

REPORT OF
THE INTERNATIONAL
PILOT STUDY
OF SCHIZOPHRENIA

Volume 1



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A limited number of copies of this report and the research schedules described in it are available on request from Dr Norman Sartorius, Mental Health Unit, World Health Organization, Geneva, Switzerland

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HISTORICAL PERSPECTIVE

In 1959 WHO convened an expert committee on the epidemiology of mental disorders (WHO, 1960). This committee reviewed the existing knowledge and stressed the need for reliable and valid data on the incidence and prevalence of mental disorders. The committee recommended that WHO should render assistance to activities concerned with psychiatric epidemiology in various countries of the world and coordinate and initiate research in this field. The committee felt that WHO should concentrate on problems which can be better solved through international coordination than by a single group and that it should explore the unique opportunities found in particular countries that require supplementation of the local effort. A series of studies were suggested which included studies aiming at a refinement of techniques of observation, classification, recording, and counting with regard to psychiatric disorder and the elucidation of problems of research design and studies of the influence of the sociocultural environment on the clinical condition and course of mental disorders. Other suggestions were made concerning studies on operational problems, such as the evaluation of psychiatric services and clinical research on problems of causation of psychiatric disorders.

The first steps to implement these recommendations were two important publications. One, by Dr D.D. Reid (1960) concentrated on epidemiological methods in the study of mental disorders. The second, by Dr T.Y. Lin and C.C. Standley (1962) focused on the scope of epidemiology in psychiatry.

Almost at the same time an informal meeting took place in Dr M. Kramer's office in NIMH and Drs S.W. Greenhouse, M. Katz, T.Y. Lin, B. Pasamanick and J. Zubin discussed the desirability and feasibility of studying the diagnostic process as a basis for developing effective methods for psychiatric epidemiology and cross cultural research.

A number of consultations and discussions followed that occasion until in 1964 WHO organized a Scientific Group meeting (WHO, 1964). This group, which was chaired by Dr R. Felix, recommended priorities for mental health research to WHO. The group put high priority on the development of methods necessary to carry out epidemiological research in a cross cultural setting. After the meeting of the Scientific Group in 1964, Dr Lin, in consultation with leading experts from several countries including Drs G.M. Carstairs, W. Caudill, E. Essen-Möller, R. Felix, M. Greenblatt, E. Gruenberg, M. Kramer, A. Lewis, E. Strömngren, J.K. Wing, L. Wynne and others, prepared the WHO meeting of investigators on comparative research on specific mental disorders in 1965. Discussion centred on WHO's research programmes in epidemiology of mental disorder and social psychiatry and an outline was produced for a long-term plan of studies in this area. Three basic papers were prepared for this meeting, one by Dr Lin, another by Dr Wing, and the third one by Dr Caudill. Consultations and work continued after this and several months later Drs Lin, Strömngren, Wing and Wynne worked out an initial plan of the IPSS which was presented to the Meeting of Investigators in the IPSS in 1966 (WHO, 1966). At the same time a grant was applied for and received from NIMH and

thus the funds necessary for the project were made available using three sources: WHO, NIMH and the collaborating centres. Soon after that the IPSS started.

The spirit of collaboration which was so very important in producing the initial proposals continued to be an essential factor in the further development of this study. Each important decision was reached after many consultations and many people made contributions at various stages of the project.

Some of the collaborating investigators and consultants are no longer connected with this project but their work and achievements were significant at the time when they were made and remain such today.

AUTHORS' PREFACE

The collaborating investigators have agreed that it would have been misleading to single out any one person as editor or principal author of this volume. Such a practice they felt would have been against the spirit of the project which from the earliest days has been a collaborative one. No effort has been made to distinguish between small and great contributions: rather they were all welcome. This spirit is well in line with the policy of WHO which has always been one of collaboration and coordination of efforts.

Each chapter of this book was drafted by someone delegated for the purpose. A list of chapters with names of the authors of the drafts are given below. In addition an editorial working group consisting of Drs T.Y. Lin, N. Sartorius, J. Strauss, E. Strömngren and J.K. Wing was established in 1969. This working group has made suggestions and comments about each of the drafts made by the various contributors who then redrafted their chapters and this was repeated several times until a pre-final draft was produced which was edited first by Dr Wing and then by the editorial working group. Dr R.W. Shapiro, Mr M. Kimura and Dr Sartorius gave the volume the final scrutiny and Mrs S. Shafner evened out the differences in style and improved the volume from the linguistic point of view.

Another important mechanism in the complicated process of producing this report was the circulation of its draft to all the collaborating investigators. For two drafts each of the collaborating investigators was requested to give detailed comments on a particular chapter. After that, on several occasions all the collaborating investigators commented on the complete drafts and again made many valuable suggestions.

On two occasions an entire draft was discussed by a full meeting of collaborating investigators: the third draft was discussed in February 1971 and the final draft in November of the same year.

The report was retyped several times and the secretaries of the Mental Health unit listed on page vi deserve our cordial thanks for their hard work, patience and endurance in this tedious and exacting task.

The chapters and the people who drafted them are listed below.

- Chapter 1: Aims, Scope, and Evolution of the International Pilot Study of Schizophrenia - Drs J.K. Wing and T.Y. Lin
- Chapter 2: Diagnosis and Distribution of Schizophrenia - Drs E. Strömngren and J.K. Wing
- Chapter 3: Management and Operation - Dr N. Sartorius and Miss E.M. Brooke
- Chapter 4: Description of the Field Research Centres. The original drafts produced by the Field Research Centres were condensed at Headquarters by Dr N. Sartorius, Miss E.M. Brooke with contributions by Dr R.W. Shapiro and Mr M. Kimura

- Chapter 5: Instruments - Dr N. Sartorius and Miss E.M. Brooke
- Chapter 6: Translation - Dr N. Sartorius and Miss E.M. Brooke
- Chapter 7: Units of Analysis - Dr N. Sartorius and Miss E.M. Brooke
- Chapter 8: Applicability and Reliability of Methods - Dr J. Strauss and Dr J. Bartko
- Chapter 9: Characteristics of Study Population - Dr N. Sartorius, Miss E.M. Brooke with substantial contributions by Dr R.W. Shapiro and Mr M. Kimura
- Chapter 10: Psychopathological Description of Patients - Dr N. Sartorius, Miss E.M. Brooke with substantial contributions by Dr R.W. Shapiro, Mr M. Kimura, Drs J. Bartko, M. Kramer and K. Williams
- Chapter 11: Clinical Classification by Computer - Dr J.K. Wing
- Chapter 12: Classification by Cluster Analysis - Dr J. Strauss with substantial contributions by Drs J. Bartko and W. Carpenter
- Chapter 13: A Concordant Group of Schizophrenics - Dr N. Sartorius, Dr R.W. Shapiro and Mr M. Kimura with contributions by Drs J. Bartko, M. Kramer and K. Williams
- Chapter 14: Discussion - Dr J.K. Wing
- Chapter 15: Summary and Conclusions - Dr N. Sartorius and Dr R. Shapiro with the contributions of Mr M. Kimura

The volume is thus in a real sense the product of many hands and the endeavour it records is the work of many more.

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Drs J. McFie; P. Schneider; E. Slater; J. Vaňá; J.M. Velasco-Alzaga and WHO staff members. In addition, exchanges of visits of collaborating investigators were held during the course of the study, and other staff of the involved field research centres and various experts from other institutions attended these meetings.

FUNDING

This project has been funded in roughly equal parts from three major sources - the Field Research Centres, the National Institute of Mental Health of the United States of America (Grant No. MH09239), and the World Health Organization.

The Field Research Centres provided professional, administrative and technical personnel, office space, supplies and in some cases facilities for data analysis. The centres often received valuable assistance from other institutions in their countries. The National Institute of Mental Health provided a grant for support of the study and the salaries of some staff members at headquarters and field research centres in developing countries were covered from this source. Funds were also utilized to cover the expenses of Exchanges of Visits of Collaborating Investigators, consultants and supplies. The World Health Organization contributed headquarters staff, part of the supplies and equipment, computer time and facilities for data processing and analysis and funds for the organization of meetings of investigators. The services of WHO units concerned with budget, finance, travel, reproduction of documents, and printing were another part of WHO's contribution.

AIMS, SCOPE AND EVOLUTION OF THE INTERNATIONAL PILOT STUDY OF SCHIZOPHRENIA

1.1 Epidemiological Programmes of WHO

The International Pilot Study of Schizophrenia (IPSS) is part of a long-term programme in epidemiological psychiatry developed by the Mental Health Unit of the World Health Organization. Plans for this programme stemmed from the recognition by WHO that epidemiological studies could play an important role in the establishment of programmes for the prevention and control of all diseases, a viewpoint shared by public health authorities in every country with a well-developed health programme. Adequate morbidity statistics were considered fundamental for the planning and evaluation of health services. These considerations were thought to apply as cogently to mental as to physical diseases and, in 1959, WHO set up an Expert Committee to consider the problems of psychiatric epidemiology. This Committee reported in 1960 (WHO, 1960) and, as a result, two monographs were published which provided an overview of the advantages and principal results up to that time of the application of the epidemiological method to psychiatric problems (Reid, 1960; Lin and Standley, 1962). A later outcome of the Committee's work was the monograph on mental health statistics (Kramer, 1969a). In 1964, the Scientific Group on Mental Health Research recommended that WHO give high priority to research activities in psychiatric epidemiology and social psychiatry (WHO, 1964).

The uses of epidemiology have been admirably stated by Morris (1964) as follows:

1. To assess changes over time in incidence, prevalence and mortality from diseases.
2. To carry out community diagnosis.
3. To assess the workings of the health services.
4. To estimate individual risks, on average, of acquiring various diseases and conditions.
5. To identify syndromes.
6. To complete the clinical picture and describe the natural history of chronic disease.
7. To provide clues to causes.

These headings are as relevant for psychiatry as they are for the rest of medicine. Even more relevant is Frost's statement in his classic paper on epidemiology (1927): "... since the description of the distribution of any disease in a population obviously requires that the disease must be recognized when it occurs, the development of epidemiology must follow and be limited by that of clinical diagnosis and of the rather complex machinery required for the systematic collection of morbidity and mortality statistics." In psychiatry, however, the problems of developing techniques that would enable clinicians to communicate with each other in a reliable way and to undertake meaningful comparative epidemiological studies appear to be immensely greater than in any other field of medicine.

In 1965, therefore, a long-term plan was drawn up in order to implement and give specific content to the general recommendations of the Scientific Group. This plan had four stages, of which the first two (Programmes A and B) were to run concurrently, while the third and fourth (Programmes C and D) were to depend to some extent upon the outcome of the earlier work (Lin, 1967).

Programme A was to be concerned with the standardization of psychiatric diagnosis, classification, and statistics, and was conceived as a long-term programme. Its aims were (a) to achieve a better understanding of the use of diagnostic terms by psychiatrists in different countries; (b) to facilitate the revision of Section V of the International Classification of Diseases scheduled for 1975; (c) to strengthen national programmes of mental health statistics; and (d) to foster the development of an international group of psychiatrists, biostatisticians, and epidemiologists, who could continue work in this field.

Twelve experts representing different schools of psychiatry and statistics were invited to participate during the first ten years of the project. This nuclear group was expanded at annual seminars by the addition of experts from the country hosting the seminar and neighbouring countries. At successive annual meetings the following topics were discussed by this group: functional psychoses, particularly schizophrenia (London, 1965); borderline psychoses, particularly reactive and psychogenic psychoses (Oslo, 1966); psychiatric disorders in childhood (Paris, 1967); psychiatric disorders in old age (Moscow, 1968); mental retardation (Washington, 1969); psychoneurosis and psychosomatic disorders (Basle, 1970); personality disorders and drug-dependence (Tokyo, 1971).

This programme has thus far been carried out as planned, using diagnostic exercises based on standard case histories and videotaped present state interviews with patients. The proposal for a new, triaxial classification of psychiatric disorders in children has recently been put to test use in several countries. A draft of an international glossary has been prepared and will be finalized in the near future. Some of the programme's results have already been published (Shepherd et al., 1968; Astrup and Odegaard, 1970; Rutter et al., 1969; Averbuch et al., 1970; Tarjan et al., 1972; see also reports of individual meetings, e.g. WHO 1970, 1971, 1973).

It was hoped that the deliberations of the nuclear group of 12 experts, together with the contributions of the other psychiatrists who participated

in the seminars, might be used as a basis for the next revision of Section V of the International Classification of Diseases, scheduled for 1975, and as a starting point for further practical work in this area. At a meeting held in 1972, the work completed up to that point was reviewed and plans for the future were adopted (WHO, 1973).

Programme B, entitled "Comparative Research on Specific Mental Disorders" was intended to determine whether comparable cases of mental disorder could be identified in various populations throughout the world (selected because they differed markedly in social and cultural characteristics). For such a programme, appropriate instruments would need to be developed for accurate and precise recording of the clinical and social information required. A team of research workers would also be needed in each of the areas under investigation and such teams would need to be trained. If this programme were successful, it would mean that the following objectives of the overall plan would have been attained: to establish whether certain specific mental illnesses were present in several culturally contrasting parts of the world; to develop systematic and reliable methods of recording symptomatic and socio-demographic data that could be used in comparable fashion by psychiatrists and social scientists from different schools of thought; to train research teams (particularly in the developing countries) in epidemiological methods; and to lay the foundation for true epidemiological studies.

Programme C was envisaged as developing out of Programmes A and B. It was thought that if the earlier programmes were successful, it would be possible to undertake proper epidemiological studies of specified mental illnesses in defined populations, using techniques and research teams developed during the earlier work.

Programme D was also planned to develop naturally from Programmes A and B. Its objective would be to devise and implement an international training programme in psychiatric epidemiology and social psychiatry.

These last two stages of the long-term plan are, of course, not yet operational, although preparations for initiating them are underway. Programme A, however, is well on the way to completion of its first phase, and in Programme B the IPSS eventually became the major vehicle of operation. The first results of this pilot study are published in the present volume.

1.2 Aims of the IPSS

In September 1965, a group of experts was convened in Geneva in order to consider how Programme B could best be implemented (WHO, 1965b). They had before them a memorandum setting out the long-term objectives of the WHO epidemiological programme and two working papers, one prepared by a psychiatrist and the other by a social scientist, suggesting that schizophrenia should be the main subject of the study and recommending the broad outlines of a study design.

It was thought that this design would be sufficient to answer many of the basic questions formulated in Programme B:

- a) In what sense can it be said that schizophrenic disorders exist in

different parts of the world? Do they differ in form or content? Does the clinical course differ?

b) Can other functional psychoses also be recognized and do they run a recognizably different course?

c) Can techniques be developed for recording and classifying symptomatology reliably?

d) Can teams of research workers be trained to use these techniques so that comparable observations can be made in both developed and developing countries?

These are not trivial questions. A consideration of the literature (see, for example, Chapter 2) illustrates the disadvantages of trying to solve problems concerning etiology and treatment without a prior demonstration that it is possible to agree on what condition is being investigated. The status of psychiatry within the expanding public health programmes being developed by WHO and national governments depends upon its having a solid clinical foundation on which planning and evaluation can be based. Moreover, it is only when these apparently simple questions have been answered that it will be possible to proceed to questions of etiology and therapy. It should be emphasized that this is true of all basic scientific work in psychiatry, not only of its social or cultural aspects, and certainly not only of its international aspects. Thus, the IPSS was addressing itself to problems which, if solved, could lead to the fruitful study of questions fundamental to the whole of psychiatry.

Moreover, it was felt that such a study would aid the development of a number of centres of psychiatric research, particularly in developing countries, which in time could come to serve as national and regional training centres and make their own epidemiological and cross-cultural contributions.

The factors favouring schizophrenia as the first subject of study were that there was a certain degree of agreement as to the chief features of at least a central group of disorders given this label; that numerous surveys had already been made and approximate incidence and prevalence rates established; that there was some evidence that the condition occurred at approximately the same rate in certain populations differing as widely as those of Bavaria, Bornholm, Baltimore, Taiwan, Japan, London, and Moscow; that almost the whole spectrum of psychopathology of the functional psychiatric disorders would be covered; and that the degree of severity and chronicity was such that in all societies schizophrenia was a personally crippling and socially damaging disease. In addition, there was an element of uncertainty to investigate, since certain studies had shown very high rates or very low rates of schizophrenia in isolated populations. Although the disease concept of schizophrenia had been challenged, no author had been able to produce as impressive an array of evidence in favour of any other approach or to show that an alternative concept would lead to a more useful way of studying what everyone agreed was a recognizable behavioural syndrome.

Because the case-finding procedures of the classical surveys had necessarily been imprecise, it was difficult to reach solid conclusions on the basis of comparisons between them. One of the major considerations, therefore, was that any study should adopt standard procedures both for collecting clinical information about each patient and for classifying the resulting data, so that a uniform diagnosis, comparable as between different areas, would be possible.

Since it did not appear feasible to examine sufficient samples of the general population to yield large enough groups of schizophrenic patients for comparative study (say, 100 from each area), the selection of a series had to be based on screening by psychiatric services. This selection method brought many difficulties in its train, not the least of which was that any idea of a proper epidemiological study (that is, a study based upon samples drawn in a specifiable way from the total population) had to be abandoned. This was not, however, an objective of the study in any case. The study was to be a pilot investigation with the main aim of discovering whether research teams could be trained to use specially developed techniques in a collaborative effort to find patients with various specified forms of mental illness, schizophrenia chief among them. The null hypothesis was adopted for test; that is, that examples of the main disorders under study would in fact be present in all areas and that no major differences would be found. Epidemiological work would come later (in Programme C), assuming that this first, limited, objective could be attained.

A corollary was that the research centres should be established in cities with reasonably well-developed psychiatric services and preferably with at least half a million inhabitants.

It was also decided that essential social and demographic data should be collected and a two-year followup be carried out in order to compare the course of the various psychiatric conditions in the different areas.

Following the decisions of this group of experts, further consultations and preparation took place, including the selection of centres, in order to work out the best means of implementation, and a draft design was considered by a meeting one year later at which most of the participating investigators were present. At this meeting plans were finalized and the IPSS came into being.

1.3 Design and Implementation

Basically, the design was that of a prospective followup study, with cases selected by a series of screening procedures and examined with standard instruments. The tasks were therefore to set up a Headquarters administration; choose the areas for study and establish working research teams in each one; devise the screening procedures appropriate to each area's services; select or create appropriate measuring instruments, translate them, and train the workers in their use; organize the regular despatch of data from the centres and its concurrent editing, coding, and analysis at Headquarters; and implement procedures for quality control, including meetings of all investigators, visits to each other's centres, training sessions,

feedback of results, and regular rounds by Headquarters staff.

The project was divided into three major phases:

- Phase 1: a preparatory phase, during which the technical and organizational groundwork would be undertaken both at Headquarters and in the centres.
- Phase 2: the main phase of the study, during which cases would be identified and data collected and sent to Headquarters.
- Phase 3: the followup phase, during which patients would be examined two years after their initial selection for inclusion in the series.

1.3.1 The first phase

Establishment of Headquarters. Headquarters was set up in the Mental Health Unit of WHO at Geneva, with a staff consisting of the principal investigator, a psychiatric epidemiologist, a social scientist, a statistician, a research assistant, and one secretary. The task of this team, together with their advisers, was to prepare the research instruments, draft the research procedures, select and train the collaborating investigators, and assist them in setting up their own organizations, keep control over the quality of data coming in, process and analyse the data, and convene meetings of investigators at which progress would be evaluated and further plans discussed.

Establishment of Field Research Centres. The nine centres were chosen according to the following criteria:

1. the existence of a network of services able to detect a substantial proportion of the likely cases of schizophrenia occurring in the population at risk (e.g., a first admission rate of 12 schizophrenic patients per 100,000 population per year);
2. the presence of several well-trained and motivated psychiatrists;
3. the possibility of setting up a simple reporting system so that potential cases would be known to the participating psychiatrists;
4. the recognition of a fairly distinct local culture or cultures;
5. the availability of census data covering the whole population;
6. the absence of very high death or emigration rates or a high prevalence of masking organic diseases that might make the diagnosis of schizophrenia difficult. (It was recognized that this criterion might be impossible to satisfy if the other conditions were to be met.)

The centres eventually chosen, after considerable travelling and much

debate, were situated in Aarhus (1); Agra (2); Cali (3); Ibadan (4); London (5); Moscow (6); Taipei (7); Washington (8); and Prague (9). These centres are referred to throughout the rest of this book as Field Research Centres (FRCs) and given the appropriate name or number. In fact, all the Centres were academic and/or research psychiatric centres and most of them served only an area in or near the city designated. Thus patients from the Washington Centre actually came from Prince Georges County, Md., an area adjacent to the Washington D.C. boundary. Details of catchment areas and other characteristics are given in Chapter 4.

In point of fact, the selection was based as much on the characteristics of the psychiatrists as on the characteristics of the Centres. It was necessary to find clinicians with training and experience who would appreciate the aims of the IPSS and the scientific values involved, and who had some personal experience with epidemiological work. All the collaborating investigators had at some time participated in scientific studies on schizophrenia. Their positions in their university hospital and research settings were such that they could make adequate resources available for this study. In addition, they represented some of the world's major contrasting cultures.

In each Centre two psychiatrists were designated as the collaborating investigators and, in some of the Centres in developing countries, funds were made available for a social scientist, research assistant, and clerical staff.

Admission criteria and screening. It was agreed that each series should include a sufficient number of young patients with functional psychoses of recent onset, covering the whole range of conditions including schizophrenia, mania, psychotic forms of depression and borderline psychoses. The lower age limit was set at 15 and the upper at 44, in both cases to avoid difficult nosological problems which, it was thought, should not be major concerns in a pilot project. Onset of the illness within 5 years of admission to the series was stipulated in order to exclude the difficult diagnostic problems associated with chronic forms of psychosis when acute symptomatology is not manifest. Certain behavioural and symptomatic criteria were also established as determining admission to the series.

All patients contacting the psychiatric services of each Centre would thus be screened to ensure that they satisfied the age and residence criteria, then to ascertain whether inclusion categories were present and exclusion categories absent (see below); in this case, they would be eligible for the series and detailed examination would commence.

Trial registration. Since several of the Centres were not familiar with procedures of the kind described above, it was decided that there should be a period of trial registration during which screening forms would be tested and the number of patients passing the various screens assessed. This would enable each participating centre to gain experience and to point out inadequacies in the procedure as practised in its own setting. On the basis of this trial, which proved very useful, a number of changes were introduced into the procedures eventually adopted for Phase 2. Some of the most relevant results of the trial registration period are given in Chapter 9.

Development of research instruments and training of collaborating investigators. The standard form of the Present State Examination (PSE) developed in the Medical Research Council Social Psychiatry Unit in London (Wing et al., 1967) was chosen as being best suited to the purposes of the IPSS. Certain modifications were introduced to adapt the PSE to the requirements of an international study, and the seventh edition of the PSE schedule was translated into the eight languages used by project investigators (see Chapter 6 for details). At the same time a start was made on assembling a glossary of definitions of the terms used. Preliminary versions of schedules for collecting demographic, social, and historical data were also prepared.

All the collaborating investigators were brought together for a week's training in the use of the PSE (see Chapter 5 for details) and for an initial assessment of inter-rater reliability.

As with registration, it was considered necessary for each Centre to undertake trial examinations in which all the schedules were to be tested on a group of cases. Each Centre was asked to select 26 patients - 12 with undoubted schizophrenia, 6 with doubtful schizophrenia, 6 with non-schizophrenic functional psychoses, and 2 with neurosis. In keeping with the criteria for admission to the main study, all trial patients were to be within the 15-44 age bracket and have no more than a five-year history of mental disorder. Many of the patients were interviewed twice by different examiners or rated by two clinicians at the same interview. The resulting schedules were sent to Headquarters for processing and analysis.

As a result of the trial registration and the trial examination of 26 patients, a substantial body of data was collected, together with a set of comments as to how the procedures and instruments might be made more useful. A full meeting of investigators was therefore convened in November of 1967 for a critical review of all the activities of Phase 1 and for agreement upon a definitive plan of operations for Phase 2. The changes made in the schedules are described in Chapter 5 and the results of the reliability study in Chapter 8.

1.3.2 The second phase

The plan of operation for Phase 2 was approved by the November 1967 meeting of investigators. All the instruments underwent revision and were reissued in their final form. The main aim of Phase 2 was for each Centre to collect at least 125 cases of functional psychosis, each documented in a standard manner. It was clear from the preliminary results that these cases would include a substantial number of patients with schizophrenia.

In order to identify patients to be included in the study, all patients contacting each of the FRCs were put through two screens, a demographic screen and a psychotic screen. The screens were designed to select patients with functional psychoses who would be likely to be available for follow-up for a period of two years from the time of their initial evaluation.

The Demographic Screen identified those patients having contacted each Centre during the course of the year from 1 April 1968 to 1 April 1969 who (a) had resided or slept regularly in the catchment area for the last six

months, and (b) were aged 15-44. This age range was chosen to exclude patients whose illness might be an early stage of presenile or senile psychosis at one end of the life-span, or childhood or juvenile schizophrenia at the other end. The residential requirement was designed to increase the likelihood of availability for followup.

The Psychotic Screen identified all of those patients who passed the Demographic Screen who did not fit any of the exclusion categories and who did fit at least one of the inclusion categories. Exclusion categories were chosen to screen out chronic patients and patients whose disorder may have been caused or significantly influenced by an organic condition. Since diagnostic practices vary, inclusion categories were symptoms rather than diagnostic labels.

The exclusion and inclusion categories appeared in their final form as follows:

Exclusion criteria:

- (1) Severe psychotic symptoms in this episode probably present continuously for more than 3 years.
- (2) Total hospitalization of 2 years or more in the last 5 years, including readmissions.
- (3) Regular abuse of alcohol.
- (4) Abuse of drugs acting on the C.N.S.
- (5) Mental retardation with I.Q. estimated by psychiatrist to be less than about 70 before onset of present illness.
- (6) Psychosis attributable to endocrine disorders (e.g., thyrotoxicosis, myxoedema, diabetes mellitus, or Cushing's syndrome).
- (7) Psychosis attributable to metabolic or nutritional disorders, e.g., electrolyte disturbance, liver disease, vitamin deficiency.
- (8) Evidence of acute or chronic brain syndrome, effects of brain surgery and other organic psychosis, not already specified in 6 or 7.
- (9) Epilepsy.
- (10) Severe hearing difficulties.) If serious enough to impede
administration of interview
- (11) Severe difficulties in speech)
production or language (bad stammer,)
foreign dialect, etc.))

Inclusion criteria:

- (1) Delusions.
- (2) Definitely inappropriate and unusual behaviour.
- (3) Hallucinations.
- (4) Gross psychomotor disorder; over- or under-activity.
- (5) Social withdrawal.
- (6) Disorders of thinking, other than delusions.
- (7) Overwhelming fear.
- (8) Disorders of affect.
- (9) Depersonalization.
- (10) Self-neglect.

Inclusion criteria 1-4 automatically qualified the patient for inclusion, regardless of the severity of symptomatology. Categories 5-10 were considered as a basis for inclusion only if the symptomatology was present to a severe degree. In addition to these 10 criteria, provisions were made to allow the local psychiatrist to include a patient that he felt was definitely psychotic, even if he did not demonstrate any of the inclusion symptoms.

It was intended that Headquarters should monitor the age and sex distribution of cases in order to preserve a rough balance between Centres (see Chapter 9).

In addition to the 125 cases of functional psychosis, it was decided that 10 cases of neurotic depression should also be included in order to provide extra material for differential diagnosis.

Data collection. The collection of data would then proceed as follows:

(1) The mental status of the patient would be obtained during an interview conducted by a psychiatrist using the PSE. The present status would cover the patient's condition only at the time of interview and during the past month. The interview would take place within two weeks of the patient's contact with a psychiatric facility of an FRC.

(2) The past history of the patient and his illness would be obtained through interviewing of the patient or an informant by a psychiatrist, a psychologist, or a social worker using the Psychiatric History Form (PH).

(3) Social and demographic information on the patient and his family

would be obtained through interviewing of the patient or an informant by a social worker using the Social Description Form (SD).

(4) Physical and neurological examination performed by a physician would ideally be carried out on every patient, but in some centres where such an arrangement would be difficult examination could be limited to only those patients suspected of having central nervous system disorder of organic origin.

(5) After all the interviews, the psychiatrist would complete the Diagnostic Assessment Form (DA) to record the patient's diagnosis and prognosis, as well as the psychiatrist's reasons for his diagnostic judgement.

This material would then be sent at once to Headquarters for editing, processing and analysis.

Reliability. In order to provide a check on reliability, further examinations were to be conducted by two clinicians simultaneously or at a brief interval. Minimum requirements were specified as follows:

Five cases should be rated by two psychiatrists simultaneously, one acting as the interviewer and the other as observer-rater. An additional five patients should be interviewed twice by different psychiatrists with an interval of up to two weeks between the two interviews. If more than two psychiatrists are involved in any Centre, each pair should take part in ten such reliability exercises. The same principles should apply whenever a new psychiatrist joins the study.

At least one simultaneous interview should be conducted each month in order to discover whether any changes in the examination or rating characteristics occur in the course of the study. If more than two psychiatrists are involved, the number of reliability checks should be increased accordingly.

Videotapes and films should be made so that they can be rated by all the participating investigators during their annual meetings.

Simultaneous intra-centre ratings of past history and social description schedules should be carried out wherever possible, and a videotaped history interview should be made for subsequent rating by investigators from all Centres.

The results of these exercises are presented in Chapter 8.

Data processing and analysis. Headquarters accepted the responsibility for processing and analysing all the data collected from Centres. Data were checked for completeness and, in case of errors, corrected after consultation with the centre involved. The WHO Data Processing and Health Statistical Methodology Units provided invaluable assistance with the analysis. The collaborating investigators were solicited for suggestions concerning data analysis, and preliminary results were fed back to centres for discussion and reference. Centres with facilities and experts available for data analysis were consulted and considerable division of labour was effected in this way. Outside consultants were also used.

Meetings of investigators. Regular meetings of investigators were held in order to clarify and modify procedures, review results, discuss practical problems encountered in the field work, undertake reliability exercises, and generally assess progress and plan future activities. These meetings came to be regarded as an essential part of the study, invaluable for training, planning, and the maintenance of morale. International studies of this type cannot be conducted without them. Further details are given in Chapter 3.

One of the chief activities of later meetings was the planning of the followup phase of the study.

3.3.3 The third phase - followup

All patients in the study were intended to be followed up for a period of two years. In certain cases, a followup was also to be undertaken after one year in Centres where such exercises were not common practice in order to test out necessary procedures. The existing schedules needed adaptation in many cases to fit the circumstances of the followup (particularly the Followup Psychiatric History Form and the Followup Social Description Form) and these revised schedules needed to be tested. Monthly reliability testing was planned as before.

3.4 Chronology of the IPSS

A brief chronological account of the major events taking place during the three phases is given below in order to summarize the activities and provide an overview of the whole operation.

It will be remembered that Programme B was planned during 1965 as part of the overall epidemiological programme of WHO. The IPSS was adopted as the major vehicle of this programme in September 1965 (WHO, 1965b). Preliminary discussions concerning the selection of Centres and collaborating investigators took place between October 1965 and February 1966, and the preparation of research instruments continued during this time up to June 1966. The first meeting of collaborating investigators, which occurred in July 1966, approved in principle the procedures to be adopted during Phase 1.

Phase 1 (August 1966 - November 1967)

- (1) Improvement of instruments for use in Phase 1 (August 1966 - April 1967).
- (2) Selection and establishment of Centres (January - November 1967).
- (3) Translation of research instruments into local languages of Centres (January - April 1967).
- (4) Trial registration (March - April 1967).
- (5) Training of collaborating investigators in the uniform application

of research instruments and procedures (May 1967).

(6) Trial examination and rating of 26 patients (July - August 1967).

(7) Assessment of Phase 1 and agreement on procedures of Phase 2 (November 1967).

Phase 2 (November 1967 - June 1969)

(1) Revision and finalization of research instruments and procedures for use in Phase 2 (November 1967 - March 1968).

(2) Identification and collection of data on at least 125 patients from each FRC (April 1968 - September 1969).

(3) Preliminary assessment of the results of the initial stage of Phase 2, and pre-final draft of Followup PH and SD forms (July 1968).

(4) Assessment of results of Phase 2 and finalization of plan of operation and instruments for followup study (May - June 1969).

(5) Data processing and analysis (January 1969 - October 1971).

Followup phase (June 1969 - October 1971)

(1) First year followup of patients (September 1969 - March 1970).

(2) Continuation of data processing and analysis.

(3) Further assessment of the results of Phase 2 (December 1969).

(4) Second year followup study (March 1970 - October 1971).

(5) Finalization of draft report, Volume I (January - December 1971).

Data analysis for the whole project will be completed in 1974, and Volume II of the report will contain further results from Phase 2 as well as the results of the followup study.