Rehabilitation* : The rehabilitation of a drug dependent individual should continue to remain the main responsibility of his family and the social group and the de-addiction service should at best become a support and supplement. Efforts should, however, be made to involve the voluntary agencies in the programme (Para 4.17).

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APPENDICES

APPENDIX I

APPOINTMENT, COMPOSITION AND TERMS OF REFERENCE OF THE COMMITTEE

Appointment

The Committee was constituted under Resolution No. X.11029/1/76—D & M S of the Ministry of Health and Family Planning (Department of Health), Government of India, dated 2nd June, 1976, which is quoted below :

Resolution

The reported increase in the use of intoxicating drugs, particularly by students, has been causing concern to the Government of India for some time. It has accordingly been decided to constitute a Committee to inquire into the extent of drug addiction in the country and to submit their recommendations. The Composition and terms of reference of the committee on Drug Addiction shall be as under :

Composition

- | | |
|--|-----------------|
| 1. Dr. C. Gopalan
Director General
Indian Council of Medical Research
New Delhi. | <i>Chairman</i> |
| 2. Shri A. Shankar
Narcotics Commissioner of India
Central Bureau of Narcotics
19, The Mall, Morar
Gwalior-16. | <i>Member</i> |
| 3. Dr. M. Adiseshiah
Vice-Chancellor
Madras University
Madras. | —do— |
| 4. Prof. R. C. Mehrotra
Vice-Chancellor
Delhi University
Delhi. | —do— |

- | | | |
|-----|--|-------------------------|
| 5. | Shri J. P. Naik
Member-Secretary
Indian Council of Social Science Research
New Delhi. | <i>Member</i> |
| 6. | Dr. M. S. Gore
Director
Tata Institute of Social Sciences
Sion, Trombay Road
Bombay. | —do— |
| 7. | Dr. Davinder Mohan
Associate Prof. of Psychiatry
All India Institute of Medical Sciences
New Delhi. | —do— |
| 8. | A representative of the Deptt. of Social Welfare
New Delhi. | —do— |
| 9. | Dr. K. Bhaskaran
Deputy Director General of Health Services
New Delhi. | —do— |
| 10. | Dr. S. S. Gothoskar
Drugs Controller (India)
Directorate General of Health Services
New Delhi. | <i>Member-Secretary</i> |

Terms of reference

- (a) To enquire into the extent of addiction to drugs in the country, particularly amongst the student community;
- (b) To determine the motivation for drug addiction;
- (c) To identify the types of drugs that are misused and the steps that are to be taken to prevent the misuse of the drugs; and
- (d) To recommend suitable de-addiction and rehabilitation programmes that should be initiated in the country.

General

The tenure of the Committee shall be one year.

The members shall not be paid any remuneration but they shall be entitled to T.A. and D.A. for attending meetings in accordance with the rates fixed by the Government of India from time to time.

The Committee shall have the power to frame its own rules of procedure.

Order

Ordered that a copy of this Resolution shall be communicated to all State Governments and all Ministries and Departments of the Government of India.

Also ordered that the Resolution be published in the Gazette of India for general information.

Sd/-
(GIAN PRAKASH)
Secretary

Subsequent Development.

- (1) Shri K. R. Ramachandran, Joint Secretary, represented the Department of Social Welfare on the Committee.
- (2) When Dr. K. Bhaskaran left India, he was replaced by Dr. A. Venkoba Rao, Professor and Head of the Department of Psychiatry, Madurai Medical College, and Erskine Hospital, Madurai, vide Ministry of Health Resolution No. X.11029/1/76-D&MS dated the 28th January, 1977.
- (3) Shri K. K. Puri, Deputy Inspector General, Central Bureau of Investigation, New Delhi, was included as a member of the Committee vide Ministry of Health Resolution No. X.11029/1/76-D&MS dated the 22nd September, 1976.
- (4) Shri D. P. Anand, was coopted as a member of the Committee in view of his special expertise.
- (5) The tenure of the Committee was extended by four months vide Ministry of Health Resolution No. X.11029/1/76-D&MS dated the 20th June, 1977.

APPENDIX II

STATISTICAL TABLES

TABLE I. NUMBER OF NEW OPIUM ADDICTS, NUMBER DROPPED, TOTAL NUMBER ON THE REGISTER AND ESTIMATED TOTAL OPIUM ADDICTS DURING 1970-75 FROM NARCOTIC COMMISSIONER REPORT*.

Type of information	Year				
	1970	1971	1972	1973	1975
Number of addicts added during the year	25	13	17	36	—
Number of addicts dropped during the year	258	1876	3,144	314	—
Total number of known addicts	87,945	86,078	82,951	82,873	80,809
Estimated total number of addicts	99,000	98,000	94,510	94,200	—
Source licit	87,945	86,078	82,951	82,873	—
Illicit	11,055	—	11,549	11,527	—

*Report for 1974 is not available.

TABLE I(a). AGE DISTRIBUTION OF OPIUM ADDICTS ACCORDING TO AGE AND SEX FROM NARCOTIC COMMISSIONER'S REPORTS*.

Age group (year)	1970		1971		1972		1973		1975	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
35-49	9718	2838	9103	2482	6235	654	6237	654	4663	630
50 and above	36237	11629	45133	18830	43725	17942	43858	17959	43081	15668
Unknown	19874	7669	9400	11130	11623	2772	11193	2772	13008	2340

*Report for 1974 is not available

Source : Department of Revenue and Banking, Government of India.

TABLE II. VALUE (IN RS) OF CONSUMPTION PER PERSON FOR A PERIOD OF 30 DAYS FOR PAN, TOBACCO AND INTOXICANTS BY MONTHLY PER CAPITA EXPENDITURE AND PLACE OF RESIDENTS.

Monthly per capita expenditure in Rs.	Urban areas Rs.	Cities Rs.	Rural Rs.
0—8	0.18	0.34	0.25
8—11	0.38	0.30	0.33
11—13	0.33	—	0.37
13—15	0.41	0.10	0.41
15—18	0.48	0.35	0.50
18—21	0.55	0.54	0.63
21—24	0.65	0.83	0.69
24—28	0.72	0.97	0.78
28—34	0.87	1.21	0.92
34—43	1.02	1.26	1.12
43—55	1.29	1.40	1.35
55—75	1.68	1.86	1.77
75+	3.10	3.47	3.33
All classes :	1.21	2.01	0.98

Source : National Sample survey Twenty Second round, Government of India.

TABLE III. ALCOHOL AND DRUG ADDICTS FROM FOUR GENERAL HOSPITALS ACCORDING TO BROAD AGE GROUPS. DISCHARGE STATISTICS OF 1973.

Hospital	Age group			Total
	15—34	35—54	55+	
1. Post graduate Institute of Medical Education and Research, Chandigarh.	A 4	4	—	8
	D —	—	—	—
2. J.J. Group of Hospital, Bombay.	A 32	32	7	71
	D 4	7	1	12
3. Safdarjang Hospital, New Delhi.	A 76	95	16	185
	D —	—	—	—
4. Government General Hospital, Madras.	A 70	99	16	185
	D 12	13	—	25

Source : ICMR (Unpublished) A = alcohol D = drug

TABLE IV. STATEMENT SHOWING IMPORTED AND INDIGENOUSLY MANUFACTURED PSYCHOTROPIC SUBSTANCES DURING 1973, 1974 AND 1975.

Schedule	Name of the substances	1973	1974	1975	Country from which imported
1.	Tetrahydrocannabinols (All isomers)	3 g	6 g	1 g	Switzerland
	Mescaline	—	1 g	—	U.S.A.
2.	D-amphetamine	59 kg (SO ₄) 2 kg (base)	25 kg (SO ₄)	60 kg (SO ₄)	U.K./Switzerland
3.	Amobarbital	475 kg	855 kg	790 kg	U.K./France/Den
	Glutenthimide	177 kg	375 kg	300 kg	Switzerland
	Pentobarbital	23 kg	—	25 kg	U.K.
	Secobarbital	1220 kg	41 kg	1350 kg	U.K./France/Den/Bel
4.	Barbital	—	3245 kg (Sodium) 268 kg (Sodium)	50 kg	West Germany Hungary
	Methylphenobarbital	200 kg	150 kg	230 kg	U.K./Switzerland
	Phenobarbital	8272 kg (base) (I) 915 kg (Sod) (I)	4000 kg 6849 kg (I) 510 kg (Sod) (I)	200 kg (Sodium). 11146 kg (I)*	Hungary/Switzerland
	Meprobamate	13383 kg (I)	6953 kg (I)	9509 kg (I)	
6.	Methaqualone	1934 kg (base) (I)	2722 kg (base) (I)	7095 kg (base) (I)	
		836 kg (HCl) (I)	693 kg (HCl) (I)	480 kg (HCl) (I)	

I = Indigenously manufactured

15 mg. × 3300000 Tablets were exported.

30 mg. × 2038000 Tablets were exported.

Source : *Estimates supplied by the Drugs Controller (India).

TABLE V. SUMMARY OF RESULTS OF DRUG ABUSE STUDIES CARRIED OUT IN GENERAL POPULATION.

Title of the study	Year of study	Number of person covered	Sampling design, if any	Age range	Prevalence rate of drug users per 100 persons Total	Types of drugs considered	Definition of drug users	Comments
1. Drug abuse in Punjab Gurmeet Singh and Brij Lal ⁷	1976-77	6,999	Nine big villages of Sangrur Distt. Punjab.	10 years and above	29.98	Alcohol, opium barbiturates, and cannabis		This study was carried out in big villages only of the Sangrur district. As this is only through personal communication, it is not clear as to whether the complete village was covered or only selected persons were covered in the study. The communication does not provide data on tranquillisers. The method of data collection is also not available. This study's result may be generalizable only for the selected villages and not for the district as a whole.
2. Drug habit in health and mental disorder. Dube and Handa ¹¹	1969	16,725			2.27	Alcohol, <i>Bhang</i> Ganja, Opium, others	Drug habit described here indicates use of a drug and denotes a general problem of drug abuse and does not imply physical dependence	The detailed sampling methodology is not given. The study has covered rural, semi-rural and urban areas. The study has provided estimate of prevalence of the drug habits in the community. The method of ascertaining the information is not mentioned. Pharmaceutical compounds have not been considered in the study. The results of this study only provide estimates for the study sample and cannot be generalized for any population.
3. Drinking in rural areas. (A study in selected villages of Punjab) Deb and Jindal ⁸	1973	1,251	Distt. Bhatinda one out of four Tehsils stratified sampling of two villages each based on presence or absence of liquor shop. Males only.	15 years and above	74.18	Alcohol only	Drug habit described includes occasional moderate or habitual drinkers classified on the basis of amount of alcohol consumed.	The study was carried out in a single district in Punjab selected purposively as this was a known high consumption area of alcohol. The data was collected on a semi-structured interview from the head of the family. It attempted to correlate alcohol consumption with socio-economic parameters and social psychologically perceived sequelae. The results are applicable to this sample only

TABLE VI. SUMMARY OF RESULTS OF VARIOUS STUDIES ON DRUG ABUSE AMONG STUDENTS CARRIED OUT IN THE COUNTRY.

Title of the study	Year of study	Number of persons included in study	Sampling procedure (if any)	Age range	Prevalence rate of drug users (percentage)			Definition of drug users	Types of drug considered	Comments
					Male	Female	Total			
1. Drug abuse among college students in India. Verma and co-workers ³⁰	1977	408	A few colleges of Chandigarh and few departments of the main campus of Punjab University.	Mean age 17.25 and 21.25		18.87	Drug abuse sometimes in the past without medical prescription (ever used)	Barbiturates, methaqualone, amphetamine and cannabis and L.S.D.	The study has not followed the normal sampling procedure for selection of colleges and departments. Hence the representativeness of any group of population is doubtful. The study has not included alcohol and tobacco. The study has supplied information regarding ever users and on current users (3.9 per cent) and dependents (1.47 per cent) The non-response rate is not mentioned.	
2. Drug abuse in University Campus Deb ³⁶	1977	1061	Male students-residing in five hostels of the university.			29.6	Drug users are those who have ever tasted the drug.	Mandrax, dexedrine, opium, Pot, L.S.D., Bhang.	The study has included only a selected population, i.e. those staying in the hostels. The procedure of selection of hostels was not according to statistical procedures. Therefore, the results of the study cannot be generalised for hostel population or for the university. The results may represent only the subjects included in the study. The other limitation is that drug users were picked up through the contact tracing method and not the questionnaire method. The study does not provide information regarding the current drug users. The non-response rate is not mentioned.	
3. Drug abuse among Medical students Sethi and Manchanda ³⁴	1977	748	All students of K. G. Medical college of one semester.			48.1	Drug users are those who have at least consumed one or more drugs during a month.	Alcohol, barbiturates, non-barbiturate, sedatives, minor and major tranquilisers-cannabis and related compounds and opiates.	The results of this study can only be generalised for one medical college for a specific year. The study has adopted a different definition of abusers. This has made the comparison of the prevalence rate with other studies difficult. This study has also included alcohol as one of the drugs. The study does not provide information on current drug users. The non-response rate is not mentioned.	

TABLE VI (CONTD.)

4. Drug abuse among college students. Dube and co-workers ²⁵	1975	564	Postgraduate students and also final year under graduates, medical students posted for training at Agra (from Agra and other Medical Colleges).	—	73.88	25.96	56.21	Alcohol, barbiturates, sedatives, non-barbiturates, hypnotics, minor and major tranquillisers, cannabis, opium and opiates.	The study has combined two categories of students <i>i. e.</i> medical and the non-medical. The selection of the students has not been carried out as per the normal statistical procedures. The non-medical students are only from local colleges whereas medical students were those who came for training at Agra although they hailed from various parts of U.P. This has made the results neither representative of the local colleges nor for medical students. The study however, highlights that the medical students have a higher risk of exposure to synthetic pharmaceutical preparations as compared to non-medical students. The non-response rate is not mentioned.
5. Prevalence of drug abuse in High School children. Mohan and associates ²¹	1975 and 1976	225 and 217	Three senior classes of the English medium High School located in Delhi. A stratified random sample design was adopted.	14-16	—	—	34.2 and 32.3	The users is a person who has used drugs without medical prescription over the past one year. Alcohol, amphetamines, barbiturates, cannabis, opium, tobacco.	The study has been carried out only in a selected population, of an English medium school. The results can neither be generalised for all the high schools in Delhi nor for the English medium schools. This study has also supplied information regarding 'experimental users' and 'regular users' and those reporting 'craving'. The study has provided information on current drug users. The study was repeated next year and estimates of prevalence are separately given for both years. The non-response rate is given.
6. Prevalence of drug abuse among Delhi University College students. Mohan and Arora ²⁰	1976	1144	All students present in the colleges during the day of the survey.	16-22	50.11	—	50.11	Period of current abuse was defined as any time over a period of one year preceding the administration of the questionnaire. Tobacco, alcohol, tranquillisers, amphetamines, barbiturates, hypnotics, and opiates	The study has not followed any sampling procedure in selection of the Institution. The study has a non-response of about 33 per cent and thus the estimate lacks in reliability and validity. The study has included tobacco also as one of the drugs and thus the prevalence rate is higher than in other studies. Excluding tobacco the prevalence rate is less. The study has provided figures on 'experimenters' 'casual moderate' or 'heavy users' and those having 'craving'. The study has given estimate of current

TABLE VII. PERCENTAGE DISTRIBUTION OF USERS AND NON-USERS OF DRUGS OBSERVED IN DIFFERENT STUDIES CARRIED OUT IN INDIA.

Author	Banerji (1963)	Dayal* (1972)	Chitnis (1974)	Verma (1977)	Deb (1976)	Mohan and Arora (1976)	Sethi and co- workers (1977)	Dube and co- workers (1977)	Mohan and co- workers (1975)	Mohan and co- workers (1976)	Mohan, and co- workers (1977)
Users	37.4	5	19.7	18.87	29.6	50.11	48.1	56.21	34.2	35.00	32.3
Non-users	62.6	95	80.3	81.13	70.4	49.89	51.9	43.79	65.8	65.00	67.7

Non-users include response rates as well as past users.

*Studies excluding alcohol and tobacco.

TABLE VIII. NUMBER AND PREVALENCE RATE (PERCENTAGE) OF CURRENT USERS.

City Drug	Delhi			Madras			Jaipur		
	Expt.	Regular	Addicts	Expt.	Regular	Addicts	Expt.	Regular	Addicts
Alcohol	457 (11.4)	9 (0.22)	19 (0.47)	281 (94.6)	11 (3.7)	5 (1.6)	345 (33.2)	45 (4.34)	8 (0.77)
Painkillers	769 (19.26)	36 (0.9)	30 (0.75)	41 (91.1)	4 (8.9)	—	92 (8.87)	—	3 (0.28)
Tobacco	137 (3.39)	200 (5.01)	84 (2.1)	—	—	—	—	—	—
Amphetamines	12 (0.3)	—	1 (0.02)	13 (81.2)	3 (18.8)	—	20 (1.92)	1 (0.10)	—
Barbiturates	20 (0.5)	1 (0.02)	2 (0.05)	45 (84.9)	6 (11.3)	2 (3.8)	19 (1.83)	1 (0.10)	—
Cannabis	42 (1.05)	6 (0.15)	3 (0.07)	41 (74.5)	10 (18.2)	4 (7.3)	38 (3.66)	2 (0.19)	—
L.S.D.	5 (0.12)	1 (0.02)	—	9 (56.2)	4 (25.0)	3 (18.8)	9 (0.86)	—	—
Opium	18 (0.45)	2 (0.05)	—	13 (92.9)	1 (7.1)	—	10 (0.96)	—	—
Cocaine	1 (0.02)	—	—	—	—	—	4 (0.39)	—	—
Pethidine	7 (0.17)	1 (0.02)	— (100.0)	2	—	—	7 (0.67)	2 (0.19)	1 (0.10)
Tranquillisers	102 (2.55)	9 (0.22)	4 (0.10)	32 (86.5)	5 (13.5)	—	48 (4.62)	3 (0.29)	1 (0.10)

Source : Mohan and co-workers (1977).

Figures in parentheses indicate prevalence rates.

TABLE IX. CASES REPORTED UNDER OPIUM ACT (RATE PER LAKH POPULATION).

Year	Number of cases	Population*	Rate
1967	9,460	504.2	1.87
1968	10,662	515.4	2.07
1969	10,659	527.0	2.02
1970	10,462	538.9	1.94
1971	11,169	550.8	2.03
1972	11,459	562.5	2.04
1973	11,451	574.2	1.99

*Population figures are based on the projection of the Planning Commission's Expert Committee.

Source : Crime Statistics in India, 1975.

TABLE X. CASES REPORTED ON OPIUM ACT DURING 1973 BY STATES.

States/Union Territories/Cities	No. of cases	Rate per 100,000 population
Andhra Pradesh	2	0.01
Assam	10	0.06
Bihar	3	0.01
Gujarat	2	0.01
Haryana	2159	20.47
Himachal Pradesh	56	1.58
Jammu and Kashmir	—	—
Karnataka	6	0.02
Madhya Pradesh	311	0.71
Maharashtra	8	0.02
Kerala	—	—
Manipur	—	—
Meghalaya	1	0.09
Nagaland	2	0.38
Orissa	38	0.17
Punjab	7355	52.03
Rajasthan	367	1.35
Tamil Nadu	75	0.17
Tripura	—	—
Uttar Pradesh	717	0.78
West Bengal	17	0.04
Total	11,129	1.96

TABLE X (CONTD.)

<i>Union Territories</i>		
A and N Islands	3	2.50
Chandigarh	76	28.40
D and N Haveli	—	—
Delhi	241	5.34
Goa, Daman and Diu	2	0.22
Lakshadweep	—	—
Pondicherry	—	—
Total	322	4.44
Grand Total	11,451	1.99
<i>Cities</i>		
Ahmedabad	—	—
Bangalore	4	0.24
Bombay	3	0.04
Calcutta	3	0.09
Delhi	227	5.54
Hyderabad	—	—
Kanpur	87	7.04
Madras	13	0.48
Total	337	1.47

TABLE XI. DISTRIBUTION OF REASONS FOR ABSTINENCE STATED BY NON USERS IN RANK ORDER (MOHAN³²)

Reasons	Rank Order
Not interested or curious	1
Enjoy myself fully without substance	2
Personal hatred of substance	3
Because of risk of physical mental danger	4
Due to influence of parents	5
Moral principles	6
Because of the risk of dependence	7
Because of social disapproval	8
Religious principles	9
Due to influence of friends	10
Non availability of substance	11
Because of a bad trip before	12
Too expensive	13

TABLE XII. DISTRIBUTION OF REASONS OF DRUG USE STATED BY NON-USERS IN RANK ORDER (DUBE³⁵).

Reasons	Rank Order
Relieve tensions, facilitate relaxation	1
Feel good and high	2
For the sake of fun	3
Social reasons	4
Ease depression	5
Satisfy curiosity	6
Improve studying	7
Heighten sexual experiences	7
To be accepted by the groups	8
Forced or persuaded by others	9
To impress others	10
For kicks	11
To challenge values of society	12
Intensity perceptions, increase aesthetic awareness	13
Sign of leadership	14
To imitate others	15
Rapid resolution of personal problem	16
Sharpen religious insight	17
Stay awake	18
Show revolt against authority	19
Facilitate social experiences	20
Deepen self understanding	21
Others	22

TABLE XIII. DISTRIBUTION OF REASONS FOR DRUG USE STATED BY DRUG USERS IN RANK ORDER.

Reasons	Dube ³⁵	Mohan ³²	Drug Addiction Committee
Relieve tensions, facilitate relaxation	1	—	—
For the sake of fun	2	—	—
Feel good, get high	3	—	6
Satisfy curiosity	4	1	1
Ease depression	5	—	—
To be accepted by the group	6	—	8
For 'kicks'	7	—	2
Forced or persuaded by others	8	4	—
To impress others	9	—	—
Heighten sexual experience	10	—	—
Social reasons	11	—	—
Improve studying	12	—	—
Facilitate social experience	13	—	—
To imitate others	14	—	—
Intensify perception	15	—	5
To challenge values of society	15	—	—
Sharpen religious insight	16	—	—
Rapid resolution of personal problems	16	7	3
Sign of leadership	16	—	—
Show revolt against authority	17	2	13
Deepen self understanding	18	—	10
Stay awake	19	—	—
Not sure why	—	3	—
Knew what it was but not its after effect	—	5	—
Was unaware of what it was	—	6	—
To remove boredom	—	—	4
As medicine	—	—	7
Help to sleep	—	—	9
To feel confident	—	—	11
For removal of inhibitions	—	—	12
As a means of threatening people close to you to get what you want	—	—	14

APPENDIX III

A MODEL FOR A CENTRE FOR THE STUDY AND TREATMENT OF ADDICTION

1. *Objectives* : The objectives of the De-addiction Centre are services, training, registration, research and documentation. Such a centre should try:

- (i) to explore and study patterns of treatment, modalities and development of services within the framework of existing services and facilities available or likely to be available;
- (ii) to develop suitable training programmes for de-addiction services and delivery systems to other medical and paramedical personnel;
- (iii) to develop suitable methods for maintaining a register for addicts of all drugs within a defined catchment area.
- (iv) to organise in a coordinated manner on multi-centric basis on-going research programmes in the area of drug abuse, dealing with
 - (a) epidemiological aspects; longitudinal and cross-sectional studies;
 - (b) treatments;
 - (c) aetiology; and
 - (d) various other applied and basic aspects related to all drugs particularly focussing on national priorities (currently alcohol, cannabis and psychotropics); and
- (v) To serve as a source for collection of existing and future data in the area of drug abuse, its storage and dissemination to various individuals or organisations nationally. This function could be advantageously developed in one of the four to six centres recommended here and could also serve the National Advisory Board on Drug Control.

2. *Service Component of the Centre* : This would consist of four aspects :

- (a) *Out-patients Department Treatment* : This service should initially start on twice a week basis and gradually expand to become available on all days of the week. In this, the various kinds of treatments offered would be maintenance of dose treatment, withdrawal treatment, group/individual/family therapy sessions.
- (b) *In-patients Department Treatment* : This service would initially start with twenty beds, and over a period of five years, expand to

fifty beds. In this facility, withdrawal treatment and psychosocial treatments would be offered.

- (c) **Extra-mural facility** : This service would be geared to providing drug-free environment to the individual after he has been through either or both of the above systems. Initially it would operate like a day-care centre, providing occupational therapy, sociotherapy and later on expand to model itself on therapeutic community model', with maximum involvement of the drug dependent individual, his family and the community. This can involve active participation of voluntary agencies and social work services. This should be able to cycle around 150 clients every two months.
- (d) **Registration system** : This would operate for persons who are drug-dependent and cannot be brought to a drug-free status. The drug dependent individuals here would be able to obtain drugs with a licit permit system.

The components (a), (b) and (d) would form the nucleus of service models set up at state levels and in medical colleges. The component (c) is experimental and needs careful evaluation in the urban setting.

3. **Training of Personnel** : These centres should be allowed to develop training programmes of about three months duration each for medical and para-medical personnel in the management and treatment of drug dependents, including maintenance of registration services. In addition, the centres should also be charged with development of suitable educational materials and provide short programmes on drug education for educators e.g. teachers, social workers, etc.

4. **Research** : Since these centres are to be located within ongoing medical institutions, it is assumed that basic research facilities and collaboration with other departments such as pharmacology, physiology, psychiatry, neurology, etc. would be available. The centres might, however, require additional inputs to strengthen the liaison with basis departments. Different centres might require different levels of such inputs, depending upon the areas they are interested in and the already available resources. In addition, these centres should conduct ongoing clinical research into various aspects of aetiology, epidemiology, psychosocial correlates and treatments. Hence, built-in provision for research would have to be provided, so that a certain level of minimum staff remains employed; and depending upon projects they undertake or are charged with, additional funding on project basis could be provided by the appropriate agencies.

5. **Operational Principles** : The following is a broad outline of a five

year programme for these centres :

- (i) First Year : The service component will come into being on an out-patient basis, starting as speciality clinic and gradually expanding to daily basis.

The registration system would simultaneously come into being, providing registration for all categories of drugs.

The laboratory system would also come into service and be operational by the end of first year, so as to provide facilities for patients under registration system as well as the O.P.D. clients.

Towards the end of the year twenty beds should also be ready to admit patients. The staff recruitment in the first year should be commensurate with the above, and atleast a Professor and an Assistant Professor of Psychiatry should be in position, as also one each in Clinical Psychology or Social Psychology. In addition, two senior residents and two house-officers should be also in position. Among para-medicals, two psychiatric social workers and appropriate nursing and other staff should also be in position for twenty beds.

In the area of research, the centres should begin planning for evaluation of ongoing research into treatment and psychosocial aspects.

Appropriate office and registration staff should also be recruited.

- (ii) Second Year : The remaining staff should be recruited during this year. The out-patient facility and registration facility should be fully operational. By the end of the year coordinated research programmes should be ready for operation.

During this period the first set of courses for medical and para-medical personnel should be devised, curriculum tested and syllabi completed.

The in-patient services should be expanded to thirty beds.

- (iii) Third Year : The courses of training programmes should be implemented, additional evaluative and general educational programmes should be undertaken or finalised. The ongoing clinical and psychosocial research should be extended to include a sample of rural population.

- (iv) Fourth Year : The training programmes for all categories of personnel should be fully operational. The mid-term evaluation of treatment and other research programmes should be undertaken. The in-patients facility should be expanded to include ten beds more.

(v) Fifth Year : The research reports should be ready for evaluation on (i) treatment modalities (ii) effectiveness of registration systems, (iii) efficacy or otherwise of training programmes. Thereafter, suitable national/regional methods should be tried on regular basis. The service research units should devolve to the institution/state concerned.

6. *Staff Requirements* : The broad requirements of staff of these centres are indicated in the following table:

STAFF REQUIREMENTS

Designation	Total Nos.	Distribution	
		Service unit	Research unit
1. Professor (part time/full-time)	1	1	—
2. Assistant Professor/Psychiatry	1	1	—
3. Lecturers : Clinical Psychology	2	—	—
Social Psychology	2	—	2
3. Senior Residents (Psychiatry)	3	3	—
4. House Officers	5	5	—
5. Nursing Staff	20	20	—
6. Ward Orderlies	10	10	—
7. Sweepers	10	10	—
8. Psychiatric Social Workers	6	3	3
9. Biochemist	1	1	—
10. Laboratory Technicians	4	4	—
11. Statistical Assistants	2	—	2
12. Computer Programmer	1	—	1
<i>Office Staff</i>			
1. Stenographer Typists	3	2	1
2. Stores Clerk	2	2	—
3. Filing Clerk-cum-Typist	2	2	—
4. Registration Officer	1	1	—

7. *Financial implications* : It is visualised that not all the centres would require same amount of inputs, as the locally applicable pay scales and the basic facilities already available and the construction costs, etc. are likely to vary.

The estimates of recurring and non-recurring costs for service inputs are approximate, based on central government estimates and cost factors that are operable in Delhi.

The recurring expenses are for staff salaries, drugs and office expenses. The staff requirements have been laid down in accordance with the Medical Council of India norms.

The non-recurring costs are for office equipment, equipment for the laboratories, in-patient facilities and construction costs for the additional in-patients.

The approximate budgeting per year is given under broad heads and recurring and non-recurring.

Year		Recurring	Non-recurring
<i>First Year</i>	: Patients	1,31,400	50,000
	Salary	1,20,000	
<i>Second Year</i>	: Patients	65,000	40,000
	Salary	1,20,000	
<i>Third Year</i>	: Patients	65,000	20,000
	Salary	80,000	
<i>Fourth Year</i>	: Patients	65,000	10,000
	Salaries	80,000	
<i>Fifth Year</i>	: Patients	65,000	10,000
	Salaries	80,000	
TOTAL	: Patients	3,91,400	1,30,000
	Salaries	4,80,000	
		8,71,400	1,30,000

This excludes the cost of ward construction and equipment for it. It is estimated that around Rs. 12,00,000 would be required to construct and equip such a ward in Delhi, estimating the cost of construction to be Rs. 75/- per sq. ft. and the covered area of around 9,000 sq. ft. The patient costs are based on expenses in Delhi, which work out to around Rs. 18/- per day/per bed, excluding salaries of the staff and attendants. This estimate also does not include provisions for additional electricity, laundry and maintenance costs which, it is expected, would be met from existing hospital facilities.

8. *Research Units* : The built-in programme for the centre requires on-going research for which no provision has been made in recurring, non-recurring expenses. It is suggested that certain staff be built into these centres purely for research and the status of this unit be examined after five years. For this purpose, an additional sum of Rs. 1 lakh per year should be provided so that this function is fulfilled. It is suggested that this amount should be

committed by the major funding agencies in the country in advance for a five year period.

9. *Central Documentation Centre* : This centre should be charged with collection, storage, dissemination of information related to all aspects of drug abuse. If possible this should be set up in collaboration with INSDOC or Documentation Centre of the ICSSR, or it can be attached to the centre in Delhi. This centre obviously has to be located in Delhi, because of various library, indexing and other facilities which are available. This centre should also function as the basic data gathering organisation for the National Advisory Council.

APPENDIX IV

A TECHNICAL NOTE ON CANNABIS

The Primary Natural Product : The plant *Cannabis sativa* Linn, is known as *Bhang* or *Ganja* in India, *Kif* in Algeria and Morocco, *Takouri* in Tunis; *Kabak*, *Asarath* and *Nasha* in Turkey, *Hashish el Keif* in Syria and Lebanon, *Djamba*, *Liamba* and *Riamba* in Central Africa and Brazil, *Dagga* in South Africa, *Marihuana* in U.S.A., *Surma* in Mozambique and *Rongony* in Malagasy (Madagascar).

The plant is a tall, annual herb, with palmately divided leaves. It is dioecious or rarely monoecious with greenish flowers. The narcotic substance is usually obtained from unfertilised female plants and from flowering or fruiting-tops of plants from which no resin has been removed. The plant is native of Western and Central Asia and is naturalised in the sub-Himalayan belt in India, and abundantly met with as wild growth in Punjab, Bengal, Bihar and extending to South. The cultivation of the plant for its fibre is permitted in districts of Almora, Garhwal and Nainital and the States of Jammu and Kashmir and Kerala.

Bhang : It consists of specially dried leaves of both male and female plants, wild or cultivated. Sometimes seeds are also mixed in it.

Ganja : It consists of the dried flowering and/or fruiting tops of the cultivated Cannabis plant, which are coated with resin as seeding is not permitted.

Charas : It is the resinous matter collected from the flowering tops of the female plants.

Active principles of Cannabis Drugs : The Cannabis active principle is collectively called Cannabinols, of which about thirty-five varieties have been isolated. From dependence point, Δ -9 tetrahydrocannabinol has been the most commonly involved substance. The detailed pharmacology and physiology have been the subject of a number of reports^{1,2}.

Modes of Consumption : Cannabis can be consumed in the following ways :

- (a) Beverages : Such as *Bhang*, *Thandai*, *Sawai*, *Sukha* in north and *rauras* or *ram-rasain* in south.

- (b) Confectionery : mixed with various sweet substances such as *majun*, *halwa*, *khoya* or *curry*.
- (c) Chewing : sometimes *bhanga* leaves are just chewed.
- (d) Smoking : *Ganja* and *chillum*, are commonly smoked, either in *chillum*, with or without tobacco, and also rolled in cigarettes.

Cannabis is also used mixed with alcohol, datura, opium and seeds of *Nux vomica* so as to enhance its effects and less frequently with *akjuic* (*Calotropis gigantea*), bamboo shoots, arsenic and strychnine. Sometimes, copper coins are boiled with *ganja* or *bhanga* leaves to make the decoction more potent.

The extent of Cannabis Abuse : The magnitude of Cannabis addiction has been referred to in the appropriate sections of the report. In addition, there are clinical studies which refer to cannabis abuse in psychiatric patient population³⁻⁸. It is to be noted that such studies have been reported from states which are known to be high consumption areas of *bhanga* and other Cannabis products.

The traditional patterns of Cannabis Abuse : Indo-Pakistan has been a traditionally cannabis consuming area. It has been a poor man's intoxicant in rural India. *Ganja* and *charas*, legally at least, remain in restricted supply (no estimates of illegal use were attempted) and prohibited in all states in India except Bihar, Madhya Pradesh, Orissa, West Bengal, and Uttar Pradesh.

The various issues related to cannabis use evaluated by the Committee were :

- (i) Acute toxic effects;
- (ii) Psycho-social-physical adverse effects associated with long term Cannabis use;
- (iii) The evidence for or against Cannabis psychosis;
- (iv) The evidence for therapeutic effectiveness of Cannabis.

(1) *Acute toxic effects* : The acute toxic state following Cannabis intake has been well described which depends upon dose, route of intake, rapidity of intake and individual factors. In heavy doses it can produce a toxic-delerious-psychosis, which usually rapidly subsides after the drug effects disappear⁹⁻¹¹.

(2) *Psycho-social and physical adverse effects* : Chopra and Chopra described the results of an eight-year follow-up study of 1238 cannabis users¹¹⁻¹². The majority of *bhanga* users (76 per cent) felt that either it had no

effects or beneficial effects. *Ganja* and *Charas* smokers, on the basis of self-assessment, reported that there was some impairment in general health, which was dose related (more in doses exceeding 2760 mg/day). They noted that such individuals could be identified on the basis of 'congestion of conjunctiva' and that they had higher prevalence of respiratory disorders, gastrointestinal complaints. They felt that the higher respiratory disorders were related more to smoking *per se* rather than Cannabis. They concluded that adverse psychological sequelae were not borne out by their observations. They also concluded that long term Cannabis abuse did not have any association with criminality and if anything, it made the users more timid. They finally concluded that harm, if any, following long term Cannabis abuse was more to the individual than to the society. The study presented no data on controls and it loses some of its validity as the inter-relationships between crucial variables such as dose or route of administration, the interactions between active principles, and its association with tobacco smoking were not sufficiently evaluated.

More recently, studies in India have shown unequivocal evidence suggesting adverse psycho-social sequelae¹³⁻¹⁶. The studies conducted abroad with long term chronic users have also failed to provide conclusive data about adverse sequelae¹⁷⁻²².

The physical effects of long-term Cannabis abuse on immune responses²³⁻²⁵, chromosomal abnormalities²⁶⁻³², endocrine functions^{18,33-35}, and brain functions³⁶⁻³⁹ have failed to establish definitive evidence of adverse effects. The studies, however, have shown that, following immediate ingestion of Cannabis, complex psychomotor activities such as driving skills are impaired⁴⁰⁻⁴¹.

(3) *Cannabis Psychosis* : Dhunjibhoy⁴² described a state which closely resembled mania in patients who had consumed Cannabis over a long period of time. Thackore⁴³ described Cannabis psychosis as a specific disease entity. More recently, studies within the country have not reported any case of Cannabis psychosis^{6,13,15,16,44}. Similarly no such evidence was found in studies conducted abroad^{22,45-47}. It appears that Cannabis could, in predisposed individuals, precipitate or aggravate a pre-existing psychosis.

(4) *Therapeutic uses of Cannabis* : Cannabis has been used in traditional systems of medicine as a pain reliever, aphrodisiac and as mood elevator. Recent studies have, however, suggested that Cannabis might have therapeutic use in glaucoma, asthma and as an anti-emetic⁴⁸. In addition, its therapeutic aspects are also being investigated, as an anti-convulsant, antidepressant, antihypotensive, in migraine and menstrual disorders.

Dependence producing aspects of Cannabis : On reviewing the evidence for estimating the dependence potential of Cannabis it was clear that it did not produce clear-cut physical dependence state, as was seen with opiates or barbiturates or alcohol and no specific withdrawal syndrome has been described for Cannabis. Cannabis must be reckoned as one of the safest drugs known at least in regard to lethality¹.

Existing knowledge indicates that Cannabis is a complex and developing subject of study which is multifaceted, requiring continuing and close study in the country.

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