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in WHO's MENTAL HEALTH PROGRAMME¹



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A list of officially designated WHO Collaborating Centres (which participated in many of the studies described in this paper) is available (document MNH/NAT/88.4 Rev.2) from the Division of Mental Health, WHO, Geneva. In addition, numerous other centres have contributed to the conduct of WHO's research programmes. These centres as well as the names of many individuals who took part in this work are listed in the papers describing the results from the specific studies.

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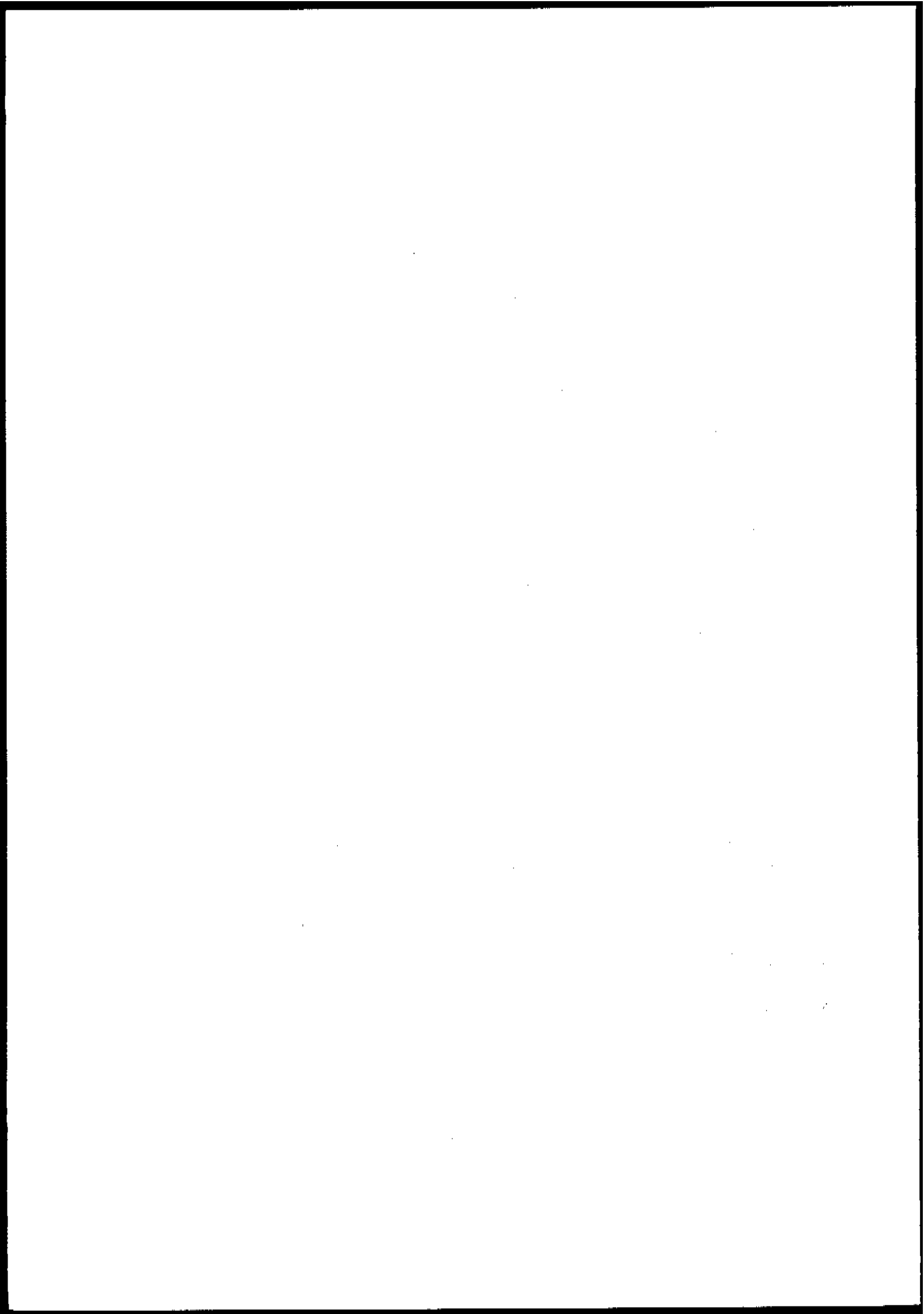
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INTRODUCTION

The mental health programme of WHO has been formulated through a process of consultation within WHO, with other United Nations bodies, with governments, with the scientific community and with various Non-Governmental Organizations (NGOs) (Sartorius, 1978; WHO, 1983a, 1988a, Lambo & Sartorius, 1990).

The programme's objectives are broad and cover three main areas: prevention and control of mental, neurological and psychosocial disorders such as those related to the abuse of alcohol and drugs; mental health aspects of general health care; and psychosocial aspects of overall development. These three areas of concern were identified in the review of the situation in the countries and are often reflected in national programmes. They also open possibilities for collaboration with a variety of other programmes within WHO and with various agencies within the United Nations' system.

For its implementation the programme relies on a network of collaborating centres in more than 60 countries, expert advisory panels, NGOs and various governmental agencies in WHO Member States. The main types of activity are collaboration with governments in mental health policy and programme formulation; transfer of information (through publications, meetings, presentations) relevant to mental health programmes and obtained from a variety of sources; the development of consensus statements of key issues; organization and support of national and international training activities, and an extensive effort to stimulate and coordinate research activities.

The themes for WHO research are chosen among proposals consonant with the medium-term programme of the Organization (WHO, 1988a). The criteria for their selection include the social relevance of the subject of research (e.g., research on prevalent disorders leading to serious disability would have higher priority); the likelihood that such research could not be carried out without WHO's involvement; the probability that useful results will become available and used in the foreseeable future, the interest of institutions and individuals to collaborate with WHO on the topic, and ethical acceptability. Projects promoting cooperation with and among developing countries and bringing together scientists from different regions, political and economic spheres and language areas are given higher priority than those involving a single institution or country.

Research activities included in the programme fall into 5 groups: (1) those concerned with the development of a common language; (2) those concerned with specific clinical, biological and social characteristics of wide-spread mental, neurological and psychosocial problems; (3) those concerned with the development of methods of treat-

ment and prevention of these problems; (4) those concerned with the provision of care; (5) and those dealing with psychosocial aspects of general health care.

Formal reports describing WHO's work - including the activities undertaken by the mental health programme - are produced biennially (WHO, 1992a). They are submitted to the World Health Assembly but do not address research coordinated by WHO in detail. The present report supplements the descriptions given in the biennial reports and provides references to work published by WHO and outside WHO. References to the work described are given at the end of this paper. A list of selected documents and publications by the Mental Health Programme is available on request (WHO, 1990a).

DEVELOPMENT OF A COMMON LANGUAGE

An essential prerequisite for collaboration in the field of mental health is agreement on a language which can be understood and will be used by all concerned. Such an agreement must cover terms used in the description of mental and neurological functioning; diagnosis and classification; indicators of presence and nature of mental, neurological and psychosocial problems (including those related to alcohol and drug dependence) and of the success of measures undertaken for their solution; terms referring to environmental factors or situations relevant in mental health investigations; and the description and use of methods of investigation, (including specific requirements, e.g., how biological samples are obtained).

After some ten years of work, WHO produced a classification of mental disorders, included in the eighth revision of the International Classification of Diseases (WHO, 1978a). The methods used to achieve this included a series of case-history exercises, reviews of the literature and diagnostic practices in many countries and intensive discussions between mental health experts and statisticians from some thirty countries on the most acceptable categorization of mental disorder (Astrup & Oedegaard, 1970; Averbuch et al., 1968; Helmchen et al., 1973; Kramer et al., 1979; Shepherd et al., 1968; Shepherd & Sartorius, 1974; Tarjan et al., 1972; WHO, 1970, 1973a; Rutter et al., 1975; Sartorius, 1976).

To ensure agreement on the content of categories included in the classification, a glossary with definitions of categories of mental disorders listed in the classification was developed in collaboration with experts in sixty-one countries (WHO, 1974; 1978a). In addition, work has been undertaken on standardization of terms in relation to epilepsy and cerebrovascular disorders, in collaboration with experts from different countries and centres collaborating in neuroscience projects (WHO, 1973b, 1978b).

The work on the chapters dealing with mental and neurological disorders became even more intensive in the preparation for the tenth revision of the International Classification of Diseases. This was done in the framework of a major programme launched jointly with the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) of the USA to further develop methods of assessment and classification of mental, neurological and psychosocial problems (Jablensky et al., 1983, Sartorius et al., 1988). This programme involved a large number of leading institutions in various countries and focussed on the development of instruments for the assessment of mental states; on the development of proposals for classification of mental and neurological disorders in the 10th revision of ICD; on the development of criteria and guidelines for diagnosis and classification; and on related lexical work. Close collaboration with a number of NGOs and members of WHO expert advisory panels and groups was established.

The ICD-10 chapter dealing with mental disorders represents a radical advance over the classification of mental disorders contained in the 9th Revision. This became possible because the change in the classification structure of the ICD as a whole allowed a threefold expansion of the number of categories available for the classification of mental disorders. Not only has the number of categories expanded : this time each of them has been accompanied by specific guidelines and criteria for their use. These instructions have been produced in several versions because it became obvious that a single version of the diagnostic guidelines cannot satisfy all the major groups of users of the ICD. Thus, a version for clinicians, one for researchers, one for use in primary health care and another for use by child psychiatric services were produced; these are to be followed by a classification of impairments and disability, a classification and instruments for the assessment of the mentally retarded and a variety of modules which can be used in conjunction with the classification and the instruments or on their own (Sartorius, 1991). The version for clinicians has been published in English (WHO, 1992b). Equivalent translations in a variety of other languages have been produced in French, Spanish, Russian, Chinese, Arabic, Basque, Bosnian, Bulgarian, Croatian, Czech, Dutch, Farsi, German, Greek, Hindi, Italian, Japanese, Kannada, Korean, Portuguese, Rumanian, Serbian, and Turkish, and will be published in 1992-1993.

WHO-sponsored studies on affective disorders carried out in three Asian countries (Nakane et al., 1991) and a series of field tests of ICD-10 have been completed (Sartorius, et al., 1988; Sartorius et al., 1992). The centres which have collaborated with WHO in the production of these instruments and the materials which now accompany the ICD have gradually grown into research and training centres dealing with the assessment, diagnosis and classification of mental disorders. These centres will conduct regular training courses, carry out further research to improve the classification and the diagnostic criteria and develop new instruments necessary for the research and service

community in their country and others using the same language or sharing the same psychiatric tradition and training facilities.

Three lexical publications have also been prepared: the first provides notes about terms which were used in the ICD-9 classification of mental disorders (WHO, 1989a), the second does the same for ICD-10 (WHO, in press) and the third deals with terms used in dealing with problems related to the abuse of alcohol and other drugs (WHO, in press).

In another study of mental disorders and psychological problems encountered in primary health care instruments suitable for the detection and description of such disorders and problems have been produced and are being tested (Sartorius & Üstün in press). Another set of instruments used in a multicentric study dealing with neuropsychiatric consequences of HIV infection will also be released shortly (Maj et al., 1991a).

In a series of projects undertaken over the years and still continuing, instruments have been adapted or developed for a standardized description of mental states and other characteristics of a patient's condition. The most widely used of these instruments has been the description of the patient's present mental state (PSE) (Wing et al., 1974). This instrument, first developed in English by J. K. Wing and his colleagues, has been extensively tested in some twenty countries and now exists in more than thirty languages; the fact that its application closely resembles a clinical interview is an important feature of the method because it allows the acquisition of reliable data about the mental state in a manner familiar and acceptable to both the research worker and the patient. The instrument was initially used to assess functional psychoses; subsequent testing proved its applicability in less severe conditions and most recent work indicates that, with appropriate modifications, it can be used for the assessment of mental disorders of varied aetiology and severity. A shortened version of the PSE has been used with success as a screening instrument in non-patient populations by Wing et al., (1977), Cooper et al., (1977), and by investigators in WHO coordinated studies on the extension of mental health care (Harding, 1978) in Colombia, India, Senegal and Sudan, and on the psychosomatic sequelae of female sterilization in Colombia, India, Nigeria, the Philippines and the UK (WHO, 1984a, 1985).

The PSE has more recently been incorporated into a system for comprehensive assessment in neuropsychiatry (SCAN) (Wing et al., 1990) which has been tested in some 20 countries simultaneously in the framework of the diagnosis and classification project mentioned above (Jablensky et al., 1983). SCAN contains components dealing with psychiatric history and other areas of assessment and can be linked to a variety of modules (e.g., for the assessment of disability). The same project has also produced two other instruments: the Composite International Diagnostic Interview (CIDI) intended for

use in epidemiological research and tested in some 20 countries (Robins et al., 1988), and the International Personality Disorder Examination (IPDE) tested in 16 sites in 13 different countries (Loranger et al., 1991, WHO, 1992c, WHO, in preparation).

The PSE was also used in a major international study on schizophrenia in which some 1200 patients were examined to establish whether similar cases of schizophrenia exist in different cultures and to develop instruments needed to obtain comparable clinical and social data which would allow transcultural mental health studies (WHO, 1973c, 1975, 1979). Several other instruments standardizing the assessment of relevant facts have been developed in the course of this and subsequent studies (Jablensky, 1978, Sartorius et al., 1986). These include screening methods to identify patients with functional psychoses, instruments to assess the psychiatric history and social condition of the patient and others. When the centres involved in the schizophrenia study examined reasons for differences in outcome of schizophrenia between developing and developed countries (Sartorius et al., 1986, Jablensky & Sartorius, 1988) they developed a set of new instruments dealing with the assessment of impairments and disabilities (WHO, 1988b); the perception of mental illness by families in different cultures (Katz et al., 1988); the recording of life events, of follow-up information and of other facts relevant to the investigation of the origin, course and outcome of mental disorders. Most recently a new study was launched to explore the course and outcome of schizophrenia in different cultures over a long period (25 and 15 years). This led to a further refinement of instruments for use in longitudinal studies and the production of several new assessment techniques dealing, for example, with perceived burden in families of schizophrenics (Gulbinat et al., in preparation; Sartorius et al., 1986; Jablensky et al., 1992).

Instruments for the assessment of specific conditions have also been developed. So, for example, an instrument for the assessment of depressive disorder resulted from a multinational study of depression (Sartorius et al., 1983). This instrument was originally tested in five countries and is by now available in some 15 languages. It covers the clinical state, psychiatric history and socio-demographic data and was found to be applicable and acceptable in each of the populations studied. Instruments for the assessment of alcohol- and drug-related problems have been developed in the framework of the projects on community response to alcohol-related problems and in the research and reporting programme on drug dependence.

A brief instrument allowing screening of populations for the presence of alcohol-related problems has been tested and released (Babor et al., 1989). At the same time, a multicentric study has been started to obtain information about cultural factors influencing the use of alcohol and drugs and to develop methods for the collection of information about these factors. A variety of anthropological methods will be used in

this work and it is expected that in addition to improving the instruments for the assessment of health problems linked to the abuse of psychotropic substances it will also be possible to produce a set of methods which researchers may wish to use in adjusting or testing assessment instruments in the field of mental health in a culture different from that in which the instrument has been developed (WHO, 1991a & b).

Instruments for the assessment of impairments, handicaps and associated disabilities in psychiatric patients have been developed in a collaborative study involving eight countries in Europe and Sudan (WHO, 1988b). This set of instruments includes the Psychological Impairments Rating Schedule (PIRS) and the Disability Assessment Schedule (DAS) both designed for use in conjunction with the Present State Examination mentioned above. Two interview schedules have been developed for use with the classification of abnormal psychosocial situations associated with child psychiatric disorders, designed in such a way as to elicit information according to the standardized rules provided in the classification. One of the instruments is for use with parents (WHO, 1990e) and the other for use directly with children (WHO, 1991h).

In addition to developing instruments for the assessment of mental states of individuals, the Organization has also undertaken to develop methods for evaluating the mental health needs and resources of communities and countries. These include a first stage screening procedure for the detection of psychiatric cases in primary health care settings (for both adults and children), an interview schedule for use with key informants, to assess their attitudes and obtain help in case identification, and a method for the assessment of the effects of psychiatric illness on family members (Harding et al., 1980; Wig et al., 1980). These instruments have proved to be applicable and acceptable in a number of developing countries. Equivalent versions of the whole set of instruments exist in Arabic, English, French, Hindi, Tagalog, Portuguese and Spanish. It is expected that the earlier mentioned CIDI will also be widely used in community surveys of mental disorders (WHO, 1990b).

Methods of describing needs and resources for mental health care in defined catchment areas have been developed in a project coordinated by the WHO Regional Office for Europe in collaboration with investigators from most European countries. In each country teams of research workers carried out a census of patients and facilities providing care and studied pathways of patients in the services in a geographically defined area (WHO, 1987). Routinely available data were used in this investigation, which has resulted in several publications. This work also led to the production of a classification of mental health services (de Jong et al., 1991). In another study, data available at national level were examined to define a minimal set of information necessary to monitor mental health needs for purposes of planning and evaluating national programmes concerned with mental health.

The response of communities to major psychosocial problems - such as those related to alcohol consumption - needs careful assessment prior to intervention programmes. A study on community responses to alcohol-related problems has been carried out in Mexico, Scotland and Zambia, and its report indicated ways of collecting data and problems likely to arise in assembling and interpreting such data (Hawks, 1978). Instruments for the assessment of drug dependence problems have also been developed in collaborative projects (Hughes et al., 1980, Arif et al., 1987).

Instruments and protocols for the epidemiological assessment of neurological problems constitute another area in which there is a need to achieve agreement, and studies using a protocol developed by WHO have been carried out in a variety of countries (Osuntokun et al., 1982a & b, Cruz et al., 1984, Wang et al., 1983). A set of schedules for the assessment of quality of care is also being developed (WHO, 1991c). These schedules cover the functioning of different components of the mental health care system and will be released after the completion of feasibility tests and translation. They will be recommended for use in conjunction with WHO's schedules for the assessment of mental states, disability and quality of life in disease.

Finally, there is another area of standardization which has been given attention - biological investigations in psychiatry. Centres collaborating in the WHO projects in biological research in psychiatry have agreed on several such methods and use them in investigations of biological factors possibly involved in the pathogenesis or treatment of mental disorders (WHO, 1978c, d). Standardization of this kind of work covers details of techniques for taking samples of blood, urine, CSF and other biological material and transporting them from laboratory to laboratory, often in different countries. Similar work has been initiated in the programme concerned with the research on and control of neurological disorders (WHO, 1978e, f).

CHARACTERISTICS OF MENTAL AND NEUROLOGICAL DISORDERS AND OF PSYCHOSOCIAL PROBLEMS OF MAJOR PUBLIC HEALTH IMPORTANCE

(a) Schizophrenic syndromes

WHO's first major research effort was concerned with schizophrenia; the International Pilot Study of Schizophrenia (WHO, 1973c) was launched to establish whether it is feasible to carry out collaborative projects in psychiatry using a commonly agreed protocol with the active involvement of investigators from different countries. Centres in China, Colombia, Czechoslovakia, Denmark, India, Nigeria the UK, USA and USSR participated in a study in which a series of patients consecutively admitted to psychiatric facilities were examined by means of standardized research instruments. The

study proved that international collaboration in psychiatric research is feasible. It also produced instruments for standardized assessment of patients in different cultures and contributed to our knowledge about schizophrenia by demonstrating that: (i) similar schizophrenic syndromes exist in all the cultural settings included in the study; but that (ii) the course and outcome of schizophrenia show significant differences between countries - patients in developing countries having on the whole a more favourable course and outcome than their counterparts in the developed world (WHO, 1973c, 1979).

The centres participating in this programme were then engaged in a series of studies aiming to explore some of the possible reasons for the differences in outcome. To exclude errors in sampling as an explanation of differences, an incidence study was launched in geographically defined areas involving all agencies which were likely to be contacted by patients and their families (Sartorius et al., 1986; Jablensky et al., 1992). Other studies to test hypotheses explaining differences in outcome include an investigation of emotional interaction in families in different cultures (Wig et al., 1987 (a & b), Leff et al., 1987); a project exploring the frequency and type of stressful life events in different settings (Day et al., 1987); and a study of social and individual factors likely to contribute to the development of impairments and disabilities in patients with schizophrenia (Jablensky et al., 1980). In another study the frequency of specific physical disorders - such as cancer, cardiovascular disease, and congenital anomalies - in schizophrenic patients was examined using a record linkage technique (Dupont et al., 1986, Nakane et al., 1986).

The long-term follow-up study which started in 1991 will attempt to obtain information about patients assessed in previous WHO studies: in all more than 3000 patients in 16 countries will be included in this study (Gulbinat et al., in preparation).

Immunological and other studies of schizophrenia have also been undertaken (Sartorius, 1988). A network of centres located in Basle, Copenhagen, Epsom, Gröningen, Moscow, Munich, and Washington collaborated in a study which showed that the levels of serum antithymic activity (ATA) were high among schizophrenic patients and their relatives. High ATA was therefore considered by the investigators as an indication of high risk for schizophrenia (Koliaskina et al., 1980). ATA values did not discriminate between patients with schizophrenia and normal persons.

(b) Acute psychoses

Acute psychoses, often described as the most frequent reason for admission to hospitals in developing countries have been investigated in a multicentre study involving more than a thousand patients in centres in Cali (Colombia), Aarhus (Denmark), Bali (Indonesia), Ibadan (Nigeria), Manila (Philippines), Honolulu (USA), and six centres in

India. The study obtained information useful for the psychopathological delineation of the syndrome and will facilitate sociological, clinical and biological studies of this condition. Methods developed in the study of Determinants of Outcome of Severe Mental Disorders and other WHO projects have been used in this investigation, with appropriate additional parts developed on the basis of an analysis of case histories of patients with acute psychoses seen in the centres collaborating in the study (Cooper, J. et al., 1990).

(c) Alcohol-related problems¹

The growing realization that alcohol-dependence syndromes represent only a part of alcohol-related problems ranging from cirrhosis to traffic accidents, as well as recent developments pointing the way to effective intervention, revived WHO's commitment to action in this field. First, a research project to explore the response of communities to alcohol-related problems was carried out in Mexico, Scotland, and Zambia; instruments were developed for the acquisition of data relevant to the assessment of the size and nature of problems and responses in geographically defined communities (Hawks, 1978). The project also produced a catalogue of interventions which were used in the community studies.

Arising from this work, a number of more recent studies have examined the effectiveness of particular interventions in a variety of cultural settings. Of these, the most complex has been concerned with the identification and management of individuals who experience alcohol-related health problems but without necessarily being totally alcohol-dependent. The first phase of this study involved centres in Australia, Bulgaria, Kenya, Mexico, Norway, and the USA; it has led to the development of a simple screening instrument (Saunders & Aasland, 1987). In the second phase, these six centres have been joined by four more (in Costa Rica, UK, USSR and Zimbabwe) to assess a range of simple treatment interventions suitable for delivery in primary health care settings (Babor et al., 1989).

Another study examined the effectiveness of health promotion approaches to the prevention of alcohol-related problems. Centres in Botswana, Costa Rica, Fiji and Sri Lanka collaborated in the preparation of assessment guidelines based on the results of the research undertaken at national level in these four countries. Linked to this study

¹Activities concerning the prevention and control of alcohol and drug-related problems were the responsibility of the mental health programme until 1 September 1990 when a special programme - the WHO Programme on Substance Abuse - was established. The description of work given here covers only activities until that date.

has been an evaluation of the relative effectiveness of peer-led and teacher-led approaches to alcohol education for young people in Chile, Norway, Swaziland and Western Australia. The results of this study (Perry & Grant, 1988) are encouraging, showing that peer-led education, adapted to the needs of developing countries, produces positive changes, not only in terms of increase in knowledge, but also in stimulating other health-oriented attitudes and behaviour.

In collaboration with researchers from 15 countries, WHO also re-analysed data from some 40 longitudinal studies on drinking behaviour and alcohol-related problems (Fillmore et al., 1988). The impetus for this work came from a 1984 task force meeting of the Advisory Committee on Medical Research: subcommittee on biobehavioural and mental health research (WHO, 1984b). Utilizing a research methodology based on techniques of meta-analysis, this project explored the inter-relationships between culture, history, chronological age, and alcohol use and abuse.

Through a series of small pilot studies of patients contacting emergency departments in a range of countries in the Americas, Africa and the Western Pacific, WHO examined the role of alcohol in the causation of accidental injuries. This work was supported by the collection and dissemination of health and other (e.g., trade) statistics concerning alcohol-related problems (Walsh & Grant, 1985) and by earlier studies carried out jointly with the Finnish Alcohol Foundation (Bruun et al., 1975) and by a major review of approaches to the prevention of alcohol-related problems in some eighty countries (Moser, 1980). The WHO Regional Office for Europe also collaborated in an International Study of Alcohol Control experiences carried out jointly by centres in Europe, the UK and Canada (Finnish Foundation for Alcohol Studies and WHO Regional Office for Europe, 1977).

More recently the Organization has also initiated biological investigations of alcohol problems. For example, ten institutions took part in a WHO study on alcohol dependence syndromes in different populations. The institutions were located in Asmara, Basel, Casablanca, Lucknow, Manila, Mexico City, Moscow, Nedlands, Sapporo and Zagreb. The aim of the study was to measure the isoenzyme activity of aldehyde dehydrogenase (ALDH-1 and ALDH-2) and its correlation with alcohol dependence, particularly in Asian populations. Among the Japanese inherited deficiency of ALDH-1 was found in 43% (50/117) of normals, 33% (27/82) of schizophrenics, but only in 4% (5/113) of alcoholic dependent persons. This lends support to the notion that ALDH-1 deficiency (which produces the flushing syndrome) inhibits the development of a drinking habit and alcohol dependence (Yamashita et al., 1990).

(d) Depressive disorders

A programme of investigation on depressive disorders was started in 1972. This programme contains studies with an epidemiological orientation, biological studies and operational research (Sartorius, 1975, 1979).

Among projects with an epidemiological orientation, the largest was a study of depressive patients in four different countries. Some 550 patients with depressive conditions were included in the study. All of them were assessed by means of a standardized method of assessment developed by the centres in Basle, Montreal, Nagasaki, Teheran and Tokyo, in collaboration with WHO (Sartorius, et al., 1983). The psychopathological pictures of the patients in the different countries showed remarkable similarity. A ten year follow-up study of the patients has been carried out and its results will be published shortly (Thornicroft & Sartorius, in press).

Another set of studies explored the biological characteristics of depressive disorders. Genetic linkage of bipolar manic-depressive illness and red/green colour blindness was examined on sixteen pedigrees identified and analyzed in a collaborative study involving centres in Basle, Bethesda, Brussels and Copenhagen. This study led to the conclusion that bipolar illnesses are heterogeneous; it also illustrated one of the advantages of collaborative studies which can help speed up the accumulation of data on rare cases - such as those in which bipolar illness and colour blindness coincide - in which an important issue can be examined (Gershon et al., 1980). In another biological study human lymphocyte antigens in patients with affective disorders were studied in four centres: the study failed to show any consistent results. Possibilities for developing a biological classification of depression were also explored in a study on differences between endogenous and non-endogenous depressive patients in responses to the clonidine growth stimulation test (WHO, 1978c, d). Another study dealt with the effectiveness of antidepressants in the treatment of depressive conditions in patients living in different geographical locations (see below).

Two studies related to the biological markers of depressive disorders have been completed. In the first, centres in Athens, Brussels, Mexico, Munich, Naples, Sapporo, Tokyo and Zagreb examined sleep-EEG abnormalities in major depression. Compared with controls, depressed patients showed sleep-continuity disturbances (such as increase in sleep-onset latency), decrease in total sleep time and in sleep efficiency. Stages 2 and 3 were reduced in depressed patients, REM latency was shortened and REM density increased. These findings confirmed the presence of specific sleep-EEG disturbances in major depression and the influence of the severity of illness on sleep continuity and REM sleep (Mendlewicz & Kerkhofs, 1991). In the second study centres in Athens,

Basle, Brussels, Copenhagen, Irvine, Milan/Naples, Moscow, Munich and Tokyo examined a total of 154 depressed patients and 130 healthy controls to assess whether the numbers of imipramine platelet binding sites can be used as a biological marker of endogenous depression. This could not be proven but the possibility that differences in the number of binding sites may exist among subgroups of depressed patients was however not dismissed (WHO, 1990c).

(e) Drug dependence¹

An important component of projects dealing with the implementation of country-wide drug demand reduction programmes² is evaluative research.

To be able to undertake it, a project was launched in 1972, aiming to develop instruments and techniques necessary to enable countries to report on changes in drug dependence problems and learn about trends in other parts of the world. In carrying out this work, WHO has collaborated with centres in Burma, Canada, India, Indonesia, Malaysia, Mexico, Pakistan, Thailand, the USA and others. This work has so far resulted in an internationally tested instrument for surveys of drug use in student populations (Smart et al., 1980); in a reporting card which can be used in treatment facilities for drug-dependent people; in the definition of a "core" data-set for surveys and case reporting; and in protocols for the evaluation of results of treatment in different settings (Hughes et al., 1980).

Other studies examined the dependence liability of thebaine (WHO, 1978e); the pharmacological and clinical effects of khat (WHO, 1980, Khan & Kalix, 1984); the clinical and social consequences of long-term use of cannabis (Wig & Varma, 1977); and the effects of chewing coca leaves and using coca paste (Arif, 1987). Instruments and methods necessary to assess public health and social problems associated with the use of psychotropic substances have been developed (Idänpään-Heikkilä et al., 1987). These methods will be used in studies undertaken to help WHO fulfill its responsibilities under the Convention on psychotropic substances which require WHO to make recommendations to the United Nations Economic and Social Council concerning international

¹Activities concerning the prevention and control of alcohol and drug-related problems were the responsibility of the mental health programme until 1 September 1990 when a special programme - the WHO Programme on Substance Abuse - was established. The description of work given here covers only activities until that date.

²These projects are undertaken in cooperation with countries and often involve the United Nations Division on Narcotic Drugs and the United Nations Fund for Drug Abuse Control, as well as UN specialized agencies such as WHO, International Labour Office, United Nations Educational, Social and Cultural Organization, and the Food and Agriculture Organization.

control of these medicaments.

The use of methadone in the treatment of opiate dependence has been subject to international review (Arif and Westermeyer, 1989). In addition, centres in a number of American and European countries are collaborating in an assessment of the relative importance of a variety of risk factors for the development of drug dependence. This work has been given renewed impetus by the emergence of the AIDS epidemic, spreading in part through the use of contaminated needles and syringes by drug dependent people. A series of pilot studies in major cities where HIV infection rates are thought to be linked to rates of drug abuse have been undertaken to learn about the epidemiology of intravenous drug use, which is of importance to WHO's programme on the prevention and control of substance abuse and of its global programme on AIDS.

Plans for research on alcohol and drug-related problems have recently been reviewed in conjunction with the effort to further strengthen WHO's programme to prevent and control these problems (WHO, 1990d).

(f) Neurological disorders

A programme concerned with the control of neurological disorders was started in the early 1970's and has involved leading centres in Canada, France, Mexico, Nigeria, Senegal, Switzerland, the USA and USSR (Bolis, 1978a, b). The centres were engaged in several WHO-coordinated research activities including a study on peripheral neuropathy and a study on transient ischemic cerebrovascular attacks. Following a meeting of a study group on applications of neurosciences in the control of neurological disorders (WHO, 1978f), epidemiological surveys of neurological disorders in African and other developing countries have been carried out (Román et al., 1991, Osuntokun et al., 1982a). Currently, epilepsy and disorders due to the affection of the CNS by tropical infections and parasitic diseases and by other environmental noxae are seen as conditions which deserve priority in WHO's programme: work on problems related to their prevention and treatment is therefore undertaken simultaneously with neuroepidemiological studies and dissemination of information (WHO, 1989b).

(g) Mental disorders frequently seen in general health care

In addition to studies aiming to develop strategies for the extension of coverage by mental health services (see below) WHO has recently undertaken a major project to produce knowledge about the types and frequency of psychological problems seen in primary health care in different countries. Some 25,000 patients were screened in general

health services to arrive at large samples of people with mental disorders cared for by the general health services. The patients will be examined using standardized methods and followed up over a period of one year (Sartorius et al., in press).

(h) Child mental disorders

In the past decade WHO has carried out or stimulated several comprehensive studies of the situation concerning mental health of children in different countries (Sartorius and Graham, 1984). The results of these studies have helped in planning national child mental health programmes.

Other studies dealt with more circumscribed topics. In four countries in the Western Pacific, for example, a study on minimal brain damage and its consequences for child growth has been undertaken (Matsuura et al., 1989). A classification of abnormal psychosocial situations has been developed for use as an axis in the multiaxial classification of childhood mental disorders (van Goor-Lambo et al., 1990). This classification has first been tested in the U.K., Germany and the Netherlands. Subsequently tests assessing the acceptability, ease of use and reliability have taken place in other countries. The classification is accompanied by glossary descriptions and diagnostic guidelines which will be translated into the official languages of WHO and possibly into others (WHO, 1986a).

A multicentric study involving eight centres in six countries defined indicators of psychosocial growth and development. These will be included in the growth charts used in the maternal and child health services of the countries concerned (WHO, 1989c).

(i) Dementias

Twelve countries are currently involved in investigations aiming to produce data about the epidemiology of dementia and to test the methods which can be used in the assessment of mental disorders in old age. (Orley, 1990, Bertolote & Orley, 1990). In the past few years special attention has also been given to issues related to the assessment, frequency and outcome of mild cognitive disorders because it appears that these disorders are more frequent and disabling than was previously thought, because they are present as a leading symptom in a variety of states and because several treatment methods are being proposed for their management (Bertolote & Orley, 1990).

(k) HIV-related neuropsychiatric disorders

Several disorders due to affections of the nervous system by viral and other agents have assumed much importance in recent years. The most important of these is the

group of neuropsychiatric problems linked to HIV infection, and WHO has recently launched a study of the frequency, type and outcome of such disorders in six countries. Two of the centres collaborating in these investigations are in industrialized countries (Germany and the USA), and the other four in the developing world (Brazil, Kenya, Thailand, and Zaire). The study examines and compares groups of people with HIV infection, without any clinically relevant signs, groups with AIDS and groups of seronegatives. Male and female subjects differing in their education are being included in the study. The study will for the first time obtain information about HIV-related neuropsychiatric problems in male and female populations, differing in their cultural characteristics, education and other attributes. (Maj et al., 1991a & b).

(1) Suicide

Trends in suicide rates are examined at regular intervals (WHO, 1982, WHO, 1983b). In addition, WHO has brought together researchers to examine various important issues in suicide trend analysis, e.g., the reliability of coroner's reports, factors influencing national statistics, etc. (Brooke, 1974). A WHO multicentric study on parasuicide involving 16 centres in 13 countries has been carried out by the WHO Regional Office for Europe (Platt et al., 1992).

DEVELOPMENT AND IMPROVEMENT OF TREATMENT METHODS

A study of the effectiveness of antidepressant medication has been undertaken by a network of centres in Basle, Bethesda, Copenhagen, Epsom, Gröningen, Moscow and Munich. In this study, plasma levels of amitriptyline have been measured and correlated with clinical responses assessed with standardized instruments (Coppen et al., 1978): no significant correlation could be established.

A set of studies dealing with the effectiveness of medicaments have been undertaken. The largest of these were the WHO coordinated studies of the effects of psychotropic drugs in different populations (Sartorius, 1981, WHO, 1986b, 1988c).

Anecdotal accounts and occasional reports in the literature seem to indicate that populations living in settings differing in climatic, nutritional and sociocultural conditions require significantly different dosages of common psychotropic drugs. The importance of this finding is obvious and WHO carried out double-blind collaborative studies on dose effectiveness of the frequently used antidepressants and neuroleptic medicaments in several countries. A set of instruments for the assessment of the clinical conditions and their changes was produced using some of the schedules mentioned above and some newly developed techniques. The effectiveness of antidepressant drugs was examined in

centres in Basle, Bombay, Cali, Lucknow, Nagasaki, Nashville and Sapporo. Three striking findings emerged: first, that antidepressant treatment is effective in a vast majority of cases; second, that there are few, if any, differences in treatment effects between the low and high dose of antidepressant drugs; and third, that most of the differences in dosage across countries can be explained by diagnostic and therapeutic habits of psychiatrists (WHO, 1986b). The effectiveness of benzodiazepines was also examined in some of the centres participating in these investigations. It clearly demonstrated the value of counselling and the superiority of the combined use of counselling and medication use over the use of medications alone (WHO, 1988c). It also produced evidence about instruments used in the assessment of effects of treatment of mild mental disorder in different cultures. Other studies in this area include the investigation of the therapeutic "window" of neuroleptics, the effects of Naloxone on schizophrenic and manic syndromes (Pickar et al., 1989) and surveys of the use of psychotropic drugs in different populations.

ORGANIZATION OF MENTAL HEALTH SERVICES: ASSESSMENT AND DEVELOPMENT OF NEW MODELS

A major focus of WHO's cooperation with countries is the improvement of mental health care. Several studies have been initiated to produce knowledge which can be used to make services more rational and cost effective. One of the most important among them was the multinational study aimed at developing new strategies for the provision of essential mental health care in developing countries. Teams in Colombia, India, Senegal and Sudan had been the first participants in this study; others in Brazil, Egypt and the Philippines joined it soon afterwards. In each country an area was selected, and the extent and nature of mental health problems in the communities were assessed in a standardized and comparable manner. On the basis of this information "priority" conditions were selected using as criteria frequency, harmful consequences, community concern and availability of effective, simple and inexpensive treatment. Specific, short training courses were designed to instruct health workers already active in the area on how to detect these "priority" mental health disorders and how to deal with them effectively (Sartorius & Harding, 1983; WHO, 1984c). These studies demonstrated that decentralized, non-specialist mental health care provided largely by auxiliary health care workers can be effective and acceptable to both health workers and the community.

WHO has also carried out studies to examine whether recording of psychological and social problems (e.g., by using an appropriate multi-axial classification) changes health workers' practices and attitudes towards such problems (Clare et al., 1992). These

studies carried out in centres in Belgium, Canada, the Philippines and Zambia also measured the ease of use and appropriateness of multiaxial classifications for mental health problems in the context of primary health care (Sartorius & Gulbinat, 1984).

In conjunction with this study, the usefulness of decision tree flow charts was examined in a study dealing with methods of management of mental disorder in primary care. A set of flow charts and an instruction manual for their use were produced (Essex & Gosling, 1982); these were evaluated in Lesotho in 1986 (Meursing & Wankiiri, 1988) and in other countries. The study compared the prescribed management of a series of psychiatric cases presenting for the first time as outpatients, as set out by general nurses trained for 13 hours in the use of the flowcharts with that prescribed by highly trained mental health professionals using conventional diagnostic processes. The study demonstrated that with few exceptions, the nurses management plan was not seriously different from that of the mental health professionals. The differences which were found indicated in what ways the charts and training should be modified.

Parallel to studies of mental health services in pilot study areas WHO and its Regional Office for Europe have made a continuous effort to define the roles of different types of health workers in the provision of mental health care. A series of publications describing them have appeared over the years. The Regional Office for Europe has also undertaken assessments of specific types of services, e.g., crisis intervention units (Cooper, 1979), forensic services (WHO, 1977) and others.

An investigation of the understanding and use of the concept of dangerousness by psychiatrists, jurists and law enforcement personnel has been carried out in six countries (Brazil, Denmark, Egypt, Swaziland, Switzerland and Thailand). The three main components of this study were (a) a review of legal provisions; (b) a description of the processes used to arrive at a conclusion about the dangerousness of a mentally ill person (Montandon & Harding, 1984); and (c) an assessment of the degree of reliability (i.e., inter-rater agreements) which experts can achieve in their assessments. This study was initiated after a thorough review of mental health legislation in some forty countries which pointed to the assessment of dangerousness as a key element in mental health legislation (Curran & Harding, 1978).

Another set of investigations aiming at facilitating care provision dealt with the improvement of information about the functioning of mental health services. These studies helped to develop an internationally acceptable and applicable method of collecting and presenting useful data about mental health needs and resources at national

level. Teams of investigators in Bulgaria, Ghana, Kuwait, Panama, Papua New Guinea, Thailand, and the USA were involved in this study (Gulbinat, 1984).

In addition to the trial application of the set of instruments developed to assess quality of mental health services (see above), WHO has started a descriptive study of mental health services in Australia, Canada, Italy, the Netherlands, Spain, UK and the USA. The main aims of the study are to identify the role which consumers can play in the organization of health services and to establish the effects which the introduction of community mental health services has on the well-being of consumers. A study of attitudes towards the mentally ill and of the consequences of changes of such attitudes on the care is linked to this work (WHO, 1991d).

In support of mental health service development WHO has also undertaken a study of mental health legislation in 50 countries. This work will be linked with the efforts to introduce quality assurance schedules and standardized assessments of the mental state and its changes under treatment.

An extensive study of methods used for the evaluation of treatment in psychiatry has been undertaken. The results of this review have been published (WHO, 1991e, Sartorius et al., in press). The findings of this review will also be used in the preparation of a set of documents on essential treatments for psychiatric disorders.

PSYCHOSOCIAL ASPECTS OF GENERAL HEALTH CARE AND HIGH-RISK GROUP RESEARCH

One of the objectives of the Mental Health Programme deals with the psychosocial components of health and development programmes. It is being pursued by several means. One of them is the organization of workshops (e.g., Harding, et al., 1979) which involve health planners and behavioural scientists and in which specific health service delivery issues are being examined to establish possible contributions from a psychosocial point of view. Another approach is the establishment of centres at national level; yet another the preparation of critical reviews of knowledge in the field (e.g., Hamburg & Sartorius, 1989; Shepherd & Sartorius, 1989). WHO has also launched several studies dealing with special problems in this area.

One such study dealt with psychosomatic consequences and perceptions of tubal ligation, a widely used fertility regulation intervention (WHO, 1984a, WHO 1985). Another is underway in several European countries to examine the nature and frequency of problems in children of transnational and intranational migrants. The investigations on high-risk groups also include studies on the emotional interaction in families with one or more members suffering from a severe disease (WHO, in preparation).

In the period 1983-1985, WHO developed a set of criteria to judge the quality of care provided in day centres for children (nursing and preschool). The reliability of the criteria in use has been examined and measured by comparing the ratings of two investigators on separate occasions. This was carried out in two cities (Athens and Ibadan) using about 30 day centres in each. The schedule containing the criteria has been released for general use in 1990 (WHO, 1990f).

The frequency and impact of life events on patients with mental disorders were studied to obtain information on differences among cultural settings in the frequency of life events and on coping strategies employed to overcome their negative effects (Day et al., 1987).

A series of other projects have been initiated recently. One aims to develop a method of measuring quality of life. The WHO instrument for the assessment of quality of life (WHOQOL) will be composed of a core part and of modules for use in special situations. It is expected that the instrument will be tested in a number of centres and that it will focus on quality of life in chronic disease, on quality of life in highly stressful situations (e.g., in refugee camps), on quality of life in those who provide care to people with a chronic disease and on quality of life of people who have difficulties in communicating (e.g., the severely mentally retarded). Preliminary work on this study has started and its completion is expected by the end of 1993 (WHO, 1991f). Another one aims to establish a methodology for the assessment of the quality of mental health care (QAC), from the mental health policy through services providing different types of mental health care. Instruments have been prepared and preliminary work for testing their methodology has started (WHO, 1991c, Sartorius, 1992).

WHO has also started work on psychosocial aspects of disasters and other situations of extreme psychosocial stress. Guidelines for psychosocial interventions in disasters have been published (WHO, 1991g). A review of work on risk perception and methods for risk perception assessment has been finalized in preparation for a study on risk perception in relation to environmental health programmes (WHO, in preparation). Work on the prevention of violence in high schools (Korufli et al., 1991) and on other aspects of violence (e.g., violence towards women) have been supported. Studies of the housing environment, family functioning and child mental health have been carried out in Singapore and Shanghai (Ekblad, et al., 1991).

CONCLUSION

The tale about Achilles and the tortoise exemplifies the difficulty of catching up with a point in a progression regardless of the amount of effort: descriptions of problems (and programmes) are outdated even before they are finalized. The review presented here is no exception: it must therefore be seen as a snapshot taken at a randomly selected point in a process, a snapshot which reminds us of the past and of the future and makes us aware of the imperfections of the apparatus which we are using to capture the wealth of events and features contained in a moment of time.

A central goal of WHO's engagement in mental health research is the creation of a worldwide network of centres and individuals collaborating in research and training on topics of public health importance in the field of mental health. There is no doubt about the achievement of this goal. WHO has been instrumental in establishing the largest ever such network of centres and individuals which is continuing to grow, strengthen its ties and produce results which are useful for science and practice.

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**Sites of WHO-designated MNH Collaborating Centres
and Centres participating in MNH Programme activities without formal designation**

AFR	AMR	EMR	EUR	SEAR	WPR
Lobatse (Botswana), Accra (Ghana), Eldoret and Nairobi (Kenya), Maseru (Lesotho), Windhoek (Namibia), Abeokuta, Ibadan and Lagos (Nigeria), Manzini (Swaziland), Lusaka (Zambia), Kinshasa (Zaire), Harare (Zimbabwe),	Campinas, Porto Alegre, Rio de Janeiro, Salvador and Sao Paulo (Brazil), Hamilton and Verdun (Canada), Santiago de Chile (Chile), Call (Colombo), La Habana (Cuba), Mexico, Panama, San Juan (Puerto Rico), Montevideo (Uruguay), Athens, Atlanta, Austin, Baltimore, Bethesda, Brighton, Boston, Bronx, Farmington, Galveston, Honolulu, Houston, Los Angeles, Orange, Minneapolis, New York, Orangeburg, Richmond, Rochester, Rockville, St-Louis, Tampa, Seattle, Washington and White Plains (USA), Nicosia	Nicosia (Cyprus), Alexandria and Cairo (Egypt), Casablanca (Morocco), Rawalpindi (Pakistan), Riyadh (Saudi Arabia), Khartoum (Sudan), Tunis (Tunisia),	Klosterneuburg and Vienna (Austria), Bruxelles, Leuven, Liege, Louvain-en-Woluwe (Belgium), Sofia (Bulgaria), Prague (Czechoslovakia), Hillerod, Risskov and Copenhagen (Denmark), Kuopio (Finland), Paris (France), Berlin, Essen, Frankfurt a/Main, Jena, Kaufbeuren, Lübeck, Mainz, Mannheim, Munich and Rostock (Germany), Athens (Greece), Budapest (Hungary), Dublin (Ireland), Jerusalem (Israel), Milan, Naples, Pisa, Rome, Verona and Venezia Giulia (Italy), Luxembourg, Amsterdam, Groningen, Leiden, Maastricht, Utrecht, Venray (Netherlands), Oslo (Norway), Warsaw (Poland), Gondomar and Lisbon (Portugal), Almeria, Madrid, Oviedo, Santander and Sevilla (Spain), Hisinga Backa, Huddinge, Orebro and Stockholm (Sweden), Basel, Bern, Geneva, Lausanne, Neuchâtel and Zürich (Switzerland), Ankara (Turkey), Cardiff, Guildford, Harrow, Leicester, Liverpool, London, Manchester and Nottingham (U.K.), Moscow (Russia), Zagreb, Ljubljana (Yugoslavia),	Bangalore, Chandigarh, Lucknow and Madras (India), Jakarta and Ujung Pandang (Indonesia), Colombo (Sri Lanka), Bangkok and Phnanh Nikhom (Thailand),	Canberra and Sydney (Australia), Beijing, Nanjing and Shanghai (China), Hong Kong, Nagasaki, Sapporo and Tokyo (Japan), Seoul (Korea), Wellington (New Zealand),

¹This table includes both sites of WHO-designated Collaborating Centres and of Centres participating in activities of the WHO Mental Health Programme but which have not been formally designated.

²A comprehensive list (with summary descriptions) of formally designated Centres collaborating with the WHO MNH Programme is available on request (document MNH/NAT/88.4 Rev.2).