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EVOLUTION OF CONCEPTS IN EPIDEMIOLOGICAL PSYCHIATRY

by

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Epidemiological psychiatry is a discipline essential for the progress of knowledge about the nature of mental disorders.

Its development has been supported by several trends in modern psychiatry. Among these are the interest in the role of social and environmental factors in mental pathology, the wish to provide quantitative evidence with the help of statistical methods widely utilized in demography and in quantitative psychology, the progress made in psychiatric therapy and therefore the need to assess objectively the efficacy of treatments, the necessity to organize prevention, care and assistance to mentally ill persons on the basis of precise knowledge of needs.

There are, however, difficulties in the application of the epidemiological method. The cost and complexity of some surveys and the need for special training of the investigators have often been responsible for the disappointment or failure of those who have undertaken such research without sufficient preparation.

The interest psychiatrists have in epidemiology has also been checked by the traditional psychiatric way of thinking, centred on the clinical description of cases, and preoccupied with individual patients rather than with the mass phenomena of the disease or with the natural history of mental disorders. Systematic recording, during a long period, of selected data, leaving aside those which cannot be considered sufficiently valid, and observing simple yet strict rules of statistics in order to make comparisons or evaluations, are, in general, efforts that a clinician can only accomplish after a sufficiently long period of training.

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For all these reasons, psychologists, sociologists, statisticians and specialists in other health problems have often shown interest before, or in place of psychiatrists in problems of the frequency of mental disorders and in the factors which determine their appearance, their evolution and their distribution.

Definition and objectives of epidemiology

Epidemiology has been defined as the discipline which studies the frequency and distribution of illnesses in space and time within a given population.

Classically, the objectives of epidemiological psychiatry are as follows :

1. To establish the frequency and distribution of different types of mental disorders in the population or in particular groups of the population.
2. To discover relationships between certain characteristics of the individuals or the environment and the disorders seen and, by this discovery, to progress in our knowledge about factors which influence the appearance, evolution and distribution of the different types of mental disorders.
3. To verify hypotheses formulated in clinical or laboratory studies using a sufficient number of cases to permit statistical analysis.
4. To measure rates of recovery and remission in order to judge the efficacy of preventive or treatment measures.

Frequency and risk factors

The determination of prevalence and incidence of mental disorders by surveys of populations is usually considered to be one of the major aims of epidemiological psychiatry. However, although the literature contains numerous theoretical descriptions of the methodology to be used for such surveys, the practical possibilities of carrying them out are much more modest. There are only a few authors, in a small number of countries, who have succeeded in establishing rates which have not been open to great criticism.

Various practical difficulties have to be overcome in carrying out surveys. The first of these is the low rate of mental disorders, especially psychoses, and the consequent necessity of examining a large number of subjects. The need to utilize complex methods of investigation in order to obtain certain psychiatric data and the requirement that the survey should be completed in a short period of time often make it difficult to find a sufficient number of

competent investigators. Research on frequency of mental disorders often falls short of the requirements to examine a sufficiently large sample of the population, with methods of satisfactory quality.

The demonstration of risk factors - genetical, somatic and psychological, social and environmental - is another main aim of epidemiology.

The risk of appearance of an illness is studied in etiological research and the risk of an unfavourable evolution of a disease (complications, chronicity, death) is studied in research with prognostic and therapeutic aims.

The number of subjects does not need to be as large for research on risk factors as it does for research on frequency, because the former can be conducted by comparing two groups of subjects. Also, by making a judicious choice of factors to be studied, the methods of investigation can be kept simple and less specialized investigators than those for clinical investigations can be used.

Etiological research aims at the discovery or confirmation of the existence of statistically significant relationships between the disorders and certain characteristics of the patient or the environment. The causal connexion which is suggested by these relationships can only be confirmed by experimental research where the etiological factor is controlled.

Prognostic and therapeutic research have become more important because of the necessity to make the most objective evaluation possible of the effect of new methods of treatment, in particular chemotherapy.

In such studies the aim is to obtain knowledge about the factors which influence the length of recovery or disappearance of symptoms, by making comparative evaluations of the rates of remission and recovery.

Therapeutic effect can only be adequately studied when the patient groups are homogenous and when conditions of treatment are identical for each individual patient. In certain cases it is necessary to have a control group not receiving treatment. The period of follow-up should be sufficiently long although not so long as to alter the comparability of the observations, and specific and uniform criteria should be used to evaluate the results.

In order to satisfy this requirement a number of rating scales have been developed which permit a more objective assessment of the nature of therapeutic results.

Morbidity statistics

Because of practical difficulties encountered in epidemiological investigations of the general population, morbidity statistics have continued to be used as an instrument for the estimation of the frequency of mental disorders. Naturally, if they are to serve this aim, their scope needs to be extended to mental health services other than only the traditional psychiatric hospital.

Morbidity statistics from hospitals have for long been our only source of knowledge about psychiatric morbidity in a population. Many have justly criticized the value of hospital statistics for the study of the frequency of mental disorders in the community.

The nature of disorders and the number of patients sent to psychiatric hospitals depend upon many factors, including the social environment, the existing services for health care and assistance, current legislation, the attitude of the population towards mental illness and the nature of treatment used.

In fact, hospitalized patients always represent only a part, more or less large, of the ill population. Certainly, the probability of hospitalization for patients suffering from some types of disorder is great, and in these cases, the rate of first admissions into psychiatric establishments could be proposed as a basis for the estimation of the frequency of new cases. However, for many other disorders, the probability of hospitalization is low or even non-existent.

These shortcomings of hospital statistics for the assessment of psychiatric morbidity together with the increasing diversification of in-patient and out-patient services led to the development of more comprehensive statistical systems.

In such systems there are, in addition to the records of patients in psychiatric hospitals or in psychiatric departments in general hospitals, data about patients treated in out-patient facilities (day hospitals, dispensaries), by private specialists, by non-specialized health and welfare services and by general practitioners.

The recording of statistical data about non-hospitalized patients or those managed in the non-specialist sector meets a number of difficulties. Among them are problems of determining the beginning and end of out-patient treatment and of recording single or infrequent treatment interventions; and in the non-specialized facilities, the problems of identification of cases.

In data analysis this necessary extension of coverage of psychiatric morbidity statistics creates particular technical problems. It also calls for the centralization of information in a single institution. This is the only way to avoid double counting, i.e., counting as discreet cases, over a given period, patients who have come into contact with services more than once or have contacted more than one service.

The notion of morbidity. Definition of a case

The evolution of ideas about epidemiological studies and morbidity statistics has made it possible to define the concept of morbidity from mental disorders and the criteria for the definition of a case.

The problem is relatively simple as long as only data about patients in treatment are used. It is much more complex when the studies are carried out in the general population.

The cases which are in medical treatment constitute the known, manifest morbidity. They represent the spontaneous demand by the population. In mental health, more than in all other disciplines, this manifest morbidity depends, not only on the frequency of disorders but also on the possibilities of care and assistance available to the population as well as the population's level of education and knowledge about mental health problems.

If admission to treatment is decided by a specialized mental health agency available to a population, a patient admitted may be considered (a priori) as psychiatric. On the other hand, if an inquiry aims at establishing the frequency of mental disorders in patients taken into medical care in a non-psychiatric facility, for example, in general medical services or by general practitioners, it is necessary to define the criteria which will help to decide which individuals are to be counted as mentally ill.

If the aim of an epidemiological investigation is to measure the frequency of mental disorders in the general population or in a particular group of the population, it becomes necessary to examine individuals who have never been in psychiatric care, and individuals who have never requested a psychiatric consultation, but who will be shown to suffer from mental disorder. The total of these individuals constitutes the latent part of psychiatric morbidity.

It is at this point that the definition of a case poses most problems. The definition used may be restrictive, based on criteria which are exclusively medical (requiring for example the presence of disorders classifiable in one of the categories of a classification of mental disorders), or extensive, taking into consideration, in addition to medical criteria,

such criteria as maladjustment in family, professional or social life. Usually, both types of criteria (psychopathological and behavioural or adaptive) are used.

All these difficulties become even larger if the investigation is concerned with the frequency of non-psychotic disorders, because in these disorders the problem of differentiating between normal and pathological is more difficult and controversial.

In 1960, a WHO Expert Committee suggested that in order for an individual to be considered as a psychiatric case, there should be :

"a manifest disturbance of mental functioning, specific enough in clinical character to be consistently recognizable as conforming to a clearly defined standard pattern and severe enough to cause loss of working or social capacity, or both, of a degree which can be specified in terms of absence from work or of the taking of legal or other social action".*

Evaluation of activity

A new area of epidemiology, evaluative research, has been greatly developed over the last few years. It focusses on the study of function and effectiveness of different types of services. Amongst the objectives of this research are : the optimization of use of the existing resources, the rationalization of budgetary expenditure and the periodic assessment of treatment programmes.

Epidemiological research has contributed to the development of interest in evaluative research by showing that the type and activities of the services can influence the prevalence of mental disorders and risk factors. At one time in epidemiology, one was frequently content to compare the number of patients to the number of individuals in the population. More recently it became apparent that it is indispensable to ensure that the psychiatric services available to the populations compared are analogous.

Standardization of methods of observation and classification

Whatever methods are used or goals aimed at by epidemiological research, it is fundamental that the data to be studied are standardized.

Standardization may be defined as the totality of methods which leads to the acquisition of comparable data. The programme of research on the standardization of psychiatric diagnosis, classification and statistics, pursued since 1965 by the Office of Mental Health of WHO

(*) WHO Expert Committee on Mental Health (1960) Eighth Report, Epidemiology of Mental Disorders, Wld Hlth Org. Techn. Rep. Ser. No.185, p.16

has clearly demonstrated the problems posed by the standardization of methods of classification and has shown that before undertaking the classification of diagnostic data, it is necessary to standardize the methods by which such data are obtained.

For a long time psychiatrists were trying to propose classifications which reflect explanatory theories of the origin and nature of mental disorders. One of the merits of epidemiology is that it has shown that a classification of mental disorders is an instrument of communication which should above all, permit comparisons. Such an instrument should allow a simple classification of cases according to the nature of the disorders. At the same time, this classification should not, in so far as is possible, depend on the convictions of the psychiatrist about pathogenesis of the disorders.

To fulfil these conditions, a classification should consist of a limited number of standardized categories.

During the last few years the classification of diagnostic data has also been improved by the introduction of multi-axial classification systems, notably for psychiatric disorders in childhood.

One such system has been developed and presented at a WHO Seminar on the diagnosis and classification of mental disorders in childhood (Paris, 1967). It contains three axes which allow the separate recording of symptomatology, level of intelligence and etiological data. In this particular case, standardization is necessary for the categories of each of these axes.

The standardization of diagnostic categories of a modern classification of mental disorders is achieved by adding to it a glossary which gives a summary description of the contents of each category or sub-category and contains the indispensable commentary which helps the user to utilize the classification in a uniform manner.

The standardization of methods of acquisition of the data necessary to make a diagnosis is obtained by the use of uniform schedules for interviewing and examination. It is only in this way that disagreements in the diagnostic classification of a case by several observers can be explained by a different interpretation of the (recorded) data rather than by differences in observation. Here too, the research programme of WHO has contributed greatly to the evolution of our knowledge. Using written case history exercises and videotaped interviews, the programme has permitted the development of experimental studies of the diagnostic process

in many countries of the world and laid the basis for standardized methods of observation.

Standardization is not only necessary for the recording of diagnostic data : it must also be applied to other types of epidemiological data. * It is, for example, indispensable to define and to standardize criteria of health and illness used in mental health research, social factors such as professional activities or the social class used in studies of risk factors, and criteria for the evaluation of results in studies of treatment effects.

In this way, as psychiatric epidemiology has developed, in spite of all kinds of difficulties the concepts from which it began have also evolved.

The improvement of the quality and comparability of data by the use of standardized methods of observation and classification, in particular in the area of diagnosis, the extension of morbidity statistics so as to cover the whole range of psychiatric in-patient and out-patient services, the demonstration of etiological and prognostic risk factors, the results of evaluative research, are some of the examples, of the contributions the evolution of ideas in epidemiology made to the progress of our knowledge on the frequency, origin, evolution and the treatment of mental disorders.