

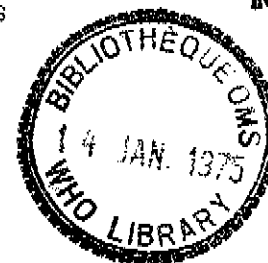


WHO DRUG DEPENDENCE RESEARCH AND TRAINING CENTRES

INDEXED

Report of a WHO Working Group

Geneva, 20-24 August 1973



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## 1. INTRODUCTION

The Working Group on WHO Drug Dependence Research and Training Centres met in Geneva from 20 to 24 August 1973.

Dr T. Lambo, Assistant Director-General, opened the meeting on behalf of the Director-General and welcomed the members of the Group and the representatives of the Secretary-General of the United Nations, the International Narcotics Control Board and the International Council on Alcohol and Addictions. He noted that the last four World Health Assemblies had given major attention to the extensive and serious problems associated with the use outside of accepted medical practice of alcohol and other dependence-producing drugs and to the ways in which WHO might contribute to their reduction. The Director-General had, among other things, been requested "to develop means for the international collection and exchange of data on the prevalence and incidence of drug dependence, and on the human and environmental factors associated therewith".<sup>1</sup> To these ends, it was proposed (i) to develop a system for collaborative reporting by selected institutions and members of WHO expert advisory panels of already available data relevant to the request of the World Health Assembly, (ii) to foster the development of increased resources for the acquisition of additional knowledge and the training of personnel required in the broad field of drug dependence by designating WHO drug dependence research and training centres and by other means, and (iii) to facilitate improved drug dependence epidemiological planning and monitoring, and comparability of future relevant studies.

Recognizing that there was a close interrelation between these three approaches to the development of needed knowledge and personnel in the field, it was in connexion with the second and third of these broad goals and related activities that the Working Group's advice and recommendations were primarily sought. The World Health Organization proposed, with the concurrence of the centres involved, to designate a limited number of institutions as WHO drug dependence research and training centres. These would include both established centres with well-developed programmes in the field and newer, less well-established centres with the capability of undertaking a broad programme in the field, but which had so far carried out little, if any, work of this nature. The latter centres would be located in geographic areas that had substantial existing or potential problems associated with the nonmedical use of dependence-producing drugs, but few, if any, individuals or institutions devoting themselves to the study of such problems or the training of needed personnel in the locality or region concerned. The advice and recommendations of the Group were, therefore, sought on (i) the means, in addition to the proposed designation of WHO drug dependence research and training centres, that the Organization might adopt to foster the world-wide development of increased research and training resources, (ii) the immediate and intermediate objectives that might be established with respect to the proposed WHO centres, (iii) the criteria that should be used in selecting centres, (iv) the identification of feasible, high priority studies, and (v) the strategies that might be used to foster both the development especially of the less fully developed centres and the comparability of future epidemiological and other studies in the field.

## 2. WORK OF INTERNATIONAL BODIES CONCERNED

### 2.1 United Nations

#### 2.1.1 United Nations Commission on Narcotic Drugs

The Commission meets regularly to review the world situation with respect to the international control of designated dependence-producing drugs. In this connexion, among other things, it (i) reviews the functioning of the international control systems and the cooperation

<sup>1</sup> World Health Organization (1973) Handbook of Resolutions and Decisions, Vol. I, 1948-1972, p. 123 (resolution WHA23.42).

of governments in this field, (ii) reviews related to national laws and administrative arrangements, and (iii) reports on illicit traffic in and "abuse" of such drugs. It also (iv) makes decisions concerning need for and level of control of certain types of dependence-producing drugs, (v) reports to the Economic and Social Council (ECOSOC), (vi) proposes draft international treaties, and (vii) addresses resolutions to ECOSOC, other international bodies and governments.

Among the resolutions recently adopted by the Commission<sup>1</sup> and later by ECOSOC<sup>2</sup> was one on "Scientific research on drug abuse".

"The Economic and Social Council,

Taking note of resolution 10 (XXV) of the Commission on Narcotic Drugs, concerning drug abuse,

Endorsing the view expressed by the Commission in that resolution that an expert review of information and the body of scientific research on drug abuse in advance of its sessions would enable the Commission to carry out, more effectively, its responsibilities in this field,

1. Invites the World Health Organization, as the competent specialized agency, to assist the Commission on Narcotic Drugs by preparing timely analytical reports on the epidemiological pattern of drug abuse for use by the Commission;

2. Requests the Secretary-General to make available periodically to the World Health Organization all relevant information he may have concerning drug abuse."

2.1.2 United Nations Division of Narcotic Drugs

The Division serves as the secretariat for the Commission and provides it with documents containing analyses of information furnished by governments on an annual basis concerning (i) the functioning of the international control system, (ii) national laws and regulations, (iii) law enforcement measures, (iv) drug control administration, (v) cultivation, production and manufacture of drugs, (vi) illicit traffic, (vii) drug abuse, (viii) scientific research, and (ix) technical cooperation. The Division's research activities are focused mainly on cannabis, opium and various species of Papaver; the United Nations Laboratory has been engaged in these fields for many years and maintains contacts with research workers in numerous countries. The Division also provides advisory services and information to governments, publishes the Bulletin on Narcotics and other informational materials, maintains a reprint library in the field, and provides technical and training services related to the control of narcotic drugs and psychotropic substances and their laboratory analysis.

2.1.3 United Nations Fund for Drug Abuse Control

This voluntary fund was established in 1971 "to develop short-term and long-term plans and programmes for concerted and simultaneous action on the supply of drugs for purposes of abuse, on the demand for such purposes and on the illicit traffic which serves as a channel connecting production with demand, and to provide assistance in the execution of those plans and programmes".<sup>3</sup> It now has resources of approximately \$ 10 million, and is making funds available to a number of international bodies for the support of a variety of programmes in the field.

<sup>1</sup> United Nations Commission on Narcotic Drugs (1973) Document E/5248 (Economic and Social Council: Official Records, p. 143, resolution 10 (XXV)).

<sup>2</sup> United Nations, Economic and Social Council (1973) Official Records, Fifty-fourth Session, Resolutions, Supplement No. 1, Document E/5367, p. 21 (Resolution 1781 (LIV)).

<sup>3</sup> Aide Memoire accompanying March 1971 letter from the Secretary-General relative to the establishment of the Fund.

#### 2.1.4 United Nations Social Defence Research Institute

The basic purpose of UNSDRI is to encourage, coordinate and, where appropriate, conduct research on the phenomena of crime and delinquency, their causes and prevention. Certain aspects of drug dependence are clearly related to this purpose and the Institute is endeavouring to encourage and collaborate with research teams in a number of countries in conducting studies, especially in developing countries, on the extent and patterns of drug use, attitudes related to it and the effectiveness of social responses to the phenomena.

#### 2.1.5 United Nations Division of Social Affairs

This Division, in December 1972, convened a meeting of youth leaders and others concerned to discuss community reactions to drug use by young people. The broad social implications of problems associated with the nonmedical use of dependence-producing drugs will be among the concerns of a proposed European Centre for Advanced Training and Research in Social Welfare.

#### 2.2 International Narcotics Control Board

The International Narcotics Control Board has been entrusted with certain administrative, supervisory and semi-judicial responsibilities to assist and guide national control measures and programmes seeking a more effective application of the provisions of the international drug control instruments. The Board is primarily concerned with the licit production, manufacture, stocks and international trade of drugs under international control, and receives information from governments on these matters. It maintains a system of import/export controls for these drugs and periodically publishes statistical and analytical reports on estimated drug requirements, on the licit movement of drugs in the international market, and on the general drug situation throughout the world. Other data furnished to the Board by governments includes reports on the total quantities and methods of disposal of seized drugs, as well as on the tolerated nonmedical use of certain drugs in accordance with reservations entered by governments at the time of adhering to the relevant treaties.

#### 2.3 Specialized agencies

##### 2.3.1 World Health Organization

WHO has, from its inception, been concerned with the identification and control of certain dependence-producing drugs and with fostering improved services for the prevention and treatment of dependence on alcohol and other drugs. Its current functions in this field are:

- (i) to keep under review the situation with respect to the use outside of medical practice of dependence-producing drugs, including alcohol;
- (ii) to foster research on the causes, epidemiology, prevention and treatment of drug-dependent persons and alcoholics;
- (iii) to foster the development of improved preventive and treatment including rehabilitation services;
- (iv) to carry out the functions assigned to WHO under relevant international treaties on narcotic drugs and psychotropic substances;<sup>1</sup>
- (v) to advise governments and international bodies on the medical and scientific aspects of the nonmedical use of drugs, including drug dependence; and

<sup>1</sup> This includes the formulation of recommendations and decisions with respect to the international control of certain types of dependence-producing drugs.

(vi) to arrange technical assistance, including training activities, with respect to the use of dependence-producing drugs outside of medical practice, and to cooperate with the United Nations and the specialized agencies in the control of drug dependence.

WHO carries out its responsibilities in this and other fields largely through the following mechanisms:

- (i) by convening groups of experts to develop conclusions and recommendations relative to a particular topic or task;
- (ii) by providing fellowships and consultation to governments on request;
- (iii) by making available training programmes and small grants for research; and
- (iv) by providing technical and other assistance to countries in (a) the strengthening of health services, (b) the development of comprehensive community health services, (c) the development of health manpower, (d) disease prevention and control, and (e) the promotion of environmental health.

Country and intercountry operational and training activities are carried out largely through WHO's six regional offices, while interregional activities of these types and research endeavours are implemented from its headquarters in Geneva. Among these headquarters' activities are programmes to monitor and evaluate adverse reactions to drugs used in medical practice, and to foster the safe and effective use of drugs. Special attention is given to evaluating the effectiveness of and adverse reactions to psychotropic drugs.

#### 2.3.2 Other specialized agencies

Other specialized agencies have begun to carry out programmes in the field of drug dependence during the last two years. Among these are (i) the United Nations Educational, Scientific and Cultural Organization (UNESCO), which has convened meetings on educational programmes, use of mass media, and will soon convene another on youth and drugs; (ii) the Food and Agriculture Organization (FAO), which is collaborating on programmes designed to foster the cultivation of crops other than, for example, opium poppy and cannabis; and (iii) the International Labour Office (ILO), which is collaborating on the development of vocational rehabilitation programmes for drug-dependent persons.

#### 2.4 International Council on Alcohol and Addictions

This nongovernmental agency, which is in official relations with a number of the international bodies earlier mentioned, facilitates the exchange of information between its member organizations, provides a channel of communication between these and the international bodies concerned, and fosters the international exchange of scientific and programmatic information in the field.

#### 2.5 Other organizations

Outside the United Nations family of international organizations and bodies, and the nongovernmental organizations in official relations with one or more of them, there are numerous other governmental and voluntary organizations and associations operating on a world-wide or regional level that have a long-term or recent interest in the nonmedical use of dependence-producing drugs. Some of these collect or generate information for their own purposes - information that may contribute directly or indirectly to the sum of available knowledge about the patterns and extent of drug use and the responses of society.

### 3. GOALS RELATING TO WHO DRUG DEPENDENCE RESEARCH AND TRAINING CENTRES

#### 3.1 Broad purposes

The Working Group considered it was the essential intention that these centres should broadly enhance the local, national, regional and international capacity to understand and respond effectively to problems related to the nonmedical use of dependence-producing drugs,<sup>1</sup> including alcohol. The centres were thus seen as important devices that would aid the realization of WHO's general strategic policies in this particular field (see section 1), and the Group welcomed the idea of such centres as timely, practical and imaginative.

#### 3.2 Objectives

The achievement of the broad purposes (above) will be dependent on carrying out activities related to a number of derivative, more specific goals or objectives. Such possible derivative objectives and related activities are many and it therefore seems useful to suggest that the centres be invited to address themselves particularly to the following approaches.

##### 3.2.1 Local, regional and international interests

The activities carried out by the WHO centres should, to a major degree, reflect local and national interests. Whenever possible, research and especially any training and service activities carried out should be responsive to the stated needs of governmental and other local and national authorities.

That locally concerned governments, institutions and persons should themselves determine what, for their own region, constitute the priority objectives and activities is a point to which the Group gave particular stress. It is not possible to design any abstract set of detailed priorities that could be relevant to the many different local, national and regional situations that pertain, the prevailing cultural perspectives, and the variability of the human and financial resources available. However, in sections 3.2.2, 3.2.3, and 5, certain broad activity areas have been identified as meriting high priority. Activities that are of local and national relevance are very often of international significance as well, and vice versa. Such broad relevance is perhaps particularly likely to be found with respect to well-designed and executed research projects. In furthering their research and training activities, the centres should give added weight to the selection of projects that are relevant to international as well as local or national interests. Particular attention should be given to the international interests expressed in relevant resolutions of the World Health Assembly<sup>2,3</sup> (see section 1).

##### 3.2.2 Research

In order to enhance the "capacity to understand and respond effectively to problems related to the nonmedical use of dependence-producing drugs" (section 3.1) it is recommended that studies in the following broad areas be substantially increased:

<sup>1</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 516, p. 8 (section 2.1).

<sup>2</sup> World Health Organization (1973) Handbook of Resolutions and Decisions, Vol. I, 1948-1972, p. 123 (resolutions WHA23.42 and WHA24.57); p. 124 (resolution WHA25.62).

<sup>3</sup> Off. Rec. Wld Hlth Org., 1973, No. 209, p. 27 (resolution WHA26.52).

- (i) epidemiological studies of the personal and social conditions and events associated with problem-related drug use;
- (ii) the natural history of such use, especially with respect to the development of dependence;
- (iii) the multiple causes, consequences and associations of drug-taking behaviour;
- (iv) the nature and effectiveness of local, national and international responses (including treatment,<sup>1</sup> preventive, and imposed corrective or punitive responses) to the problems perceived to be associated with drug-taking behaviour; and
- (v) the development of improved means for providing preventive and therapeutic services.

### 3.2.3 Training

The Working Group was of the opinion that each WHO drug dependence research and training centre should, as a minimum, be prepared to provide information and training relevant to its own principal research and service activities. Desirably, they should also strive to develop the capacity to provide broadly based clinical and research training in the field.

### 3.2.4 Other objectives

Other derivative objectives recommended for acceptance by the centres might include:

- (i) fostering a continuing review that concerns itself with the identification of locally and nationally relevant problems, priorities and feasibilities;
- (ii) fostering the dissemination of relevant information to and from local, national and international levels;
- (iii) establishing liaison with existing treatment services that can provide an adequate base for therapeutically oriented research and training, and/or assisting in the establishment of new or additional treatment services needed for this purpose;
- (iv) establishing liaison with existing educational and other preventive programmes that can provide a similarly useful base for training and research activities related to prevention;
- (v) establishing liaison with various United Nations bodies and agencies as well as non-governmental organizations that have already developed or are developing significant activities related to problems associated with the nonmedical use of drugs (see section 2); and
- (vi) sharing in the actual implementation of particular facets of response, for example the establishment and/or operation of treatment services or educational programmes.

## 4. CRITERIA FOR SELECTION OF CENTRES

The Group was of the opinion that there was no specific or rigid formula that could or should be developed to determine what institutions might, with their concurrence, be designated as WHO drug dependence research and training centres. Both the well-established centres and

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<sup>1</sup> The word "treatment" is used here in a very wide sense to include all relevant medical, social, welfare and rehabilitative helping responses directed toward the individual, whether carried out by official or unofficial agencies.

the newer, less well-established or developing centres (see section 1) will vary in size, predominant interests, nature and variety of programmes, influence in the local or national area, and expertise. For example, in some regions a centre might be an institution or organization which, at the outset, had on its staff only one individual or a small group with the interest and capability required to begin to contribute new knowledge relevant to one or more of the research areas noted in sections 3.2.2 and 5, even though such work had not yet been undertaken. The potential research could be of local, regional, or international interest. In other regions, a designated centre might already have an extensive staff and a well-developed research programme in the field of drug dependence.

The degree to which a centre may be able and willing to contribute to the sum total of world knowledge and experience will depend on a number of variables, such as (i) the perceived nature and extent of problems connected with drug use, (ii) the amount of local support that can be provided, and (iii) the kind, amount and source of other assistance available. It was recognized that frequently the amount of local support provided would depend on the degree to which services (e.g. treatment or educational) were provided for the local community.

#### 4.1 Criteria relating to all centres

The following points were considered to be applicable to all centres, wherever located and whatever size. Each centre and/or the institution of which it is a part should:

- (i) have on its staff an individual or group of individuals with the interest, capabilities and available time necessary (a) to contribute to the fund of knowledge, data, experience, and, in the broadest sense of the term, wisdom in the field, and (b) to utilize comparable information originating outside its own confines or region;
- (ii) be located in a geographic area having a significant existing or potential drug problem, the study of which will help give a reasonably balanced coverage of various drug-related problems in differing parts of the world;
- (iii) be an important institution already well established as a centre for research and training in the broad field of drug dependence, or be based in an existing university or other important institution or institute whose activities and/or resources are relevant to the field of drug dependence;
- (iv) be related in some significant way to health, social or educational authorities;
- (v) possess a reasonable balance between methodological sophistication and the practical problems of application (whether in modes of research, prevention, treatment and rehabilitation, or in assistance with the formulation of social policy);
- (vi) be, or have the capacity for becoming, a model and reference point for research and training in the field; and
- (vii) have substantial prestige and the respect of scientists, governmental authorities, and other policy makers.

#### 4.2 Criteria relating primarily to well-established centres

In addition to the general criteria in the preceding section, the following are some features that, if present in an older and larger centre, would assist considerably in achieving the overall goals of such centres (see section 3):

- (i) a commitment to and demonstrated capacity for high quality basic and applied research with a particular focus on various kinds of epidemiological studies;

- (ii) an organized programme for the dissemination of knowledge through formal, graduate and post-graduate training, and through other education and communication systems directed to the professional and non-professional communities;
- (iii) access to treatment and rehabilitation programmes suitable for clinical training and for various kinds of clinical investigation such as developing and/or evaluating different modes of therapeutic intervention. It is important that identifiable methods be utilized to ensure that the research and training responsibilities are not "engulfed" by pressures for direct treatment services;
- (iv) a wide variety of specialties should be either represented on the staff of the centre or available to it. The proportion and variety of disciplines will depend on the major area of research activity, the presence or absence of treatment facilities, and the range of responsibilities and functions of the centre. Assuming a broad range of programmes including research, treatment and rehabilitation, training and education, the following categories and professions would be included: medical specialties, such as internal medicine, psychiatry and clinical pharmacology; other health professions, such as nursing, occupational and physiotherapy; social and behavioural sciences, such as social work, sociology, law, psychology and political science; epidemiology and biostatistics;
- (v) laboratory facilities pertinent to the range of research carried out in the centre; and
- (vi) adequate and continuing financial support - from government and/or other substantial sectors of the community, for example endowed foundations.

#### 4.3 Criteria relating primarily to new centres

In addition to the criteria generally applicable to all centres, the Group was of the opinion that special consideration might be given to designating a centre that was not yet well established if it were located in an area with:

- (i) significant existing or potential public health and social problems associated with the nonmedical use of drugs and few, if any, existing resources being devoted to their study or the training of needed personnel; and/or
- (ii) some special kind of drug-use pattern more or less peculiar to that area (e.g. opium eating, or chewing of coca or khat leaves).

#### 5. PRIORITY ACTIVITIES

It was recognized that, in formulating public policies and programmes, members of the general public and especially decision-makers need to take account of scientific data as well as locally prevailing beliefs and attitudes. In this connexion, specially focused new research as well as special analyses of available information are needed to assist in assessing and, where indicated, modifying societal responses to problems perceived to be associated with the nonmedical use of dependence-producing drugs. To these ends, the Group identified a number of research and training activities as meriting high priority. The usefulness of carrying out these and related activities will be enhanced to the degree that they are (i) specific with respect to such parameters as dose, purity, route of administration, frequency, occasion and duration of use of particular drugs; (ii) descriptive of the "use" made of drugs by individuals and groups as well as the group dynamics involved in the drug taking and the relation of these factors to the broad sociocultural responses to drug-taking behaviour; and (iii) precise in the definition of methods used for measurement. Specificity enhances the possibility of valid comparisons between studies having similar aims, and comparative perspective helps delineate what is local and what is universal, what is transient, and what is more enduring.

While a number of priority areas for research are indicated in the following sections, the Group was mindful that on-going observations, existing and new hypotheses and social needs, as understood by perceptive scientists, would give further impetus to the initiation of particular studies.

Note was also taken of the facts that a wide variety of disciplines and points of perspective as well as multiple methodological approaches and techniques would be required in carrying out the necessary studies. These may range, for example, from single case reports to tightly designed prospective and quasi-prospective (cohort) studies, or from laboratory studies of small group interactions to large field studies of the effects of multiple approaches to education in one region as compared with minimum "drug information" activities in another. The Nineteenth Report of the Expert Committee on Drug Dependence<sup>1</sup> notes a number of special problems associated with studies in the field of drug dependence (p. 12, section 2) and discusses in some depth various research approaches and methods applicable to this field (p. 18, section 4).

## 5.1 Research

### 5.1.1 Epidemiological studies

A continuing awareness of what drugs are being consumed, by whom, under what circumstances of supply and consumption, and also the nature of the problems associated with differing types of use is needed for sound planning, implementation and evaluation of policies and programmes intended to prevent or reduce problem-related drug use. If quantitative data of this type are viewed in the light of valid information about factors<sup>2</sup> associated with and influencing drug use, they can be useful not only to persons responsible for policy and programme formulation and implementation but also to scientists and others concerned primarily with increasing our fund of knowledge about the causes and consequences of various types of drug-taking behaviour and the effective prevention and management of associated problems.

In addition to epidemiological studies intended primarily to determine the nature and distribution of drug-related problems in a population and the factors that influence that distribution, monitoring studies, having the more limited objective of determining changes in drug-use patterns, are of especial interest. Such monitoring provides the basis for prompt responses to changing situations and for timely alerts to personnel (e.g. enforcement, health, and welfare) responsible for dealing with drug-related problems in other geographic areas in which a particular existing or changing pattern has not yet been observed.

Studies leading to an improved understanding of the factors that favour and limit the development and spread of unanticipated waves of drug use would be instructive in developing improved methods for the prevention and control of such outbreaks. These waves tend to be self-limited, i.e. the infinite spread of heroin or other drug use is not seen. The factors operative in fostering or limiting the spread of the use of a particular dependence-producing drug may include friendship networks, peer attitudes and pressures, lack of approved versus institutionalized consumption, economic and other aspects of availability, and individual personality and sociocultural influences. To better understand the spread of the nonmedical use of a particular drug that has only in a relatively recent period become available in a given country, it may be helpful to study the use and non-use of that drug in a country where it has long been available. The problem of spread requires scrutiny.

<sup>1</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 526.

<sup>2</sup> For example, sociocultural and economic factors, class- and age-contingent behaviours, and societal responses to drug use.

Finally, there is a need for parallel studies in a given locale of the nature, patterns and extent of medically or socially sanctioned drug use as well as drug use that is not so sanctioned. Such studies would allow for analyses of age, sex, class, cultural and personality specific responses to non-stressful as well as stressful, external and internal stimuli. Many choices are involved in such responding, for example socially versus non-socially accepted behaviour, the seeking of medical versus nonmedical sources of relief from discomfort, and the choice of chemical versus alternative means of coping or seeking satisfaction and pleasure. Social psychological and policy analyses focused on alternative individual and social mechanisms and sources of strain would lead to further, primarily etiologically oriented research.

#### 5.1.2 Research into the multiple causes and consequences of drug use

Many of the epidemiological studies mentioned in the preceding section will help to improve our understanding of the causes and consequences of drug-taking behaviour or lead to the generation of testable etiological hypotheses. During its discussion of high priority research in this broad area, the Group noted (i) that an interplay of human, environmental and pharmacological factors were involved in the multiple causes as well as consequences (positive, neutral or negative) of drug-taking, and (ii) that a distinction should be made between those consequences that were related primarily to man-drug interactions (e.g. acute intoxications with their many differing manifestations) and man-society interactions (e.g. stigmatization, blocked opportunity, incarceration).

Studies on the natural history of the nonmedical use of dependence-producing drugs were considered to be of especial importance. As noted in the preceding section, these might focus on the factors appearing to favour or limit the wave-like spread of such drug use. Additionally, they might focus on a description of individual and small group patterns<sup>1</sup> of use and the personal and sociocultural factors associated with nonuse as well as use. The nonmedical use of drugs may be experimental, causal, or dependent<sup>2</sup> and each of these types of use may or may not be associated with individual or social problems. The different phases of individual and group drug-use patterns (from experimental to dependent use) present areas for further investigation of possible causal factors as well as interventions ranging from restrictions on the availability of drugs to the provision of satisfying alternative activities<sup>3</sup> to drug use and/or the treatment<sup>4</sup> of persons involved in problem-related use. Natural history studies will also help identify populations and individuals at particular risk of becoming involved in problem-related use of drugs. The identification of such persons is essential to the development of targeted primary and secondary preventive activities.

Special attention should be given to the relationship of social change to the nonmedical use of drugs. For example, migration into new social settings with a decrease in primary and secondary social controls may be found to enhance risk; unemployment or an extreme national emergency may increase or decrease the frequency of problem-related drug use. Note should be taken of the temporal relation between legal or economic policy changes and fluctuations in the patterns of drug use.

<sup>1</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 526, p. 19 (section 4.1.1).

<sup>2</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 516, p. 16 (section 2.3.3).

<sup>3</sup> Wld Hlth Org. techn. Rep. Ser., 1970, No. 460, p. 36 (section 3.4.3); 1973, No. 516, p. 38 (section 5.3.6).

<sup>4</sup> Wld Hlth Org. techn. Rep. Ser., 1967, No. 363, p. 24 (section 2.2.2); 1970, No. 460, p. 9 (section 3).

Closely related is the need for studies of changing customs and cultural perceptions concerning the regulation of pain and pleasure. Historical research on drug use and societal responses in various cultures during different epochs would be useful in bringing perspective to the assessment of current social policies.

Finally, continuing biomedical and psychological investigations of the immediate and delayed effects on man of short- and longer-term use of different types of dependence-producing drugs should be carried out to further clarify not only the risks involved but also the mechanisms that are operative in producing or influencing those risks.

### 5.1.3 Research on the usefulness of societal responses

Some of the general approaches to intervention in the problem-related use of dependence-producing drugs include "(1) regulatory and enforcement practices to limit drug availability; (2) punitive measures and other sanctions against drug users; (3) treatment and rehabilitation of drug-dependent persons; (4) educational efforts to discourage drug use; and (5) the provision of attractive alternative activities to groups at high risk".<sup>1</sup>

In a given locality having a particular set of drug-related problems, it is important to determine whether the use of a given approach or method<sup>2</sup> to reduce these problems results in changes and whether those changes are predominantly for the better or otherwise. Are there unintended side effects? What are the human, social and economic costs and are they acceptable in the light of the changes achieved? Is it likely that the observed positive or negative changes were indeed due to the intervention in question.<sup>3</sup>

In addition to the preceding cost/benefit questions, there are additional queries having to do with cost/efficacy. For example, how may observed positive changes be enhanced? Which of several existing or potential approaches or methods produce a given result at the lowest cost in human as well as financial terms?

Changes in, for example, correctional or other social policies, employment rates, or availability of recreational facilities provide an opportunity to assess the impact of the change in question on patterns of problem-related drug use. In the broad field of treatment and rehabilitation (including corrections), it may be possible to design studies to examine the relative efficacy of legal sanctions versus community persuasion in bringing those involved in problem-related drug use into contact with "helping personnel" and moderating a wave of non-medical use of drugs. Similarly, studies are needed on the relative effectiveness of various treatment modalities carried out under similar conditions and also of a given modality carried out under differing circumstances, for example of voluntary versus compulsory participation.

In addition to studies that compare the relative efficacy of different treatment modalities - and thus assist in selecting for use the most effective methods currently available - there is a need for research that looks to the development of increasingly effective therapeutic methods and agents. The latter could range, for example, from the development of improved chemotherapeutic agents that block the action of drugs of various type to the innovative use of peer groups in rehabilitation and social reintegration of drug users.

<sup>1</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 526, p. 30 (section 4.4).

<sup>2</sup> As used here, method means a particular technique or modality used within a broad approach, for example individual and group therapy, withdrawal, and various maintenance regimens would be among the methods that might be used within a treatment and rehabilitation approach.

<sup>3</sup> Temporal relationships and other associations do not necessarily impute causality. Influences other than the approach or method under study may account for some or all of any observed changes. It is necessary to be on the alert for the possible existence of extraneous influences.

In the field of primary prevention, it is necessary that cost/benefit and cost/efficacy studies be carried out on such interventions as (i) measures taken to limit the availability of dependence-producing drugs; (ii) information and education programmes aimed at discouraging drug use per se and/or problem-related drug use; and (iii) the use of peer group techniques to achieve the same ends.

In seeking answers related to the foregoing questions and areas of inquiry, researchers may focus on the effects of a particular intervention on such different targets as individuals (e.g. frequency of toxic reactions and other medical complications associated with drug use); populations (e.g. youth, immigrants, males, females, labourers, professionals); and agents and agencies (e.g. medical, social, rehabilitation, school, enforcement, correctional and judicial).

To be useful at local as well as regional and international levels, evaluative studies must, as a minimum, (i) make explicit the particular problem(s) addressed and the specific operational objective(s) of the intervention, (ii) clearly describe all elements of the intervention in question, (iii) indicate the criteria and measurements used for determining the degree to which each objective has been, or is being, achieved, and (iv) the costs incurred (personal and social as well as economic). To be useful in assessing the relative efficacy of differing approaches and methods addressed to similar problems and operational objectives, the studies must additionally (i) use the same criteria to characterize the target situation including the severity of any problems or condition to be affected, (ii) use the same criteria and comparable measuring devices to determine the degree to which each desired objective was, or is being, attained, and (iii) take account of all cost elements of the differing approaches and methods, and utilize the same basis for "costing" any element shared by two or more of the interventions in question.

To achieve such methodological comparability will require much time and effort, but it is essential to a determination of the actual and relative usefulness of interventions intended broadly to reduce the extent and seriousness of problems associated with the nonmedical use of dependence-producing drugs.

## 5.2 Training

Training activities may be directed toward persons representing a variety of professions (see section 4.2 (iv)), subprofessions and other groups and may cover a wide range of subject matter at differing levels of complexity. As noted in section 3.2.3, the Group considered that each WHO drug dependence research and training centre might, as a minimum, be prepared to provide information and training relevant to its own principal research and service activities, e.g. if a centre were substantially involved in epidemiological studies, it should be in a position to train persons for at least some aspects of work in that field.

While priorities should ultimately be determined in the light of local, national and regional assessments of training needs, it is believed that emphasis will often need to be given to the training of persons who can contribute to the attainment of locally identified, high priority research and service objectives. This is perhaps particularly so with respect to newer, less well-developed centres since they will be located in geographic areas having few existing research and training resources in this field.

It is evident that, in many parts of the world today, there is a pressing need for the training of more persons in the basic professional skills required to provide basic services and research in such broad fields as health (e.g. physicians, nurses, clinical psychologists, technicians), social welfare (e.g. social workers, sociologists, economists), enforcement and corrections, jurisprudence, and administration. The need is for basically trained generalists or "clinicians", and this need has to be met before such generalists will be available for any special training about the problem-related use of drugs. The staffing of the envisaged newer centres must therefore depend on wider advances and developments. The centres may, themselves,

contribute to the solution of these wider problems of professional need by (i) building up a cadre of highly trained research and "clinical" personnel who, though giving special attention to drug-related matters, may make significant and stimulating contributions in more general areas, and (ii) providing a model of training enterprise that may be relevant to the solution of other training problems.

A final priority training activity, but by no means the least important, has to do with the continued training of the centres' own staff members.

#### 6. IMPROVING THE COMPARABILITY OF EPIDEMIOLOGICAL STUDIES

One of the main evidences of competence in carrying out and reporting on research is to be found in the degree to which knowledgeable persons who read the reports are enabled to make meaningful comparisons between their own fund of knowledge, however acquired, and the information contained in the report. This is an exercise that is essential for the continuing growth of scientific knowledge. Unfortunately, a considerable amount of the available literature on the epidemiology of problem-related use of dependence-producing drugs does not lend itself to such comparisons.

Measures to help improve the comparability of future studies in this field must be a part of any programme undertaken to further the acquisition of urgently needed new knowledge. A substantial degree of comparability must exist between studies if one is to be able to draw conclusions (at a reasonable level of generalization) that might be helpful in furthering effective preventive, therapeutic and many related activities.<sup>1</sup>

The Group expressed its concurrence with the recommendations relative to fostering "comparability" contained in the Nineteenth Report of the WHO Expert Committee on Drug Dependence.<sup>2</sup> In so doing, it emphasized particularly the need to encourage the widespread use of precise and rather uniformly defined terminology in research work. For example, instead of reporting on "drug abuse" or "drug misuse", it would be preferable to describe the drug-taking behaviour in question in terms of such parameters as dose, route of administration, frequency and duration of use (see section 5). Emphasis was also placed on the need to utilize a limited number of relatively culture-free (or culture-fair) tests and also brief, simple "event-directed" (rather than "attribute-directed") questionnaires in order to help relate the work of one researcher to that of others. The comparability between the interpretations given by various investigators would also be enhanced if, whenever possible, they chose to report their findings in terms of normative data established within agreed upon reference frameworks.

In discussing collaborative research as an important means of fostering the comparability of research data, at least two patterns of such research were noted:

(i) "Parallelism-based" projects. In this type of project the main subdivisions are almost completely similar to each other. Thus two or more investigators may plan to carry out one and the same inquiry in two or more communities (each student in his own community or in the one he is most familiar with). The investigators will have, in this case, to work out together a plan for the uniform use of terminology, and the selection of similar methods of assessment and similar methods of statistical analysis.

<sup>1</sup> For some special comments on evaluative studies, see section 5.1.3, especially the last paragraph.

<sup>2</sup> Wld Hlth Org. techn. Rep. Ser., 1973, No. 526, p. 33 (section 6).

(ii) "Convergence-based" projects. In this type of study the project is divided up into a number of parts that are similar in some, but not in all, respects. Thus two (or more) students might agree to work together on a project for a comparative study of the effects of cannabis and alcohol on a number of tasks that involve speed and accuracy of psychomotor performance. Each one of them may work on one drug. Yet they have to agree, right from the beginning, on a uniform use of terminology, a number of reference parameters for comparison, and methods of analysis.

## 7. FOSTERING SOUND DEVELOPMENT OF CENTRES

In considering means by which WHO drug dependence research and training centres might develop and enrich their programmes, the Group made two basic assumptions: (i) that a primary requisite of any centre was the presence of an energetic individual or small group of staff members interested in and capable of contributing to knowledge in the broad field of drug dependence; and (ii) that, in accordance with section 4.1, such a nuclear staff was available in each designated centre. Primary attention was therefore given to possible ways in which the staff might be made increasingly effective. More attention was given to the circumstances likely to prevail in newer, less well-established centres than to those more commonly found in rather well-developed organizations. However, since every centre should strive continuously for improvement, the following observations were thought to have some applicability to most of them.

### 7.1 Strengthening staff as a resource

Among the often used mechanisms recommended for use in strengthening staff resources are the following:

- (i) obtaining the part-time services of skilled scientists who, while interested in and capable of working on problems associated with the nonmedical use of drugs, do not wish to lay aside all work associated with their present interests in order to concentrate exclusively on drug-related matters. Such part-time staff members often bring with them experiences and insights that stimulate and broaden the perspectives of existing staff members;
- (ii) involving students with differing levels of training. Such persons are often willing to make available a significant proportion of their time and talent in return for access to data and learning experiences that enable them to help fulfil degree or other career objectives;
- (iii) providing opportunities for skill improvement through "continuing education". This may be achieved by (a) making it possible for staff members to undertake periods of work or study with colleagues in the same centre or in other settings; (b) arranging for persons having particular qualifications to come to the centre (e.g. during a sabbatical period) to demonstrate their skills and otherwise instruct the staff, (c) providing for the mutual exchange between centres of regular staff members for designated periods, and (d) affording opportunities for staff members to pursue new professional interests within the centre.

### 7.2 Strengthening technical and scientific resources

Investigators responsible for planning and carrying out broad research programmes and/or specific projects often require the services of suitable assistants, the availability of technical equipment appropriate to their needs, and ready access to relevant literature. The acquisition of most of these resources involves not only matters of financing, but also staff training and the development of bibliographic and other library services and resources. Such resources are essential in order to foster the productivity and sustain the interest of professional personnel.

A particular centre may, during the earlier phases of its growth, find it necessary to limit its library acquisitions to items that are immediately relevant to its particular areas of inquiry and training. In short, the goal during this phase may be limited to the development of a "working library". However, it is desirable that each WHO centre should, as a longer-term goal, seek to develop its library in such a way that it may also serve as a national or regional "reference library" of work broadly relevant to the field of drug dependence, if such a resource is not already available in the geographic area involved.

### 7.3 Strengthening financial resources

The task of generating funds to support the manpower, equipment and related needs of WHO drug dependence research and training centres was seen as involving at least two major phases. The first applies almost entirely to newer, less well-established centres which have carried out little if any work in the field. For such a centre, it may be necessary to obtain funds beyond those immediately available to the institution concerned in order to cover the salary and related costs of a small nuclear staff (see section 4.1 (i)). Established centres will already be devoting funds to the broad field of drug dependence. However, there may be particular situations in which it would be necessary to obtain additional funds to support the equivalent of an additional nuclear staff member. This might well be true of a centre whose nuclear staff is so fully committed to on-going specific projects that there is no time for such staff members to (i) review or respond to local needs, (ii) plan a broad programme, or (iii) participate with other centres in planning collaborative studies.

The second major phase of fund raising will occur as the nuclear staff readies relatively large-scale programmes and projects for implementation. Most such new or additional activities will require financial resources beyond those already available to the centres.

To finance their phase one activities, WHO centres should be encouraged to look first to local (national) sources. Many host agencies and/or governments will be able to provide the modest sums required for a small nuclear staff and some supporting services. Industry and foundations are also potential intracountry sources of such funds. In a few instances, it may be necessary to seek funds from sources outside the country, especially from national and international organizations known to have special interests in the field of drug dependence. In view of its role in designating and fostering the development of research and training centres in this field, it is recommended that WHO endeavour to acquire funds that it can use to help initiate new centres in developing areas.

With respect to financing phase two activities, i.e. major programmes and projects to be carried out in accordance with detailed protocols prepared by or under the supervision of the nuclear staff members, it is suggested that again funds be sought first from sources within the geographic area served by the centre and only if necessary from official or voluntary organizations outside that region. On request, WHO should provide for expert peer review of major projects which a designated centre or group of centres wish to undertake and make available its good offices in helping to obtain funding for those projects it believes to be of particular national, regional or international significance and scientific merit. As the competent specialized agency within the United Nations family of organizations, and with the advice available to it from members of its expert advisory panels and other consultants, the World Health Organization is in a unique position to provide both expert peer review and assistance in obtaining funding for worthy programmes and projects of the type foreseen in this report.