FACTORS ASSOCIATED WITH THE COURSE AND OUTCOME OF SCHIZOPHRENIA

A Multicentred follow-up Study :
Part I : Objectives and Methodology *

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Introduction

Schizophrenia is the commonest psychosis in any community. A number of epidemiological studies conducted in different parts of the world have reported that the point prevalence rate of schizophrenia is about 2-3 per 1000 (Lemkau et al 1942, Lin 1953, Dube 1970, Sethi et al 1967, Verghese et al 1973). It is a common clinical experience that some schizophrenic patients have a good outcome while others do not. The follow-up of patients diagnosed as schizophrenic in the International Pilot Study of Schizophrenia (IPSS) showed that inspite of initial clinical similarity, there were remarkable variations of course and outcome within and across different cultures. Those in developing countries had a better outcome than those in developed countries (WHO 1979). About 1/3 of schizophrenic patients tend to become chronic leading to much disability and loss of manpower (Bleuler 1983). If this variability in the course and outcome is influenced by biological or sociocultural factors, it becomes important to identity these factors. Such

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information may be helpful in predicting with reliability the course and outcome of the disease. Also attempts can be made to modify these factors so that the outcome may become better.

Hence, a multicentred investigation to examine the factors associated with the course and outcome of schizophrenia was conducted under the auspices of the Indian Council of Medical Research. Three Senior and experienced psychiatrists were chosen as consultants for the study. The centres which participated in the study were King George's Medical College, Lucknow; Madras Medical College, Madras; and Christian Medical College, Vellore. Vellore was the co-ordinating centre.

This paper describes aims and objectives and methodology of this study. The question which the present study addressed itself was : is it possible to identify sociocultural and clinical variables which predict and might be aetiologically related to the course and outcome of schizophrenia. The following areas were specifically looked into : sex, marital status, level of education, duration of illness, symptomatology, nature of onset of the illness, age of onset of the illness, occupational history, presence or absence of well defined precipitating factors, premorbid personality traits, urban/rural background, degree of religious activity, life events after onset of illness, treatment compliance, regularity of follow-up and treatment modalities.

Another objective was to find out if possible, whether the course and outcome of schizophrenia in a developing country such as India is in fact better as suggested by the IPSS and whether the three centres in India which differ in sociocultural aspects show differences in the nature, course and outcome.

It was felt that if a group of schizophrenic patients diagnosed using well defined criteria (of diagnosis) and assessed in detail, were followed up carefully over a long period of time it may be possible to identify factors related to the course and outcome of the disease.

Material and Methods

1) Selection of patients :

All patients who attended the psychiatry clinics of the participating centres from 15th October 1981 to 15th October 1982 and satisfied the inclusion criteria were included in the study. These criteria were adapted from Feighner's criteria of diagnosis (Feighner et al 1972), with two modifications. The duration was taken as 3 months since it was felt that we might otherwise lose some acute schizophrenic patients for the study. The marriage as a criteria of diagnosis was left out since it will not be reliable for our country.

The following were the criteria of diagnosis used in this study :—

(A) Presence of delusions or disorganised thoughts and communication or passivity feelings.

(B) Absence of primary affective illness, manifest organic cerebral disorders, regular abuse of alcohol, epilepsy, severe or moderate mental retardation.

(C) The duration of illness should be atleast 3 months continuously without return to premorbid level and should not be more than 2 years.

(D) Any one or more of the following :
    i. Poor social adjustment.
    ii. Schizoid premorbid personality.
    iii. Family history of schizophrenia.

iv. Hallucinations.

v. Emotional blunting.

All the above criteria A, B, C, and D must be fulfilled. Only patients in the age group 15-45 years were included.

The catchment area for each centre was as follows:

Lucknow : Five districts around Lucknow.

Madras : An area within 30 KM radius with Madras Medical College Hospital as Centre.

Vellore : Outpatients from the district of North Arcot and in-patients from the four southern states of Tamil Nadu, Andhra Pradesh, Karnataka and Kerala.

Commuters i.e. people whose homes are outside the catchment area, were excluded. Temporary residents such as students and visitors were included only if they had spent in the year prior to the beginning of the study an uninterrupted period of 6 months or more in the catchment area and were likely to stay on for atleast one year.

2) Initial psychiatric evaluation

The following tools were used for this purpose : these tools were adapted after making very small modifications from those used in the WHO collaborative study on determinants of outcome of severe mental disorder.

i. A screening schedule to select the patients who satisfied the criteria of inclusion and exclusion as elaborated above.

ii. A detailed psychiatric history was taken from all available sources using the WHO Psychiatric and Personal History Schedule (PPHS I). This is a 10 paged document specially prepared to collect and code informations on psychiatric history (20 items); Medical history (8 items); Residence (7 items); Household and family description (6 items); Social net work (4 items); Marriage (7 items); Parents and siblings (5 items); Occupation (12 items); Education (3 items); Religion (2 items); Developmental and premorbid personality (73 items).

iii. A detailed mental status examination was conducted using Present State Examination 9th Ed. (PSE) (Wing and Cooper 1974).

iv. A diagnostic and prognostic schedule (DPS) was also used as part of initial psychiatric evaluation, where the interviewer makes a clinical diagnosis (ICD-9) and short term prognosis.

Before beginning the study, a workshop was arranged in Vellore to get experience with the tools and to conduct reliability exercises. The investigators, consultants and research staff participated. All the above tools were discussed in the group. When one member of the group interviewed a relative of the patient (using PPHS I) or the patient (using PSE) the others scored. Several such exercises were conducted. The inter-rater reliability in most of the items was about 90% in the use of the above tools. It was found that some items showed consistent disagreement. These items were discussed to get uniformity in assessment. The above exercises were repeated at future meetings of investigators, consultants and research staff.

The initial assessment started on 15th October 1981. All patients were screened and those patients who satisfied the criteria of inclusion were assessed in detail. A psychiatric history was taken by a psychiatric social worker from close relatives using

PPHS I. PSE was used by a psychiatrist to assess mental status. DPS was used to make a clinical assessment about the probable diagnosis and prognosis. This initial asessment took about 2 hours.

3) Follow-up :

After the initial assessment the patients were regularly followed up atleast once in 3 months. The Interim Follow-up Schedule (IFS) used for this provided information regarding symptomatology, details of treatment, and drug compliance. This tool was also adapted from a WHO schedule used in the collaborative study on determinants of outcome of severe mental disorder.

A detailed reassessment was done after 1 year of initial assessment using a 1 year folow up Psychiatric and Personal History Schedule (PPHS II) and P.S.E. If any patient did not come for follow up, even after sending 3 letters, home visits were made to complete follow up. This was a trial follow up to find out whether the study was going in the right direction and also to evaluate the possible follow up rate. This showed that in all the 3 centres, the one year follow up was more than 90%. A meeting of all the investigators and consultants was arranged where the one year follow up data were discussed and the techniques of analysis of data for the 2 year follow up were finalised. Interim follow up was continued as referred to earlier. A detailed assessment was made as before at the end of two years using a 2 year follow up Psychiatric and Personal History Schedule (PPHS III) and P.S.E.

Throughout the course of the study, every 10th patient in each centre was assessed by a second person also to assure intra-centre reliability.

4) Assessment of course and outcome

The main objective of the study was to identify the factors which influence course and outcome of schizophrenia. A large group of hypotheses variables were therefore selected mainly based on clinical experience and reports from various studies. These are grouped under the following headings : sociodemographic variables (14 items) ; past history variables related to episode of inclusion (5 items) and variables related to follow up period (8 items).

Since the above variables had to be correlated to course and outcome, it was important to evolve a method of quantifying course and outcome. For this purpose a method similar to that used in IPSS (WHO 1979) was used. The parameters considered were:

. (a) percentage of follow up period spent in psychotic state. Psychotic state implies one or more of the positive symptoms as mentioned in Appendix of one year follow up psychiatric and personal history schedule. (There would be 4 groups: 0-15%, 16-45%, 46-75% ; 76-100%).

(b) Pattern of course (Clinical outcome) (This was taken from PPHS III Item 2.6). The following 5 groups were made as given in PPHS Item 2.6 :

Group 1 : Complete or nearly complete recovery without relapse or exacerbations of psychotic symptoms.

Group 2 : No relapses or exacerbations of psychotic symptoms but with residual personality change.

Group 3 : One or more relapse or acute exacerbations of psychotic symptoms with full or nearly full

remissions following them with no marked personality change.

Group 4 : One or more relapse or exacerbation of psychotic symptoms against a background of marked personality change.

Group 5 : Continuous psychotic illness.

The operational definition of *remission* used in this study was the same as that used in the WHO study. It is a state following a psychotic episode in which none of the symptoms characteristic of a psychotic episode would be present for a minimum period of 30 days.

(c) *Occupational outcome* : For the assessment of occupational outcome, 3 items on PPHS III were used. Viz : 6.10 ; 6.13 ; and 7.3 along with 11.4 of PPHS I. Different items of PPHS III were used for housewives and students.

The following were the groupings :
Group 1 : no impairment
Group 2 : some impairment
Group 3 : severe impairment.

(d) *Social outcome* : PSE items 106 and 107 and PPHS III 9.1.1 to 9.1.4 items were used for this.
Group 1 : no impairment
Group 2 : some impairment
Group 3 : severe impairment

An overall assessment of outcome was done using the above 4 parameters to give best, worst and intermediate outcomes. The above parameters were also used to derive outcome grouping similar to those used in IPSS (W.H.O. 1979).

(5) Statistical analysis

All the completed schedules (screening schedule, diagnostic and prognostic sche-

dule, interim follow up schedule, PPHS – one year follow up and 2 year follow up, PSE – one year follow up and 2 year follow up) were sent to the Vellore centre. All schedules were checked and analysed. The socioeconomic variables (PPHS) and clinical symptoms (PSE) were analysed for each centre and for the whole group.

Each of the variables listed in the hypotheses referred to under aims and objectives was analysed with each one of the outcome variables using Chi-square test. The strength of these associations was assessed by multiple regression analysis. A discriminatory analysis between the "best" group and "worst" group on assessment of outcome was also done.

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