



**SOME OBSERVATIONS ON THE
NATURAL HISTORY
OF NEUROTIC ILLNESS**

by

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INTRODUCTION

Neurotic symptoms have long been recognised as a prominent cause of distress and disability. By general practitioners, physicians and surgeons no less than by psychiatrists, the concept of neurotic disorder is regularly invoked to explain the whole or part of the invalidism of a wide group of patients. It is of interest to recall that as long ago as 1681, Thomas Sydenham, in his classical treatise on Hysteria, considered that about one-sixth of his patients suffered from this illness. (Sydenham, 1681). In more recent times, Henderson & Gillespie (1950) estimated that about one-sixth of outpatients attending hospital departments of general medicine suffer from neurotic illness. The reported incidence of neurotic disorders in general practice varies widely (Kessel & Shepherd, 1962), but the working party of the Council of the College of General Practitioners (1958) in Britain agreed that :-

"In this review of psychological medicine in general practice, we have been impressed by the importance and size of the problem".

Similarly in Australia, Macfarlane Burnet (1953) has listed the psychoneuroses among the major medical problems of our day.

There can be no dispute about the high prevalence

of neurotic disorders and their importance as a cause of disability at the present time. It follows that notwithstanding the enormous amount of study which has been devoted to these disorders, our understanding of the neuroses and their management is by no means complete. This is, of course, hardly surprising in view of the bewildering difficulties which assail the study of psychiatric disorders.

There are no objective criteria by which the presence of functional psychiatric illness can be demonstrated. Consequently the diagnostic labels we use are open to a variety of different interpretations and the reliability of such diagnoses is not as high as is the case with most organic diseases. These handicaps apply particularly to neurotic disorders where considerable difficulty is experienced in attempting to distinguish these disorders from variations of normal experience on the one hand, and from psychotic illnesses on the other. Various investigators (Hunt et al., 1953; Schmidt & Fonda, 1956; Norris, 1959; and Kreitman et al., 1961) have found that the amount of agreement between psychiatrists with respect to diagnosis is considerably less for the neuroses than for functional and organic psychoses. Difficulties of this kind have at times led to what Kreitman (1961) has aptly termed "the everyday confusional state of psychiatric parlance".

Problems relating to psychiatric diagnosis in general have been ably reviewed by various authors (inter alia Hoch, 1953; Oberndorf, 1953; Pasamanick et al., 1959; Brooke, 1959; Stengel, 1960;) and a detailed discussion of this topic is outside the scope of the present text. It is, however, relevant to emphasise that accurate information about natural history is of considerable importance in diagnosis (Zubin, 1953; Kreitman, op.cit.). In the absence of any objective tests against which clinical diagnosis of functional psychiatric disorders can be checked, precise data about their long-term course can provide a means of validating diagnosis. It follows, that the accumulation of further knowledge about natural history may assist in attempts to establish more reliable diagnostic categories.

Natural History of Neurotic Disorders.

In the present context we may define natural history as the development, clinical features, social effects, course and outcome of an illness. The voluminous literature on neuroses contains very few investigations which are concerned with the natural history of these disorders. Various reasons may be advanced for this. The long-term course of an illness can only be studied by following the progress of a large number of patients with this illness over a period of several years. Neurotic patients, however, are notoriously difficult to trace,

so that follow-up studies in this field are not only time-consuming but present considerable practical difficulties. But perhaps the principal reason for the dearth of such investigations is an historical one. Freud's epoch-making discoveries have given rise, in this century, to a different type of research in which attention has been directed towards psychological mechanisms underlying neurotic disorders. Such studies have been invaluable in increasing our understanding of these disorders and in presenting us with aetiological hypotheses. It seems clear, however, that for the further testing of such hypotheses we require basic factual information about neuroses. However, there is a conspicuous lack of such data in the literature, while, on the other hand, theoretical speculations abound. This state of affairs has been sharply criticised by the authors of a recent text-book of psychiatry :-

"The normal progress of scientific advance, by which facts are first accumulated and confirmed, and then have fitted to them a theory whose initial implications are subjected to test, has been interrupted by a flight into air. Theoretical exposition follows theoretical exposition in evergrowing complexity, and the need constantly to check theory by seeking at every point for new facts is forgotten". (Mayer Gross, et al., 1960).

In view of these considerations, the gathering of factual information about natural history should be regarded as an essential adjunct to the study of psychodynamic processes in the individual. Both avenues of enquiry are complementary,

with new discoveries or orientations in one stimulating advances in the other. In addition, natural history data are required as a yardstick against which the efficacy of various treatment procedures can be measured. In the words of Claude Bernard (1865) :-

"We cannot judge the influence of a remedy on the course and outcome of a disease if we do not previously know the natural history and outcome of the disease".

Bernard's dictum applies particularly to the neuroses, for the evaluation of psychotherapy and other forms of treatment in these disorders remains a major, and as yet unsolved, problem (Lewis, 1958).

In the last few years, psychiatrists have become increasingly concerned about the lack of reliable natural history data. A recent leading article in the Medical Journal of Australia (1962) pointed out :-

"The surveys which have already been carried out or which are still in progress have demonstrated the handicaps resulting from....the scanty knowledge of the natural history of so many varieties of mental disorder".

Our current state of knowledge about the natural history of neuroses has been summed up by Lawrence Kolb (1959) as follows :-

"The paucity of well-validated and long-term studies on the outcome of treated and untreated psychoneurotic conditions and other disorders of personality makes it impossible to forecast accurately their course and prognosis".

The same conclusion has been reached by a number of other authorities who urge systematic, long-term follow-up studies of neurotic patients to correct the serious deficiencies in our knowledge of natural history (inter alia Curran, 1952; Alexander, 1953(a); Anderson, 1957; Shepherd, 1957; Ernst, 1959; Pollitt, 1960; Strömberg, 1961; Chapman, 1963;).

By means of such studies, detailed information can be obtained regarding the development, course, social sequelae and eventual outcome of neurotic disorders, and an attempt can be made to identify those variables which significantly influence prognosis. Accurate data in these areas should thus advance our knowledge with respect to long-term prognosis, and also provide some indication of the range and degree of social disability resulting from these disorders. With these aims in view, we need to consider the principles and methodology of follow-up investigations and how these can be applied specifically to natural history studies of neurosis.

Follow-up Studies

In medicine as in psychiatry our knowledge of prognosis has in the past been mainly based on the personal experience of

individual physicians. Stimulating and valuable though such descriptions continue to be, it is generally accepted today that remembered personal experience is highly fallible as the basis for prognosis (Truelove, 1959; Pollitt, op.cit.). An accurate knowledge of the course of an illness can only be obtained by a systematic study of the fate of patients who suffer from it. Furthermore, in order to allow for the operation of the infinite number of environmental and other factors which may affect the course and outcome of an illness in any given individual, it is necessary to study large numbers of patients. This fact has been widely accepted in general medicine where the previous anecdotal approach to prognosis has been almost completely discarded in favour of planned follow-up studies (e.g. Honey and Truelove, 1957; Joint Report by Medical Research Council and American Heart Association, 1960; Taylor et al. 1960; Fry, 1960; Adams & Merrett, 1961).

Such considerations apply particularly to functional psychiatric disorders, whose long-term course is frequently altered by a whole host of unknown variables. Under these circumstances, it is obviously misleading to base our knowledge of prognosis on isolated case reports; instead, systematic investigations of large series of patients are required. Such investigations have been carried out in respect of Schizophrenia

(inter alia Langfeldt, 1956; Holmboe & Astrup, 1957; Welner & Strömberg, 1958;), Manic-Depressive Illness (inter alia Rennie, 1942; Lundquist, 1945; Stendstedt, 1952;) and other mental disorders. Follow-up studies in psychiatry present special problems, and it is proposed to consider these in relation to the long-term study of neuroses.

In essence, follow-up studies usually consist of (i) a detailed assessment, after a specified interval, of the clinical status of each of a series of patients who had previously been under medical care for a particular illness, and (ii) an attempt to isolate factors of prognostic significance by investigating the relationship between outcome and salient features in the histories of these patients.

By means of such studies information can be obtained about the natural history of an illness. It should be mentioned, at this stage, that the term natural history, as applied by Ryle (1936) to organic disease, refers to the course of the untreated illness. However in respect of neurotic disorders, it is necessary to broaden this concept to include the study of illness which may have been modified by medical intervention (Pollitt, op.cit.). For clearly, any investigation of the behaviour and long-term course of an illness must of necessity

be conducted with patients who have at some time been under medical supervision; in this connection allowance is made for the known susceptibility of neurotic patients to apparently minor environmental changes including simple medical care. As neurotic patients have almost invariably received some kind of treatment ranging from simple counselling to formal therapeutic techniques, data about the natural history of neuroses can, in practice, only be obtained by studying the progress of such variously treated patients.

There is, to date, no reliable body of evidence concerning the specific effect of any of the current methods of treatment on the long-term prognosis of neuroses (inter alia Meehl, 1955; Lewis, op.cit., Kolb, op.cit., Astin, 1961;). Many authors have ascribed their reported outcome results solely to the effect of treatment. Yet clinical experience suggests that many other factors, such as family history, childhood environment, premorbid personality, intelligence, social circumstances and the particular form of neurotic reaction may have a direct bearing on prognosis. It is heuristically more profitable, therefore, to regard treatment as one of many possible factors which may influence the course of neuroses, and to investigate in detail the relationship between each of these suspected prognostic factors and eventual outcome. Clinical impression concerning prognosis can thus be checked by follow-up studies; and those features in the life-histories of neurotics which, aside from treatment, demonstrably

affect outcome can be isolated. Such an approach in no way deprecates the value of formal therapy, but is adopted to further our understanding of natural history per se, and to provide an essential starting point for investigations designed to assess the efficacy of therapy.

The difficulty of studying the natural history of a group of disorders whose course may be influenced by a large number of environmental and other factors is self-evident. A further obstacle, to which we have previously referred, is the fact that neurotic disorders cannot be precisely defined. Thus the considerable differences in reported outcome results in the literature may be partly attributable to variations in diagnostic practice. It seems likely for example, that authors such as Ziegler & Paul (1954), who reported that 46% of neurotic patients eventually develop psychotic illness, are using different diagnostic criteria for neurosis and psychosis from those applied by the majority of workers. Unfortunately, to date most follow-up reports on neuroses contain no information about the original clinical state of the patients studied other than the statement that they were suffering from neurotic disorders. As no satisfactory definition of neurosis is possible, it is important to supplement this diagnostic label by a detailed description of

the clinical and social features common to the investigated patient sample. This is necessary in order to make the diagnosis, and thus the reported findings, more meaningful to other workers.

Evaluation of Outcome

It will be apparent from the foregoing discussion that formidable obstacles surround the investigation of long-term progress of neurotic illness. However, the fundamental problem in this field of research concerns the actual evaluation of outcome.

Neuroses are characterised not only by the presence of various somatic and mental symptoms, but also by some disturbance in the social adjustment of the individual. Evaluation of outcome in neurosis should therefore comprise an assessment of (a) the patient's capacity to function adequately in society and (b) his symptomatic state. But we have no objective criteria by which the degree of even presence of neurotic symptoms can be demonstrated, nor any unequivocal, independent standard against which the social adjustment of any given individual can be measured.

What constitutes "normal" social adjustment? Seeman (1959) lists :-

"....stability, high environmental contact, high internal communication and effective complexity"

as the essential criteria of normal adjustment, while Combs & Snygg (1959) refer to :-

"....a high degree of need satisfaction. These are people who feel generally capable of coping with life, who have developed phenomenal selves so defined as to be highly successful in the achievement of effective maintenance and enhancement of self".

Hilgard (1962) describes an adjusted person as one who

"....is not unduly distressed by the conflicts he faces. He attacks his problems in a realistic manner; he accepts the inevitable; he understands and accepts his own shortcomings and the shortcomings of those with whom he must deal".

Yet another psychologist argues that before an individual's social adjustment can be regarded as normal he must possess

"self control", "personal responsibility", "social responsibility", "democratic social interest" and "ideals". (Shoben, 1957).

The enormous difficulty of delineating "normal adjustment" is illustrated by the above examples. In the view of leading authorities (inter alia Fenichel, 1946; Carstairs, 1958; Lewis, 1958; Nunberg, 1959; Hollingshead, 1961) the concept of normality or "mental health" currently remains a vague, undefinable ideal which can be variously interpreted. In assessing outcome, therefore, the investigator has no objective criteria or clearly defined standards to guide him.

But faced with the practical problem of assessing the social adjustment of any given patient, the psychiatrist must

have some yardstick on which to base his judgment. He is likely to find the semantically sophisticated but obscure definitions mentioned above unhelpful in this regard. A simpler and more realistic basis for appraisal has been put forward by Freud (1922) :-

"The difference between nervous health and nervous illness (neurosis) is narrowed down therefore to a practical distinction, and is determined by the practical results - how far the person concerned remains capable of a sufficient degree of capacity for enjoyment and active achievement in life".

However, the problem of establishing a set of precise, unambiguous criteria by which the "capacity for enjoyment and work" can be reliably judged remains unsolved. This is obviously a formidable task. The evaluation of social capacity involves an appraisal of intangible complex aspects of human behaviour such as interpersonal and marital relationships, and such appraisals must of necessity depend largely on subjective clinical judgment. The criteria used in making assessments of this kind are very hard to specify. Yet, these criteria must be clearly defined to enable other investigators to comprehend and verify reported findings. What is needed, therefore, is the further development of methods whereby the subtle and often intuitive clinical judgments of psychiatrists can be translated as far as possible into explicit and measurable terms.

Hitherto the outcome of neurotic disorders has generally been reported as the proportion of patients judged to be "recovered", "much improved", "improved", etc., without any explanation of what is meant by these terms. In many cases the authors do not indicate whether their evaluation is based on the presence and degree of clinical symptoms only, or whether the social adjustment of patients is also taken into account. Even in those cases where the authors state that social adjustment has been considered, it is often not clear which particular areas of social functioning have been investigated nor what criteria were used in estimating the degrees of social adjustment. These deficiencies in communication make the interpretation and verification of reported findings a perplexing and often impossible task.

As might be expected under these circumstances, the literature reveals gross discrepancies in reported results of outcome in neurosis. For example, the proportion of patients assessed as having a satisfactory outcome (i.e. "recovered" and "much improved") ranges from a rather gloomy 14% in one study (Hardcastle, 1934) to a distinctly optimistic 91% in another (Terhune, 1949). The reported incidence of psychotic illness in neurotic patients varies from nil to 46% (Ziegler & Paul, 1954).

These discrepancies may, in part, be due to the heterogeneous nature of the various kinds of disorders which we call

neuroses and to the fact that they can be classified only with difficulty and at a purely descriptive level at present. However, a critical examination of prognostic studies in this field reveals serious deficiencies in methodology per se which must be held largely responsible for the wide variations in reported findings.

Methodology

A detailed review of the literature follows in a subsequent chapter. At this stage, we will consider some common errors in the design and method of prognostic studies which largely invalidate reported findings. These deficiencies in methodology may be broadly grouped under 3 headings:-

1. Insufficient Information

In many reports we are told that the progress of patients suffering from neurotic disorders of one kind or another has been ascertained, without any information about their history, social characteristics or symptomatology. In some cases, authors have failed to indicate the length of the follow-up period, what proportion of the original patient sample was actually followed up, or the particular method used to obtain the required data - e.g. letters of enquiry, formal questionnaires or psychiatric interviews. Finally, with very few exceptions, investigators have not stated their criteria for assessment of outcome.

2. Errors in Sampling Technique

Bradford Hill (1961) has described various errors in sampling technique which can lead to biased results. Such errors abound in prognostic studies of neurosis. In many cases, the patients studied are not a random sample but have been "selected" in various ways. For example, one author reported his findings on the follow-up status of 100 patients. His sample was obtained by sending questionnaires to the family doctors of 250 patients who had previously been in the author's care, and as only 100 replies were received, these formed the basis of his results. We have no way of knowing whether these 100 patients were, in fact, representative of the total sample. In cases such as this, there is a strong possibility that selective factors operate which produce biased results.

Another serious deficiency of prognostic studies is the inadequate follow-up rate. In the majority of publications, one finds that the authors have failed to trace at least one-quarter of their original sample of patients. As the fate of a substantial proportion of neurotics remains unknown in each of these investigations, it is doubtful if any valid conclusions can be drawn from the reported results.

3. Faulty Enquiry Methods

Many investigators have relied solely on letters of enquiry or postal questionnaires as a means of ascertaining their patients' progress. The design of these enquiry documents is, in some cases, open to serious criticism. The authors of one study, for example, sent questionnaires to patients asking them to state whether they considered themselves "well", "much improved", or "improved"; no other choice was offered. The introduction of bias is self-evident here, and little meaning can be attached to results obtained in this manner.

Aside from the actual design of questionnaires, there are enormous opportunities for error when the clinical state and social adjustment of patients is assessed through the post. Letters and questionnaires may be of value when used in conjunction with psychiatric interviews. However, information obtained exclusively from postal enquiries is clearly inadequate for the reliable assessment of outcome in neurotic patients (inter alia Berg, 1952; Rennie, 1953; Woodside, 1953; Blair et al. 1957).

These deficiencies in methodology throw grave doubt on the validity of reported results. Furthermore, the absence, in most cases, of any information about the nature of the patient sample, the kind of enquiry technique, or the criteria used for

assessment makes it impossible for other workers to repeat these studies and verify the findings. There can be little doubt that the remedy for these serious shortcomings lies in the application of rigorous and fully explicit methods to prognostic studies of neurotic illness. The requirements for a reliable follow-up investigation may be outlined as follows :-

- (1) The sample studies should be unselected (from the stated clinic population) and should consist of a consecutive or randomly chosen series of patients.
- (2) A full description of the patient sample should be given; this should include clinical features as well as other salient variables such as age, sex, marital status and social class.
- (3) It is essential to aim at following up as many patients in the sample as possible. If the fate of a significant proportion of patients remains unknown, little meaning can be attached to reported results (Doll, 1959). Despite all efforts, however, it is found in practice that some neurotic patients cannot be traced. Therefore, in order to estimate whether the outcome of such patients is likely to differ substantially from that of the rest of the sample, a detailed comparison between traced and untraced patients with respect to history, clinical features, and social characteristics must be made.

- (4) The method of obtaining follow-up information must be specified. It is suggested that detailed psychiatric interviews with patients and their relatives are preferable to postal methods of enquiry. The psychiatrist conducting these interviews should be someone other than the original therapist, in order to obviate possible bias.
- (5) The criteria for assessing outcome should be made as fully explicit as possible. These criteria should relate to clinical symptoms as well as to various, specified areas of social adjustment (for example work record, interpersonal relations etc.). Ideally, assessments of the clinical-social status of patients (a) during the original illness and (b) at follow-up should be based on the same criteria, and outcome determined by direct comparison between these two assessments.
- (6) Attempts should be made to relate outcome to possible prognostic factors such as family history, childhood environment, premorbid personality, social class, intelligence, and type and duration of symptoms. In investigating the relationship between such factors and final outcome, it is necessary to employ appropriate statistical methods to determine

whether observed associations are likely to be significant or merely chance effects. A statistical analysis of the data obtained in this kind of investigation is essential, for, as Bailey & Witts (1959) point out, "not only do we require numerical ways of reducing and summarising vast numbers of facts, but we want to be able to make efficient decisions on very variable material as to which hypotheses are worth retaining and which are not".

The present report concerns a follow-up study of neurotic patients undertaken by the author. The stringent methodological approach outlined here has been adopted in an attempt to elicit some accurate, communicable and verifiable data about the long-term course of neurotic disorders. The method and findings of this investigation, as well as its limitations, will be fully discussed in the text.



II. REVIEW OF LITERATURE

Various authors including Orbison (1925), Matz (1929), Fenichel (1930), Kessel & Hyman (1933), Mapother (1935), Neustätter (1935), Bennett and Semrad (1936), Landis (1938), Schilder (1939), Harris (1939), Shapiro & Freeman (1939), Knight (1941), Jacobson & Wright (1942) and Thorley & Craske (1950) have reported on the outcome of neurotic disorders as assessed either at the completion of treatment or a few months later. In what follows, however, we shall be concerned only with the literature purporting to give information on the subsequent course of neurotic illnesses - that is with reports in which the status of patients was assessed one year or more after the completion of treatment.

Hardcastle (1934) followed up the first 100 patients who had attended the Department of Psychological Medicine at Guy's Hospital, London in 1931. The sample consisted of 33 adults and 67 children. Patients were grouped by the author, a Psychiatric Social Worker, into 4 diagnostic categories defined as Affective Changes, Conversion Symptoms, Mentally Defective, and Organic; no details are given regarding the history, clinical findings or treatment of these patients. Follow-up assessments were made from personal interviews 2 years after discharge. The proportion of patients traced is not stated, but the author reports that of 21 adult Neurotics (i.e. patients with Affective Changes or Conversion

symptoms), 3 were much improved and 10 improved. No definition is given of the former term; improvement is defined as ".....where definite improvement has been noted in the condition for which the case was referred".

Wenger (1934) reported on 50 cases who had received out-patient psychotherapy in Vienna. They were suffering from various unspecified neurotic disorders and treated by the author. When interviewed 6 months to 1½ years after cessation of therapy, 50% appeared much better and 32% showed some improvement. The criteria upon which these assessments were based are not stated.

Luff & Garrod (1935) investigated 710 consecutive admissions (mostly out-patients) to the Tavistock Clinic, London. In contrast to the above studies, the authors describe their sample in considerable detail. Patients were followed up by letter 3 years after completion of therapy and in this way information was obtained about 500 cases (70% of the total sample). 385 of these patients suffered from Neurotic Disorders and their outcome was reported as relieved (i.e. much improved or improved) in 60% at time of discharge, and in 54% three years later. The prognosis was not affected by a family history of mental illness, unsatisfactory childhood environment, or length of treatment; patients with Anxiety States had the most favourable outcome at follow-up (64% relieved),

whereas the outcome for patients with Hysteria, Obsessional States and Depressive States was less favourable (50-52% relieved).

Lewis (1935) described a group of 52 consecutive referrals to a London Psychiatric Clinic of unemployed men who were on "out-relief" (i.e. public assistance during the depression), and who had been referred to the Clinic by Public Assistance Committees for presumptive mental disorder. In 37 patients the clinical picture appeared remarkably uniform and was described as that of a chronic neurosis in which hysteria predominated; the remaining patients suffered from other psychiatric illnesses. Patients were treated by short-term psychotherapy and occupational training. One year after discharge, 49 of these 52 cases were visited by a Psychiatric Social Worker who found that just over one third had ceased to be recipients of out-relief, mostly because they had obtained work. No other criteria were used in assessing outcome.

Comroe (1936) reported on the outcome of 100 patients at the University Hospital in Pennsylvania with a diagnosis of Neurosis. His results were obtained by sending questionnaires to the physicians of 250 patients who had previously been in the author's care; 100 replies were received and these form the basis of the findings. 40% were definitely improved or cured, 34% had remained in status quo, 2% were worse, and in 24% definite evidence of organic disease was

found. No information is given in this paper regarding the history, clinical findings or treatment of patients, nor does the author reveal how long after discharge from hospital follow-up enquiries were made.

Lewis (1936) investigated 50 patients at the Maudsley Hospital, London, with Obsessional Illness, who had been treated (as in or out-patients) at least 5 years previously by various methods, including psychotherapy in 17 cases. Information was obtained from personal interviews with patients and with relatives; 16 patients were symptom-free, 7 were regarded as much improved, 5 suffered from recurrence of symptoms at intervals, and 22 showed little or no improvement or were considered to be worse. Thus the outcome was satisfactory in 46%.

Ross (1936) followed up all patients diagnosed as psychoneurotic who were admitted to the Cassel Hospital, London, over a 12 year period. The sample consisted of 1186 patients with a variety of neurotic disorders such as Anxiety States, Hysteria, Obsessional States, Anorexia Nervosa, Traumatic Neurosis and Compensation Neurosis; they were treated with psychotherapy and supportive measures. Letters of enquiry to patients revealed that 1 year after discharge from hospital 45% of patients reported themselves as well, and 25% as improved; 5 years after discharge

only 46% of the total sample could be traced, and of this group, 51% regarded themselves as well or improved.

Yaskin (1936), in the United States, investigated the outcome of illness in a group of 121 private patients with Anxiety Neurosis, Conversion Hysteria, Anxiety Hysteria and Obsessive-Compulsive Neurosis. Treatment included psychotherapy, sedatives, occupational therapy and physical therapy; 11 patients were hospitalised. 41 patients were reported as recovered, 41 as improved, 9 as not improved, 24 as having developed a recurrence, and 6 patients originally diagnosed as suffering from Anxiety Hysteria developed psychoses. The author does not indicate how the sample was selected and what proportion was followed up, nor the length of the follow-up period, how information was obtained, or what criteria were used in assessing outcome.

Bond & Braceland (1937) investigated the progress of 710 consecutive admissions to a private mental hospital in Pennsylvania 5 years after discharge. 37 cases were regarded as psychoneurotic; at follow-up 21 (57%) were recovered, 7 (19%) improved, 4 unimproved, 3 patients were dead and 2 untraced. The authors do not mention the clinical features upon which their diagnoses are based, nor what treatment these patients received. They do not reveal how they obtained their information or what criteria were used in assessing outcome.

Curran (1937) used questionnaires to obtain information about a group of patients attending the Out-patient Department at St. George's Hospital, London. The follow-up interval was 1-3 years and 83 patients (40% of his original sample) were traced. 69 of these patients suffered from Neurotic Disorders; at follow-up 26 (38%) were considered much improved, 21 (30%) improved and 22 (32%) not improved. These patients had been treated by supportive interviews, and only 25 cases were seen more than 3 times after the initial examination.

Harris (1938) followed up 259 out-patients with a diagnosis of Anxiety State who had attended the Maudsley Hospital 10-12 years previously. 123 patients (48% of the total sample) were traced and their status ascertained by means of questionnaires and in some cases (number not stated) by personal interviews. 31% were described as well; in 49% symptoms were still present, 7% had developed psychoses, and 13% were dead. Patients described as well were symptom free, and those cases with persisting symptoms were graded in 3 categories according to the degree to which such symptoms impaired the patients' ability to work. The author pointed out that age, sex, occupation, and presence or absence of a psychopathic family history had no appreciable effect on outcome, but that duration of illness (less than 2 years - 65% recovered; over 2 years - 11% recovered), and clinically assessed premorbid personality were important prognostic factors.

Masserman & Carmichael (1938) interviewed 100 patients, including 32 Neurotics who had been admitted to a psychiatric clinic of a general hospital in Chicago, one year after discharge. Patients received routine hospital care and brief psychotherapy, the average length of stay in hospital being 24 days. Organic disease which was thought to contribute to patients' complaints was found in just over one-third of the neurotic group. At follow-up, 60% of patients with Neuroses showed definite improvement of which two thirds were described as sufficiently recovered to permit stable occupational, marital and social adjustments; criteria for assessing these adjustments were not made explicit. The authors report that in 9 cases of Conversion Neurosis, 6 cases of Anxiety State, one case of Mixed Psychoneurosis and one case of Obsessive-Compulsive Neurosis, the diagnosis was changed at follow-up (mainly to Schizophrenia and Organic Disease); in view of their figures of 60% improvement in 32 patients we must assume that patients whose diagnosis was changed were excluded from this figure. The authors do not indicate the numbers in the original sample.

Coon & Raymond (1940) (cited by Miles et al, (1951)) investigated a large series of patients with Neurasthenia and Anxiety States in Stockbridge, Massachusetts. By means of questionnaires sent 1 to 20 years after discharge from hospital, patients were asked to state whether they considered themselves well,

much improved, or improved; no other choice was offered. The result, namely that 91% of patients who answered the questionnaire agreed with the author's suggestion that they were well, much improved or improved, is thus not surprising.

Schou & Vorbeck (1941) (cited by Eitinger (1955)) investigated 120 patients with illnesses diagnosed as Neurasthenia, and 132 diagnosed as Hysteria, by questionnaires sent 3-8 years after discharge from hospital in Scandinavia. They reported that of patients with Neurasthenia 25% had recovered, 43% had improved and 32% were unchanged; whilst of patients with Hysteria 13% had recovered, 39% had improved and 48% were unchanged. The authors point out that the outcome in their sample was considerably worse at follow-up than at the time of discharge; the proportion of patients regarded as not improved at the time of discharge was doubled at follow-up.

Friess & Nelson (1942) selected from the records of 3587 consecutive patients seen at a medical clinic in New York, all those (498) with a diagnosis of Psychoneurosis or Psychopathic Personality; 25% had evidence of coexisting organic disease at the time of their original visit but in only 11% were any of the original complaints considered to be attributable to the organic disease. Though 48% of cases were referred for psychiatric treatment only 14% made more

than 5 visits to a psychiatrist. Patients were followed up after 5 years; the authors state that 229 patients were untraced and that information was obtained about the remaining 269 patients (54% of the sample). However, their results refer to only 200 patients of which 53 (26.5%) were regarded as cured or improved, 116 (58%) were unchanged or worse, 15 patients (7.5%) were dead and in 16 cases (8%) the diagnosis of psychoneurosis was found to be incorrect. The criteria used in assessment are not stated.

Hamilton, Varney & Wall (1942) report on the outcome of psychoneurotic disorders in 200 patients (100 males and 100 females) who had been admitted to a State Mental Hospital in New York 5-15 years previously. The authors do not indicate the size of the original sample, nor how information about these patients was collected. 51% of males and 66% of females were described as recovered or much improved; these terms were not defined.

Ziegler & Heersema (1942) followed up 111 patients who had attended the Mayo Clinic 14 years previously, and whose chief symptom had been depression. Information was obtained chiefly from letters sent to patients. Of the 84 patients who were traced, 30 were described as well, 5 as improved, 24 as unchanged or worse; 7 had committed suicide and the remaining 18 patients had died from other causes.

Wilder (1945), in America, described the progress of a series of private patients with whom he had conducted psychotherapy. In one group of 23 patients interviewed by the author almost a year after the end of therapy, 82% were described as cured or much improved; in a second group of 54 patients who were followed up by letters alone, two years after completion of treatment, 50% were described as cured or much improved. No details regarding the clinical features of diagnosis of patients are given. The proportion of the original sample who were untraced is not mentioned, though the author indicates that many patients could not be traced and some were not questioned "for reasons of tact".

Denker (1946) in New York investigated 500 patients who had received disability benefits from an Insurance Company for psychiatric disorders which rendered these patients incapable of carrying on with any occupation. They were treated by General Practitioners with sedatives, tonics and supportive measures. The author obtained information about the progress of these patients from reports submitted by their physicians to the Insurance Company. 44.6% of patients were apparently cured after one year and after 5 years this proportion was 90%. Patients were described as apparently cured when they had returned to work and had no complaints or only very slight difficulties. No description is given of the clinical state of patients.

Guttman & Thomas (1946) studied 382 ex-servicemen discharged from the British Army on account of Neurosis. In the majority of cases the official diagnosis had been Anxiety State, Hysteria or Psychopathic Personality. These men were interviewed by a Psychiatric Social Worker 15 months after discharge from the Army; their progress was assessed in terms of their health, work record, and social readjustment. Three-quarters of the sample required medical attention during the follow-up period and 68% described their health as worse than before enlistment; nearly all men had lost working time through sickness, and 10% showed signs of serious domestic and social maladjustment. These findings differ considerably from those of other studies; in view of the special characteristics of the sample, the factor of disability pensions cannot be ignored.

Terhune (1949), in America, described the outcome in 86 patients with Phobic Syndromes, treated privately by the author. Treatment consisted of "emotional retraining and reconditioning of specific fears through re-education or brief psychotherapy". 67% were described as permanently relieved from phobias and 24% showed great improvement. No criteria for assessment are stated; the length of the follow-up interval and the method in which data were obtained are not indicated.

Cobb (1950) selected his sample by attempting to contact about 500 psycho-neurotic patients who had received psychotherapy in a hospital in America; the first 200 cases who were traced were then interviewed by the author. 76% were described as greatly improved or improved, 15% as unchanged, 6% as worse and 3% were dead. Both symptoms and social adjustment were taken into account (in an unspecified way) in assessing outcome. The follow-up interval is not stated.

Wheeler, White, Reed & Cohen (1950), in America, conducted a 20-year follow-up investigation of 173 patients originally diagnosed as Neuro-circulatory Asthenia (Anxiety Neurosis, Effort Syndrome and Neurasthenia). These patients had complained of palpitations, nervousness, faintness or dizzy spells and fatigue. The authors obtained information from questionnaires (93 cases) or interviews (60 cases). They found that 12% of patients were free of symptoms, 35% had some symptoms but without any disability with regard to work and social life, and 53% suffered from some disability as a result of their symptoms.

Miles, Barrabee & Finesinger (1951) in a carefully planned study, investigated 76 cases with Anxiety Neurosis who had been in-patients in a psychiatric ward of the Massachusetts General Hospital where they had received psychotherapy. 62 patients (81.5%) were

traced 2-12 years after discharge from hospital and their status was assessed in the majority of cases from interviews. Outcome was evaluated in terms of symptoms, social adjustment and depth of insight, and assessments were made on the basis of explicit criteria. 23% of patients were found to be markedly improved, 35% were definitely better and 42% essentially unchanged. An analysis of anamnestic material suggested that intelligence, childhood environment, childhood neurotic traits and severity of symptoms were related to the course of the illness.

Muller (1953) studied all patients with Obsessional Neuroses who had attended the Burgholzli Klinik in Zurich between 1916 and 1941. He was able to follow up 57 patients (68% of the original sample) after 25 years. Outcome was assessed on the basis of symptoms and social adjustment. 49% of patients were either free of symptoms or much improved; 3 patients had committed suicide and 2 patients had developed psychoses (Schizophrenia and Endogenous Depression respectively). The author found that a normal premorbid personality and an episodic course of the Obsessional illness were favourable prognostic signs.

Rudin (1953) also examined patients with Obsessional Illnesses in Germany. Of the original sample of 205 patients information was obtained in 114 cases of which 34 (30%) showed

marked improvement, 42 (37%) were unchanged and 38 (33%) were worse.

Pascal, Swensen, Feldman, Cole & Bayard (1953) examined prognostic factors in a group of mental hospital patients. The sample included 95 Neurotics; patients with a previous history of mental illness were excluded from the study. One year after discharge 75% of patients were improved and 25% unimproved. The criteria for assessing outcome were not made explicit, nor did the authors indicate how their data was obtained. Patients who could not be traced were counted as improved where they had been assessed as such on discharge from hospital. The authors listed 11 prognostically significant variables including marital status, diagnosis, duration of illness, and type of onset.

Rennie (1953) followed up a group of patients who had been admitted to the Phipps Clinic, Baltimore, with Psychoneurotic Disorders 20 years previously. The size of the original sample is not indicated but outcome was ascertained in 240 cases, chiefly by means of letters of enquiry to patients or to their family doctors. 10 patients had committed suicide and 14% had developed psychotic illnesses; of the remainder approximately one third were described as recovered (symptom-free), one third showed some improvement and one third were unchanged.

Harris (1954) compared the results in Neurotic out-patients treated by two different methods at the Maudsley Hospital, London. In the majority of cases a diagnosis of Anxiety State had been made; all patients who were judged suitable for psychotherapy were then arbitrarily assigned to one of two groups, one group receiving psychotherapy and the other group being treated by carbon dioxide inhalations. There were originally 60 patients in each group, but 44 patients had to be excluded because they failed treatment or required admission to hospital. The outcome of the remaining 76 patients (38 in each group) was assessed 12-15 months after cessation of carbon dioxide treatment; however 13 patients in the psychotherapy group were still receiving treatment at the time of follow-up assessment. No significant difference was found between the outcome in the two groups; 45% were regarded as recovered or improved; 54% were unchanged and 1% worse.

Langen & Veit (1954) in Germany described a group of 73 women who had received psychotherapy as in-patients. The diagnostic categories appear vague and make comparison with other studies difficult; in 22 cases the diagnosis was Psychoneurosis, in 39 cases Organ-neurosis, and 12 cases were labelled "general Versagen" which might be translated as total inadequacy. Two years after completion of treatment the authors were able to follow up 66 patients; they found that 50% were symptom free; 27% were improved and 23% unchanged.

Ziegler & Paul (1954) followed up 66 female patients who had been in the Boston Psychopathic Hospital with a diagnosis of Hysteria 20-25 years previously. The authors obtained information about 48 of these patients and found that 46% were either symptom-free or had minor symptoms only, in 8% somatic conversion symptoms had recurred and 46% had subsequently developed Schizophrenia, Manic-Depressive Psychosis or unspecified Organic Psychoses. The authors comment that, in retrospect, it appeared that the original diagnosis was questionable in several cases.

Brill & Beebe (1955) investigated a large series of American ex-servicemen who had been admitted to hospital during military service because of a Neurotic Disability, 5 years previously. 592 men were interviewed by over 200 psychiatrists and in other cases information was obtained from questionnaires. Assessments were made of various areas of social adjustment using explicit criteria. The authors found that preservice personality, preservice social adjustment, and a history of preservice disability due to psychiatric illness were important prognostic factors. In assessing outcome the authors distinguished between psychiatric diagnosis and psychiatric disability at follow-up. 45% had no psychiatric disability, in 27% symptoms were clearly present but were considered to be not more than slightly disabling; and in the remainder symptoms resulted in moderate or severe disability.

However from a diagnostic viewpoint only 28% of patients were judged entirely free from psychiatric illness.

Eitinger (1955), in a 10 year follow-up investigation of 466 neurotic patients admitted to the Oslo University Psychiatric Clinic, collected pertinent data by means of questionnaires in 75% of cases, and by interviews in the remainder. The patients had received various forms of treatment including E.C.T., sedatives and occupational therapy, but no intensive psychotherapy was given. The outcome was very satisfactory (i.e. cured or much improved) in 33% and satisfactory (i.e. definite but limited improvement) in 21%. Low intelligence, a pathological premorbid personality and a duration of illness of more than 2 years before admission were found to be associated with poor outcome. Patients with Depressive Reactions and Conversion Hysteria were found to have the best prognosis.

Schjelderup (1955) carried out a follow-up investigation of his own patients who had been in analysis 8-24 years previously. He was able to trace 28 patients (68% of the original sample); outcome was assessed mostly from personal interviews. The intelligence and educational standard of these patients was considerably above average. Their diagnoses were as follows: Obsessive-Compulsive Illness (5 cases), Anxiety Hysteria (5 cases), Psychoneuroses with mixed symptomatology (18 cases). The illnesses

in most cases were of long standing; some patients had been ill since childhood and in the remainder the average duration of symptoms before analysis was $7\frac{1}{2}$ years. The average length of the analysis was $2\frac{1}{4}$ years. At follow-up 25% of patients were free of all symptoms and were considered to have shown favourable personality changes; 54% showed some definite improvement in terms of symptoms and social adjustment, and in the remaining cases the results were considered unsatisfactory.

Paulett (1956), a general practitioner in England, followed up after an interval of 4 years, 66 patients diagnosed as neurotic. He re-examined 47 of these patients and compared them with 47 cases who had submitted to routine examination four years previously and who had been free of any symptoms at that time. The author found neurotic symptoms (not defined) in 60% of men and 70% of women; it is not clear whether these figures refer to all cases or to the neurotic group alone.

Blair, Gilroy & Pilkington (1957), in England, investigated 235 cases with neurotic or personality disorders who had received brief out-patient psychotherapy (average 7 sessions) at least 15 months previously. Their status was ascertained from interviews and questionnaires. The outcome was much improved in 40%, improved in 32% and not improved in 15%; the remainder were untraced or had died; criteria used in assessing outcome are not stated.

Canestrini & Moreno (1957) attempted to follow up 500 patients with Neurotic Disorders who had attended the Rome University Polyclinic 26-31 years previously. They were able to interview 50 patients and found that, of this group 68% showed definite improvement. 3 patients were suffering from Schizophrenia and one case was diagnosed as Manic-Depressive Psychosis.

Dührssen (1957) assessed the results of psychotherapy in a group of patients with unspecified Neurotic Disorders 3 years after completion of treatment. The average duration of treatment was 90 hours. 300 patients (described by the author as 60-70% of the total sample) were traced. The outcome was regarded as satisfactory in 84% of cases (i.e. patients were either free of symptoms or had only few and infrequent symptoms). The author does not indicate whether patients were interviewed or whether information was obtained from questionnaires.

Ljungberg (1957), in a detailed and extensive study, investigated all patients admitted to the University Psychiatric Clinic at Stockholm between 1931 and 1945 with a diagnosis of Hysteria. 92% of the original sample were interviewed by the author 7-20 years after discharge from hospital; his final figures refer to 381 patients (135 males, 246 females). Just over one half of the patients had abnormal premorbid personalities, though no uniform personality type

was found. The childhood environment had been unsatisfactory in a significantly higher proportion of patients than in the general population. Treatment consisted mainly of routine hospital care and supportive measures. The author reports that "the pace of recovery is greatest in the first 5 years, after which a stabilisation sets in, with very small variations". 38% of patients still had symptoms of Hysteria one year after discharge, 23% after 5 years, and 21% and 20% after 10 and 15 years respectively. Thus 5 years after discharge from hospital 77% of patients were symptom-free; 5 patients had committed suicide. Patients with abnormal premorbid personalities were found to have a more unfavourable prognosis than cases whose premorbid personalities were judged non-deviant (i.e. normal).

Middendorp-Moor (1957), in Germany, examined a group of out-patients who had received psychotherapy (an average of 19 sessions) for various unspecified, Neurotic Disorders. Follow-up of 60 patients (61% of the original sample) by interview 3-6 years after the end of treatment revealed that 21% were symptom-free, 23% had improved, and the remainder were unchanged or worse. Criteria used in assessing improvement are not made explicit.

Pollitt (1957) investigated the progress of 150 patients with Obsessional States at St. George's Hospital, London. Of 82

patients (including 29 who had been leucotomised) followed up one or more years after discharge from hospital, 67% had become either free of symptoms or able to carry on a normal life. The author comments that his findings indicate a better prognosis for Obsessional States than previously reported by other authors. However, information was obtained mainly from questionnaires and less than two-thirds of the original sample were traced.

Hastings (1958) studied the progress of a large series of patients who had been admitted to the psychiatric section of a University Hospital in Minnesota. The sample included 371 patients with Psychoneurotic Disorders; therapy in these cases consisted of general supportive measures. 77% of the series were traced and interviewed by a Psychiatric Social Worker who assessed outcome in terms of social adjustment. 46% of patients were making a good social adjustment; in the remainder, social adjustment was moderately or severely impaired as a result of neurotic illness. Anxiety Reactions and Hysteria were found to have the best prognosis. The author considers that as these patients had not received any "specific" treatment, the figure of 46% is, presumably, an estimate of the spontaneous remission rate in psychoneurotic disorders.

Board (1959), in America, discusses the results of psychotherapy 9-14 months after completion of treatment. His paper

is mainly concerned with the amount of agreement between patients' and psychotherapists' judgments of outcome. The patients suffered from a variety of psychiatric illnesses and the number of patients with neurotic disorders is not given; for this reason the results obtained are not relevant to the present discussion.

Ernst (1959) interviewed a series of psychoneurotic patients who had attended the University Psychiatric Polyclinic in Zürich 20 years previously. He was able to trace 78% of the original sample and reported his findings on this series of 120 cases. The sample comprised all varieties of Neurotic Disorders except for Obsessional Illnesses. In assessing outcome the author took into account symptoms, personality integration ("Persönlichkeitsharmonie") and evidence of social adjustment. 19% of patients were described as cured, 58% as improved and the remainder were unchanged or worse. 2 patients were found to be suffering from Schizophrenia, one patient from a Depressive Illness of a cyclical nature, and 4 patients had committed suicide. Patients with Hysteria and Depressive Reactions were found to have the best prognosis; these illnesses usually had an acute or subacute onset in contrast to the more gradual onset of Anxiety or Neurasthenic Reactions. The premorbid personality was found to be an important prognostic factor. Affective symptoms and disorders of consciousness (for example hysterical trance-states) were favourable prognostic signs.

Stevenson (1959), in America, followed up 21 psychoneurotic patients who had received psychotherapy. At termination of therapy, 14 were described as much improved and 7 as unimproved. After an interval of about 2 years the author found that improvements had been sustained; however, in another part of the communication, he reports that 2 patients, originally regarded as much improved, had relapsed.

Wallace & Whyte (1959), in England, studied a sample of 83 patients with neurotic disorders who had been put on a waiting list for psychotherapy and were still on this list 3-7 years later. The sample consisted predominantly of patients with Anxiety States or Hysteria. 49 patients were traced of whom 32 (64%) were described as improved; these were troubled only by residual symptoms; they were in full employment and had suffered no fall in socio-economic status. The premorbid personality was considered to be clearly related to outcome.

Gatfield & Guze (1962), in America, attempted to follow the progress of 37 patients with Conversion Reactions 3-10 years after discharge. They were able to trace 24 of these patients and reported that 38% were free of conversion symptoms but 85% "were still sick despite the remission of many individual conversion symptoms".

Guze & Perley (1963), in a 6-8 year follow-up study of 25 women suffering from Hysteria found that only 3 patients could be considered well or much improved. The authors stress the poor prognosis in Hysteria, but their findings are based on a highly selective sample consisting of middle-aged women most of whom had been ill for at least 20 years.

Roberts (1964) traced 38 "housebound housewives" one and a half to sixteen years after discharge from a psychiatric in-patient unit at a London teaching hospital where they had been treated by sedation and "firm encouragement". At follow-up, 55% were able to travel from home alone. A gradual and later onset, milder disability and no relapse within six months were associated with a good prognosis.

This brief review of the literature pinpoints many of the difficulties in studying neurotic illnesses. There are wide variations in reported outcome; thus 5-year follow-up studies show improvement rates varying from 27% (Friess & Nelson, 1942) to 90% (Danker, 1946). Inconsistencies are likely to be due to the undoubted heterogeneity of these illnesses and to the variable, and often inadequate, methodology employed. Hence, it is not possible to make legitimate generalisations about the prognosis of neurotic disorders from the published data.

III. METHOD

A. SELECTION OF SAMPLE.

Selection of patients for inclusion in this study was carried out in the following manner:-

- (i) The sample was taken from the series of patients admitted to the Professorial Unit at the Maudsley Hospital, London, who were discharged between January 1st, 1953 and December 31st 1955* - that is 4 to 6 years before the present follow-up investigation.

The Professorial Unit is a general psychiatric in-patient unit consisting of 80 beds; approximately 250 patients ranging from severely ill to mildly disturbed cases are admitted each year. Research and post-graduate training is supervised by the Professor of Psychiatry, and the medical staff comprises 3 Consultants each in charge of a firm to which 3 or 4 Registrars are attached. The diagnosis is made in each case by the Consultant, and treatment is carried out under his direction. The diagnostic classification used is the World Health Organisation International List of Diseases and Causes of Death (Geneva 1947).

* The terms Key admission and Key discharge have been used in the text when referring to this particular episode in the patient's illness, which has been termed Key illness.

- (ii) All patients in this series were included (subject to the reservation in (iii) below) where the diagnosis at discharge came under the heading of "Psychoneurotic Disorders" (W.H.O. International List, Codes 310-318 inclusive).
- (iii) The investigation was restricted to patients who had been domiciled in Great Britain for a minimum period of 2 years prior to key admission. In this way 9 patients, (3 from India, 3 from the West Indies, 2 from Pakistan and one from Nigeria) who were temporary visitors to this country and whose cultural background differed widely from that of the rest of the sample, were excluded.

The final sample, therefore, consists of all patients discharged during a 3 year period from the Professorial Unit at the Maudsley Hospital with diagnoses subsumed under the heading of "Psychoneurotic Disorders", who were domiciled in Great Britain. It should be noted that before the start of this investigation the author had no contact with any patient in the sample.

B. RECORDING OF DATA.

A document was designed for recording relevant information about each patient. The information was coded in such a way as to facilitate automatic sorting of data. Details of this

information are shown in the attached copy of the document (Appendix I). It consists of 3 main sections, as follows:-

Part I contains data, extracted by the investigator from the case-notes, concerning the previous history of the patient and the illness up to the time of discharge.

Part II was designed for the recording of information which it was hoped to obtain at follow-up, both about symptomatology and events in the patient's life during the interim period, and about the patient's status at the time of the follow-up interview.

Part III of the document contains summarising indices and sets out the manner in which the final overall outcome was calculated from the available data.

It was considered that the overall outcome should take into account both the symptoms and the social adjustment of the patient, and that the assessment should be made as far as possible on the basis of precise and verified data rather than of subjective impressions. Evidence regarding social adjustment was assessed by devising rating scales with respect to work record, interpersonal relations, marital relations and sexual adjustment. The criteria for each point on the rating scales were clearly specified and, where possible, were based on objective information. They are shown on the document in Appendix I. A Composite Index of Social Adjustment (Appendix I p.44) was derived from these scales.

For descriptive purposes, symptoms were all grouped under 6 headings as shown (Appendix I pp.6-9) and the Symptomatic Outcome was rated clinically after assessing changes in frequency and severity of symptoms in each group.

The Final Overall Outcome was calculated by adding ratings of Symptomatic Outcome and Composite Index of Social Adjustment and recording the result on a 5-point scale (Appendix I p.45). Points 1-5 on this scale will be referred to in the text as Recovered, Much Improved, Slightly Improved, No Change and Worse respectively, but it should be borne in mind that these terms refer to numerical intervals on the scale derived as above.

C. TECHNIQUES OF FOLLOW-UP.

A letter was sent to each patient briefly explaining the purpose of the present investigation. He or she was asked to attend hospital accompanied by the spouse (or, if single, a close relative), the patient to have an interview with the investigator, and the relative to be interviewed by a Psychiatric Social Worker who assisted the investigator in this way with the collection of information.

In approximately 50% of cases no reply was received, so a further letter was sent. Where no response was obtained after 3 letters every effort was made to trace the patient by

contacting his General Practitioner, through various social agencies, and by visiting the last known address. A number of the patients who were finally traced agreed to co-operate in the investigation but found it difficult to attend hospital. All such patients who lived within 100 miles of London were visited in their own homes and interviewed there. The remainder (6 patients) who lived outside this area and, for practical reasons, could not be interviewed, were sent a questionnaire (Appendix II) which was designed to cover as much as possible of the same ground as the interview.

Refusals

Six patients were traced but refused to consent to an interview. A variety of reasons was given: 2 patients had a grievance against the hospital and doctors in general, claiming that they had been mis-diagnosed and mismanaged at the Maudsley Hospital, but had subsequently been cured by faith healers; 3 patients misinterpreted the nature and purpose of the investigation in various ways; one lady stated that she did not wish to be reminded of what she considered to be a very painful experience in her life. With the single exception of this lady who was sent a letter of apology and not approached again, these patients were visited by the author who attempted to correct any misconception about the investigation and to persuade them to consent to an interview; this was successful in two cases.

D. FOLLOW UP INTERVIEW.

Before the patients were contacted, data relating to previous history and key illness were extracted from the case-notes and recorded in Part I of the document. Ratings of social adjustment before and during the illness were made independently by the author and by the Psychiatric Social Worker, and where there was disagreement, this fact was recorded in the document.

During the follow-up interview, information about history and illness was available neither to the author nor to the Psychiatric Social Worker, in order to avoid any bias which might result from prior knowledge of the ratings made from the case notes. The only previous information to hand during the interviews was a list of the symptoms which had been present during the key illness, this information being required in order to assess changes which had subsequently occurred in frequency and severity of these symptoms.

The patient and the relative were interviewed by the author and the Psychiatric Social Worker respectively, the interviews being conducted at the same time in the majority of cases. Identical information was sought from the patient and the relative by focussing the interviews on the topics listed in Part II of the document; this information was recorded by both interviewers separately (on duplicate copies of this part of the document) during and immediately after the

interview. The author, in addition, carried out a formal examination of the patient's mental state and recorded these findings in the appropriate section of the document (Appendix I pp.38-43). Approximately $1\frac{1}{2}$ to 2 hours were spent with each patient.

Following the separate interviews, the findings were discussed, and where information differed, this fact was recorded together with the reasons.

The method of investigation described above was evolved in the light of experience gained in a pilot study on an earlier series of 20 patients. As a result, it was possible to judge the kind of information, and the amount of detail, which could be obtained in a follow-up study; the method of conducting the interviews and recording information was modified accordingly.

IV. DESCRIPTION OF SAMPLE AND FOLLOW-UP RESULTS

A. DEMOGRAPHIC FEATURES OF SAMPLE

The total sample consisted of 181 patients. In 6 cases the diagnosis was changed at follow-up, and this group is described separately (Appendix III). The data set out below refer to the status of the remaining 175 patients at the time of key admission.

(i) Sex and Age Distribution

<u>Age (years)</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
under 30	19	35	54 (30.9%)
30-39	15	36	51 (29.1%)
40-49	14	33	47 (26.9%)
50 and over	8	15	23 (13.1%)
Total	56 (32%)	119 (68%)	175 (100%)

The ratio of females to males in the total sample is approximately 2 : 1, and does not differ significantly in the various age groups.

(ii) Marital State

	<u>No. of Patients</u>
Married	94 (53.7%)
Single	60 (34.3%)
Separated	10 (5.7%)
Divorced	6 (3.4%)
Widowed	5 (2.9%)
Total	175 (100%)

(iii) Employment Status

The sample comprised 93 employees, 57 housewives and 5 employers. 10 patients were classed as dependants, 3 as students, one as retired, and 6 as unemployed.

(iv) Social Class

Patients were grouped into 5 social classes according to the occupational classification of the Registrar General for England and Wales, (General Register Office, 1956).

Class I comprises professional occupations, Class II the so-called intermediate professions (e.g. Nurses, Chemists, Opticians), and Classes III, IV and V include skilled, semi-skilled and unskilled occupations respectively.

<u>Social Class</u>	<u>No. of Patients</u>
I	7 (4.3%)
II	26 (15.8%)
III	98 (59.8%)
IV	16 (9.8%)
V	17 (10.4%)
	<u>164 (100.1%)</u>

11 patients were unclassifiable (3 students, 6 unemployed men, and 2 patients where insufficient information was available).

B. DIAGNOSIS (at Key Discharge)

The diagnostic nomenclature adopted is that of the World Health Organisation International List of Diseases and Causes of Death (Geneva, 1947).

<u>Diagnosis</u>	<u>No. of Patients</u>
Neurotic Depressive Reaction	62 (35.4%)
Anxiety Reaction	48 (27.4%)
Obsessive-Compulsive Reaction	23 (13.1%)
Hysterical Reaction	17 (9.7%)
✓ Phobic Reaction	6 (3.4%)
Mixed Neurotic Reaction	19 (10.9%)
Total	<u>175 (99.9%)</u>

The category Mixed Neurotic Reaction consisted of patients who presented a mixed clinical picture with principally hypochondriacal symptoms.

C. PREVIOUS HISTORY

(i) Family History (Parents and Siblings)

	<u>No. of Patients</u>
Neurotic and/or psychopathic disorders	53 (33.1%)
Other mental illness only	8 (5%)
Nil	99 (61.9%)
Total	<u>160 (100%)</u>
Information insufficient	15

(ii) Childhood Environment

	<u>No. of Patients</u>
Adverse	70 (47%)
Satisfactory	79 (53%)
Total	<u>149 (100%)</u>
Information insufficient	26

Childhood environment was regarded as adverse where there was a history of impoverishment, of total absence of one parent, of absence of the mother for 12 months or more during the first five years of the patient's life, of upbringing in an orphanage, or of an unsatisfactory home atmosphere as shown by constant, serious parental quarrels, definite rejection of the patient by one or both parents, frequent beatings, or by marked emotional disturbance in either parent.

(iii) Neurotic Traits in Childhood

	<u>No. of Patients</u>
Present	73 (51.8%)
Absent	68 (48.2%)
Total	<u>141 (100%)</u>
Information insufficient	34

Neurotic traits included: enuresis after the age of 4, marked fears, night terrors, sleepwalking, stammering, nailbiting, eating difficulties, temper tantrums and disturbances of social behaviour.

(iv) Educational Standard

	<u>No. of Patients</u>
Primary (Elementary) only	123 (70.3%)
Secondary, Grammar or Technical	42 (24%)
University or equivalent	10 (5.7%)
Total	<u>175 (100%)</u>

(v) Premorbid Personality

	<u>No. of Patients</u>
Abnormal	98 (56%)
Normal	77 (44%)
Total	<u>175 (100%)</u>

The premorbid personality was rated as abnormal where definite evidence was found in the case histories of paranoid, obsessional, schizoid, cyclothymic, hysterical or psychopathic traits resulting in marked peculiarities in behaviour.

(vi) Intelligence (Wechsler-Bellevue scale)

<u>I.Q.</u>	<u>No. of Patients</u>
Over 130	6 (4%)
111 - 130	42 (27.8%)
90 - 110	89 (58.9%)
under 90	14 (9.3%)
Total	<u>151 (100%)</u>
Unknown	24

(vii) Previous Illness

	<u>No. of Patients</u>
Psychiatric illness only	41 (23.4%)
Organic illness only with persisting handicap	20 (11.4%)
Organic illness only; no persisting handicap	16 (9.1%)
Both organic and psychiatric illness	12 (6.9%)
No significant illnesses	86 (49.1%)
Total	<u>175 (99.9%)</u>

Persisting handicap implies residual symptoms or other features requiring continued medical supervision, persisting at the time of key admission.

(viii) Previous Psychiatric Treatment

59 patients (33.7%) had received psychiatric treatment before key admission, either during previous illnesses or since the onset of the key illness; 54 of these had been admitted to a psychiatric in-patient unit. Insufficient information was available to permit reliable specification of the various kinds of treatment.

D. KEY ILLNESS

(i) Precipitating Factors

	<u>No. of Patients</u>
Present	96 (54.9%)
No obvious precipitating factors	79 (45.1%)
Total	175 (100%)

Precipitating factors were recorded as present where case histories revealed definite evidence of adverse change in the physical state or environment of the patient within 6 weeks of onset of key illness.

A manifold variety of precipitating factors was reported and attempts to categorise them proved impractical. Events which were temporally associated with the onset of key illness included, amongst others, physical illness, menopause, unwanted pregnancy, death of close friends or relatives, difficulties at work, marital and family dissension, engagement, and sexual difficulties.

(ii) Duration of Symptoms before Key Admission

	<u>No. of Patients</u>
Under 6 months	53 (30.3%)
6 months - 2 years	50 (28.6%)
2 - 5 years	28 (16.0%)
Over 5 years	28 (16.0%)
Lifelong	16 (9.1%)
Total	175 (100%)

Duration of symptoms was designated Lifelong where symptoms had been present since childhood or adolescence. In this group of patients it was found impossible to demarcate the onset of illness from signs of disturbance associated with an abnormal premorbid personality.

(iii) Symptomatology and Clinical Findings

Symptoms were grouped for descriptive purposes under the following headings:-

I. Associated Organic Disease

29 patients (16.6% of the total sample) had symptoms and signs referable to organic pathology or disease in addition to their neurotic disorders.

Diabetes Mellitus, Peptic Ulcer, Asthma, Chronic Bronchitis, Iron-deficiency Anaemia, Essential Hypertension, Lumbar Intervertebral Disc protrusion, Hemiplegia following Cerebral Thrombosis and Carcinoma of the Stomach were diagnosed in these patients during key admission.

It was not always possible to judge to what extent the neurotic disorder was related to the physical illness. In some cases an obvious association existed while in others there was no apparent connection. For example one patient with a normal premorbid personality and no previous history of mental disorder developed, at the age of 60, Cerebral Thrombosis, which

resulted in residual hemiplegia; this event apparently precipitated an Anxiety Reaction which led to her admission to the Professorial Unit 12 months later. On the other hand a single woman, aged 47, was admitted with depression and hysterical symptoms which consisted of episodic trance-like states during which she would moan loudly and perform various abnormal movements; at the same time she remained conscious and able to answer questions rationally and coherently. There was a history of a similar illness 25 years previously from which she had apparently recovered after 7 months. Her premorbid personality was abnormal; she had never worked, remaining financially dependant on her relatives throughout her life, and she was described as a self-centred person with very few friends and no outside interests. During key admission she was investigated on account of weight loss and Carcinoma of the Stomach was diagnosed. In view of her history it seemed clear that the Gastric Carcinoma and the neurotic illness were unrelated.

II. Symptoms of Neurotic Illness

(a) Somatic Symptoms not associated with organic disease

81 patients (46.3% of the total sample) had somatic symptoms without demonstrable organic basis.

In 30 cases these symptoms were referable to the

autonomic nervous system (e.g. breathlessness, palpitations, trembling, sweating, tightness in the stomach, diarrhoea) and were commonly associated with a subjective feeling of anxiety.

In 10 cases the symptoms were referable to the sensorimotor nervous system, i.e. so-called conversion symptoms such as paralyses and paraesthesiae.

A further 10 patients presented with both of the above classes of symptoms in conjunction.

In 13 patients the predominant somatic symptoms were fatigue, lassitude or weakness, these symptoms being invariably accompanied by depression.

There remained 18 patients with somatic symptoms which could not be placed in any of the above categories; some of these patients presented with a multitude of symptoms affecting almost every part of the body, and in others the symptoms were localised (e.g. testicular pain).

(b) Disorders of Affect.

These were present in 161 patients (92% of the total sample). Symptoms included depression, anxiety, irritability, subjective tension, panic attacks, emotional lability and feelings of unreality. Various combinations of affective symptoms occurred in most patients; in particular depression and anxiety were commonly associated.

The various symptoms were recorded as shown in the document (Appendix I p.7) and for purposes of comparison will be considered in the text under three broad headings, though it must be emphasised that these are approximate groupings with ill-defined boundaries:

Depression principally (90 patients), often with accompanying irritability, anxiety, lack of confidence, difficulty in concentration, insomnia and cognate symptoms.

Anxiety principally (56 patients) either in the form of acute anxiety attacks with or without specific phobias, or chronic anxiety (expressed by complaints such as 'tension', 'restlessness', 'constant fear', 'continual worrying over nothing' etc.).*

Depersonalisation and/or Derealisation principally (15 patients). Other affective symptoms, the most common being acute anxiety attacks and chronic anxiety were associated with depersonalisation in 13 cases, the remaining 2 patients exhibiting no concomitant affective symptoms.

* In 2 patients in this group chronic anxiety was associated with marked emotional lability.

(c) Disorders of Thought Content

These were reported in 74 patients (42.3%) of the total sample.

Obsessional ideas, ruminations, impulses or phobias were present alone in 12 cases, and were associated with compulsive rituals in a further 23 patients.

Hypochondriacal ideas were present alone in 22 patients, and in conjunction with obsessional symptoms in 8 patients. Other manifestations of disorders of thought content included the presence of overvalued ideas (5 cases), and vague paranoid ideas (4 patients whose diagnosis at key discharge was Hysterical Reaction).

(d) Disorders of Perception

6 patients, (3.4% of the total sample) were subject to visual hallucinations, illusions or micropsia. (In each case these symptoms were considered to be part of a Hysterical Reaction).

(e) Disorders of Consciousness and Memory

These symptoms were present in 14 patients (8% of the total sample). The category comprised symptoms of dissociation: amnesia, fugues, twilight states or pseudodementia.

(f) Disorders of Behaviour

These disorders were reported in the notes of 49

patients (28% of the total sample). The symptoms consisted of retardation of speech and activity, overactivity, agitation, aggressive or destructive behaviour and attempts at self-injury; 8 patients had made suicidal attempts or gestures before key admission. Addiction to barbiturates (3 patients) was included under this heading.

The incidence of neurotic symptoms grouped in the above categories is shown in Figure I.

(iv) Social Adjustment before and during Key Illness

Information from the case-notes concerning social adjustment with respect to work record, interpersonal relations, marital relations and sexual activity, was rated on 3-point scales for two separate periods: (a) before onset of key illness and (b) between onset of key illness and admission to hospital. The three points on the scales have been termed Satisfactory, Mediocre and Unsatisfactory (Tables 1 - 4).

The author and the Psychiatric Social Worker differed in their assessments of work record in two cases, of interpersonal relations in seven cases, of marital relations in one case and of sexual activity in five cases; in no case was the difference more than one point on the scale. These ratings are entered in the tables in the rating unknown category.

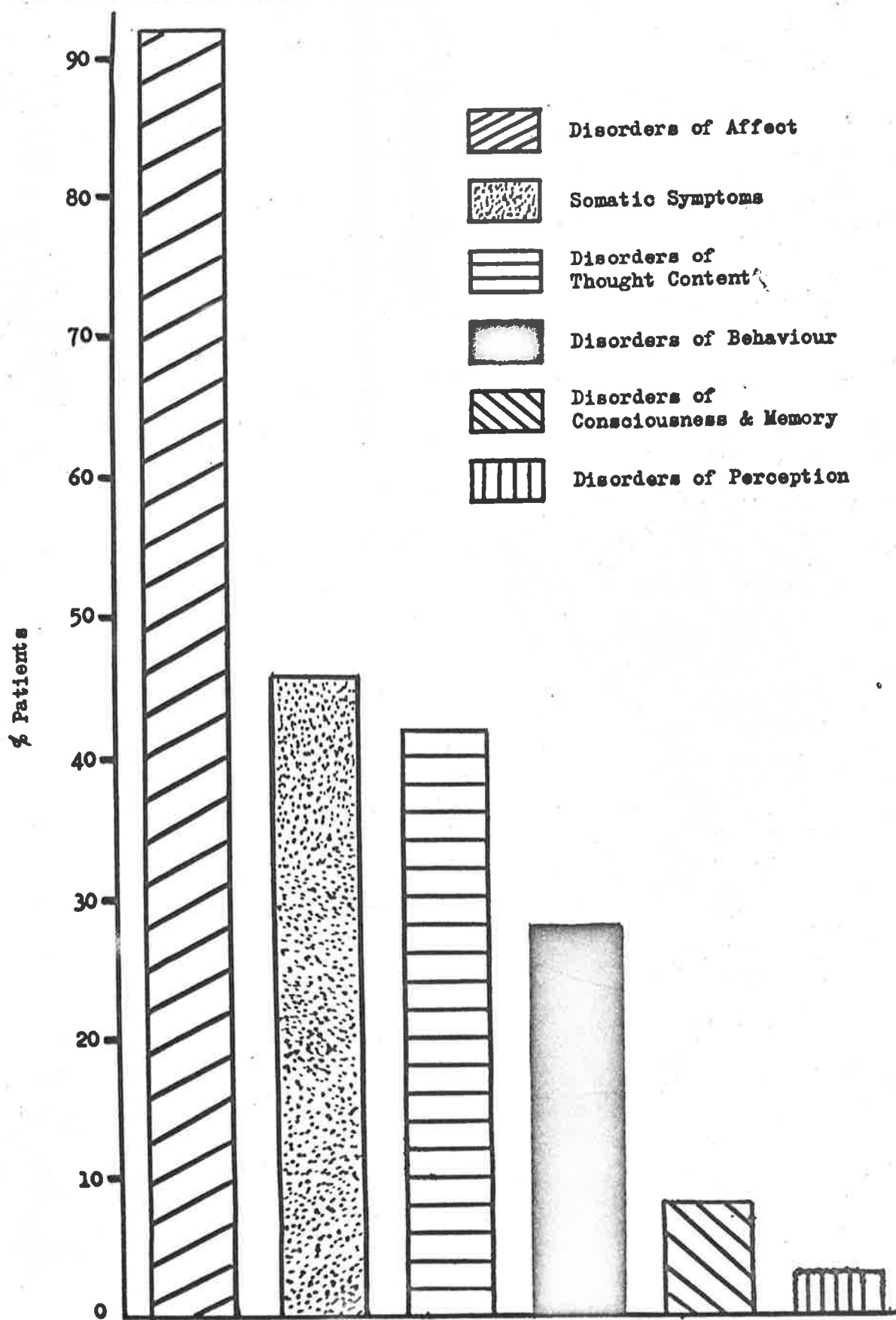


FIG. 1 - INCIDENCE OF SYMPTOMS DURING KEY ILLNESS

Work Record

The rating scales were based on the criteria set out in the document (Appendix I pp.10-12) for (a) patients in full-time employment, (b) housewives and (c) students. However insufficient information was available for assessing domestic management, so housewives are omitted from Table 1.

T A B L E IEFFECT OF KEY ILLNESS UPON WORK RECORD

(Numbers and percentages of Patients)

Rating	Work Record		Significance of Difference
	Before Key Illness	During Key Illness	
Satisfactory	95 (81.2%)	37 (31.9%)	$P < .001$ (C.R.=7.42)
Mediocre	15 (12.8%)	32 (27.6%)	$P < .01$ (C.R.=2.78)
Unsatisfactory	7 (6%)	47 (40.5%)	$P < .001$ (C.R.=6.14)
TOTAL	117 (100%)	116 (100%)	
Unknown or not applicable	58	59	
GRAND TOTAL	175	175	

From Table I we can see that whereas before the illness work record was wholly satisfactory in 81% and unsatisfactory in only 6% of patients, after the onset of the illness these figures were 32% and 41% respectively. These differences are highly significant statistically and indicate that the onset of neurotic illness in the present sample of patients was associated with deterioration in their work record.

Interpersonal Relations

The criteria used for rating interpersonal relations are shown in the document (Appendix I pp. 13-15).

T A B L E 2

EFFECT OF KEY ILLNESS UPON INTERPERSONAL RELATIONS

(Numbers and Percentages of Patients)

Rating	Interpersonal Relations		Significance of Difference
	Before Key Illness	During Key Illness	
Satisfactory	82 (50%)	69 (42.6%)	not significant (C.R. = 1.30)
Mediocre	69 (42.1%)	70 (43.2%)	not significant
Unsatisfactory	13 (7.9%)	23 (14.2%)	not significant (C.R. = 1.76)
TOTAL	164 (100%)	162 (100%)	
Unknown	11	13	
GRAND TOTAL	175	175	

50% of patients were regarded as having satisfactory interpersonal relations before the onset of the illness as compared with 43% during the illness. The difference, however, is not significant.

Marital Relations

The criteria for assessing marital relations are listed in Appendix I, pp. 16-17.

T A B L E 3

EFFECT OF KEY ILLNESS UPON MARITAL RELATIONS
(Numbers and Percentages of Patients)

Rating	Marital Relations		Significance of Difference
	Before Key Illness	During Key Illness	
Satisfactory	47 (43.5%)	41 (39.4%)	not significant
Mediocre	41 (38%)	39 (37.5%)	not significant
Unsatisfactory	20 (18.5%)	24 (23.1%)	not significant
TOTAL	108 (100%)	104 (100%)	
Unknown or not applicable	67	71	
GRAND TOTAL	175	175	

The difference which can be ascribed to the onset of the illness is again small; 44% of patients appeared to have satisfactory marital relations beforehand, and 39% afterwards. The differences are not significant.

Sexual Adjustment

The criteria upon which ratings of sexual adjustment are based, and the categories of patients in whom these ratings were considered to be inapplicable are described in Appendix I pp.18,19.

T A B L E 4

EFFECT OF KEY ILLNESS UPON SEXUAL ADJUSTMENT

(Numbers and Percentages of Patients)

Rating	Sexual Adjustment		Significance of Difference
	Before Key Illness	During Key Illness	
Satisfactory	50 (43.5%)	36 (33.6%)	not significant (C.R. = 1.38) not significant (C.R. = 1.11) $P < .01$ (C.R. = 2.58)
Mediocre	27 (23.5%)	18 (16.8%)	
Unsatisfactory	38 (33%)	53 (49.5%)	
TOTAL	115 (100%)	107 (99.9%)	
Unknown or not applicable	60	68	
GRAND TOTAL	175	175	

The proportion of patients whose sexual activity was rated as satisfactory was higher before than during the illness, but not significantly so, whilst the proportion of patients having frankly unsatisfactory sexual adjustment rose more sharply (from 33% to 50%) and this difference is significant statistically.

(v) Treatment during Key Admission

	<u>No. of Patients</u>
Primarily supportive treatment	63 (36%)
Primarily physical treatment	42 (24%)
Systematic psychotherapy	28 (16%)
Physical treatment and psychotherapy combined	19 (10.9%)
Leucotomy	10 (5.7%)
Nil	13 (7.4%)
TOTAL	175 (100%)

Supportive treatment comprised occupational therapy, social casework, limited use of sedatives, and psychiatric interviews limited to a discussion of symptoms and environmental stresses.

Physical treatment included E.C.T. and drugs such as Amphetamines, Barbiturates and Chlorpromazine; Mono-amine oxidase inhibitors and the so-called thymoleptic drugs were, of course, not available during key admission (1953-1955).

Patients were regarded as having received Systematic Psychotherapy where, whatever technique was adopted, at least 12 sessions were held at regular intervals (once a week or more often), the interviews being aimed at relief or removal of symptoms through resolution of underlying conflicts. During key admission from 12 to 37 psychotherapeutic interviews (mean 18.7) were conducted with each of these patients; hypnosis or intravenous abreaction was used as an adjunct to psychotherapy in 3 cases.

Treatment was coded Nil where patients remained in hospital for less than 2 weeks.

(vi) Duration of Stay in Hospital

	<u>No. of Patients</u>
Under 4 weeks	21 (12%)
4 - 8 weeks	38 (21.7%)
9 - 13 weeks	33 (18.9%)
14 - 25 weeks	52 (29.7%)
Over 25 weeks	31 (17.7%)
TOTAL	<u>175 (100%)</u>

(vii) Outcome at Key Discharge

	<u>No. of Patients</u>
Recovered	38 (21.7%)
Much Improved	69 (39.4%)
Slightly Improved	46 (26.3%)
No Change	21)
)(12.6%)
Worse	1)
TOTAL	<u>175 (100%)</u>

These categories refer to the outcome as assessed at the time of discharge by the Consultant in charge of each case. Patients whose outcome was recorded as improved or slightly improved have been grouped under the heading Slightly Improved, in order to facilitate comparison between outcome at discharge and final outcome at follow-up.

E. PROGRESS SINCE KEY DISCHARGE

Information about the status of the 181 patients at follow-up 4-6 years (mean 5.3 years) after discharge from hospital was obtained as follows :-

Personal interviews	145 patients
Questionnaires	6 "
Relatives, General Practitioners, hospital records	9 " (died since discharge)
Total follow-up	<u>160 patients (88.4% of sample)</u>

Failures:

Untraceable	17 patients
Refused interview	<u>4 "</u>
Total	<u>21 patients (11.6% of sample)</u>

Of the 160 patients whose progress since discharge has been ascertained, 6 patients whose diagnosis was changed at the follow-up assessment have been excluded from tabulations. They are described separately in Appendix III. The results set out below thus refer to 154 patients. We shall refer to data relating to the social adjustment and symptomatology of this group of patients during two periods, (a) the interim between key discharge and time of follow-up, and (b) at follow-up (i.e. during previous 6 months). Data which were incomplete or unverified have been incorporated under the heading information insufficient.

Deceased Patients

Data concerning social circumstances and the mental state of these patients up to the time of death have been included in the tabulations where such data were considered reliable.

<u>Causes of death</u>	<u>No. of Patients</u>
Suicide	4
Carcinoma of Stomach	1
Myocardial infarction	1
Cerebral thrombosis	1
Congestive cardiac failure	1
Disseminated sclerosis*	1
Total	<u>9</u>

(i) Environment since Key Discharge(a) Type of Domicile and attitude of domestic group towards patient

	<u>No. of Patients</u>
Domestic Group; attitude positive	90 (58.4%)
Domestic Group; attitude mixed or negative	29 (18.8%)
Solitary	26 (16.9%)
Mental Hospital	6 (3.9%)
Other	3 (1.9%)
Total	<u>154 (99.9%)</u>

* this patient was excluded from tabulations as her diagnosis was changed at follow-up.

The domicile recorded is the one in which the patient lived for the greater part of the interim period between key discharge and follow-up. Domestic Group refers to a domicile in which the patient lived with his spouse, his own family or his friends. Where members of this household were tolerant and accepting of the patient (as judged by the author at follow-up), their attitude was recorded as positive; when intolerance, hostility or fear were exhibited by some or all members, this fact was recorded as attitude mixed or negative. Solitary domicile included all patients who lived alone, for example in lodgings. In 3 cases the domicile was recorded as other; one of these patients was in the Army and two lived in students' hostels.

(b) Material Circumstances

	<u>No. of Patients</u>
Adequate	138 (89.6%)
Poor	16 (10.4%)
Total	<u>154 (100%)</u>

Material circumstances were gauged from the financial position and housing conditions; patients whose material circumstances were rated as poor all lived on National Assistance in conditions of poverty.

(c) Occurrence of Stress

	<u>No. of Patients</u>
Present	80 (55.6%)
Absent	64 (44.4%)
Total	<u>144 (100%)</u>
Information insufficient	10

Patients were questioned regarding any major crises in their lives since discharge from hospital, and these events, when confirmed by relatives, were recorded as stress present. Events regarded as stressful by patients were too diverse to permit categorisation; they included physical illness, job dismissal, financial hardship, unwanted pregnancy, deaths in the family, marital discord, unhappy love affairs and broken engagements, sexual difficulties, and social isolation.

(d) Effect of Stress on Mental State

	<u>No. of Patients</u>
Detrimental	46 (57.5%)
No obvious effect	34 (42.5%)
Total	<u>80 (100%)</u>

The effect of stress on the mental state was regarded as detrimental where there was definite evidence of an increase in the severity or frequency of existing symptoms, or of the appearance of fresh symptoms, within 6 weeks of any stress situation.

It was not possible to discover any type of stressful event which was invariably associated with deterioration in the mental state. Nevertheless, the figures showed that the miscellaneous group, consisting almost wholly of stresses of a personal, intimate kind, such as marital discord and difficulties in interpersonal relationships, appeared to be more commonly followed by a recrudescence of symptoms (in 33 out of 43 cases) than were the more easily 'specifiable external stresses, such as physical illness, financial hardship or job dismissal, which were followed by deterioration in mental state in 13 out of 37 cases.

(ii) Social Adjustment

Data relating to social adjustment during the interim and at follow-up were rated on 3-point scales (Appendix I pp.24-33); the scales are identical with those designed for rating social adjustment before and during key illness. The results are shown in Tables 5 - 8.

Assessments were made separately by the author and by the Psychiatric Social Worker on the basis of information obtained from the patient and relative respectively. Congruences between these two sets of assessment were as follows :-

Complete agreement		359 ratings
	{ on work record	1 rating
Disagreement	{ on interpersonal relations	15 ratings
	{ on marital relations	14 ratings
	{ on sexual adjustment	15 ratings

It appeared that in all except 4 cases, these disagreements resulted from discrepancies between the information given by the patient and that given by the relative; a final rating was therefore agreed upon after discussion between the author and the Psychiatric Social Worker, in which the probable veracity and accuracy of informants were taken into account.

In 4 cases differences in ratings appeared to be due to disagreement in the interpretation of data by the author and by the Psychiatric Social Worker. These cases were entered in the tables in the rating unknown category.

Deceased patients were included in the ratings for the interim period but were coded not applicable at follow-up.

TABLE 5

WORK RECORD SINCE KEY DISCHARGE

(Numbers and Percentages of Patients)

Rating	Work Record		Significance of Difference
	During Interim	At Follow-up	
Satisfactory	52 (55.9%)	58 (63.7%)	not significant
Mediocre	24 (25.8%)	16 (17.6%)	not significant
Unsatisfactory	17 (18.3%)	17 (18.7%)	not significant
TOTAL	93 (100%)	91 (100%)	
Unknown or not applicable	61	63	
GRAND TOTAL	154	154	

The data in Table 5 show that the proportion of patients with a satisfactory work record was higher at follow-up (64%) than during the interim period (56%) but this difference is not statistically significant.

T A B L E 6

INTERPERSONAL RELATIONS SINCE KEY DISCHARGE

(Numbers and Percentages of Patients)

Rating	Interpersonal Relations		Significance of Difference
	During Interim	At Follow-up	
Satisfactory	66 (45.2%)	63 (44.4%)	not significant
Mediocre	62 (42.5%)	61 (42.9%)	not significant
Unsatisfactory	18 (12.3%)	18 (12.7%)	not significant
TOTAL	146 (100%)	142 (100%)	
Unknown or not applicable	8	12	
GRAND TOTAL	154	154	

Table 6 shows that virtually no differences were found between the ratings of interpersonal relations during the interim period and at follow-up; relations were judged to be satisfactory in 44-45% of cases, mediocre in 43% and unsatisfactory in 12-13%.

T A B L E 7MARITAL RELATIONS SINCE KEY DISCHARGE

(Numbers and Percentages of Patients)

Rating	Marital Relations		Significance of Difference
	During Interim	At Follow-up	
Satisfactory	56 (57.7%)	60 (63.2%)	not significant
Mediocre	23 (23.7%)	19 (20%)	not significant
Unsatisfactory	18 (18.6%)	16 (16.8%)	not significant
TOTAL	97 (100%)	95 (100%)	
Unknown or not applicable	57	59	
GRAND TOTAL	154	154	

A higher proportion of patients were considered to have satisfactory marital relations at follow-up (63%) than during the interim period (58%); the difference, however, is small and not statistically significant.

TABLE 8

SEXUAL ADJUSTMENT SINCE KEY DISCHARGE

(Numbers and Percentages of Patients)

Rating	Sexual Adjustment		Significance of Difference
	During Interim	At Follow-up	
Satisfactory	49 (47.1%)	47 (44.8%)	not significant
Mediocre	27 (26%)	28 (26.7%)	not significant
Unsatisfactory	28 (26.9%)	30 (28.6%)	not significant
TOTAL	104 (100%)	105 (100.1%)	
Unknown or not applicable	50	49	
GRAND TOTAL	154	154	

The differences found in the proportion of patients with satisfactory sexual adjustment at follow-up (45%) and during the interim period (47%), were again small and not significant.

Composite Index of Social Adjustment

This index was derived from ratings of work record, interpersonal relations, marital relations and sexual adjustment as outlined in the document (Appendix I, p.44). The 3 points on the final scale have been termed, for descriptive purposes, Satisfactory, Mediocre and Unsatisfactory.

Table 9 shows the Composite Index of Social Adjustment for 4 separate periods:- (a) before key illness, (b) during key illness, (c) during the interim and (d) at follow-up.

From the data in Table 9 we can see that with the onset of the illness there was a substantial fall (from 51% to 24%) in the proportion of patients having a satisfactory social adjustment. There is an increase both in the proportions with mediocre and with unsatisfactory adjustment. These differences are highly significant statistically.

Information relating to the interim period indicates a return towards the distribution obtaining before the illness, with a rise from 24% to 42% in the proportion of patients having a satisfactory social adjustment, and corresponding falls both in respect of mediocre and unsatisfactory adjustment. This improvement is sustained but not substantially increased by the time of the follow-up assessment. Differences between the period of illness and the interim period are significant, whilst those between interim period and time of follow-up are not.

These findings, illustrated in Fig.2, give clear evidence of impairment of social adjustment during the neurotic illness and of the return almost to premorbid levels within 4-6 years.

TABLE 9

SOCIAL ADJUSTMENT BEFORE, DURING AND AFTER ILLNESS

(Numbers and Percentages of Patients)

Rating	Composite Index of Social Adjustment			
	Before Key Illness	During Key Illness	During Interim	At Follow-up
Satisfactory	88 (51.2%)	41 (23.8%)	61 (41.8%)	60 (42.3%)
Mediocre	71 (41.3%)	95 (55.2%)	62 (42.5%)	65 (45.8%)
Unsatisfactory	13 (7.5%)	36 (20.9%)	23 (15.7%)	17 (11.9%)
TOTAL	172 (100%)	172 (99.9%)	146 (100%)	142*(100%)
Unknown or not applicable	3	3	8	12
GRAND TOTAL	175	175	154	154

Significance of Differences

- Before and during Key Illness
Satisfactory C.R.=5.09, $P < .001$
Mediocre C.R.=2.55, $P < .025$
Unsatisfactory C.R.=3.42, $P < .001$
- During Interim and at Follow-up
Differences not significant
- Before Key Illness and during Interim
Satisfactory C.R.=1.58, Not sig.
Mediocre Not significant
Unsatisfactory C.R.=2.22, $P < .05$
- Before Key Illness and at Follow-up
Satisfactory C.R.=1.58, Not sig.
Mediocre Not significant
Unsatisfactory C.R.=1.18, Not sig.
- During Key Illness and Interim
Satisfactory C.R.=3.40, $P < .001$
Mediocre C.R.=2.11, $P < .05$
Unsatisfactory C.R.=1.11, Not sig.
- During Key Illness and at Follow-up
Satisfactory C.R.=3.40, $P < .001$
Mediocre C.R.=1.58, Not sig.
Unsatisfactory C.R.=2.09, $P < .05$

* Deceased patients have been excluded as not applicable at Follow-up.

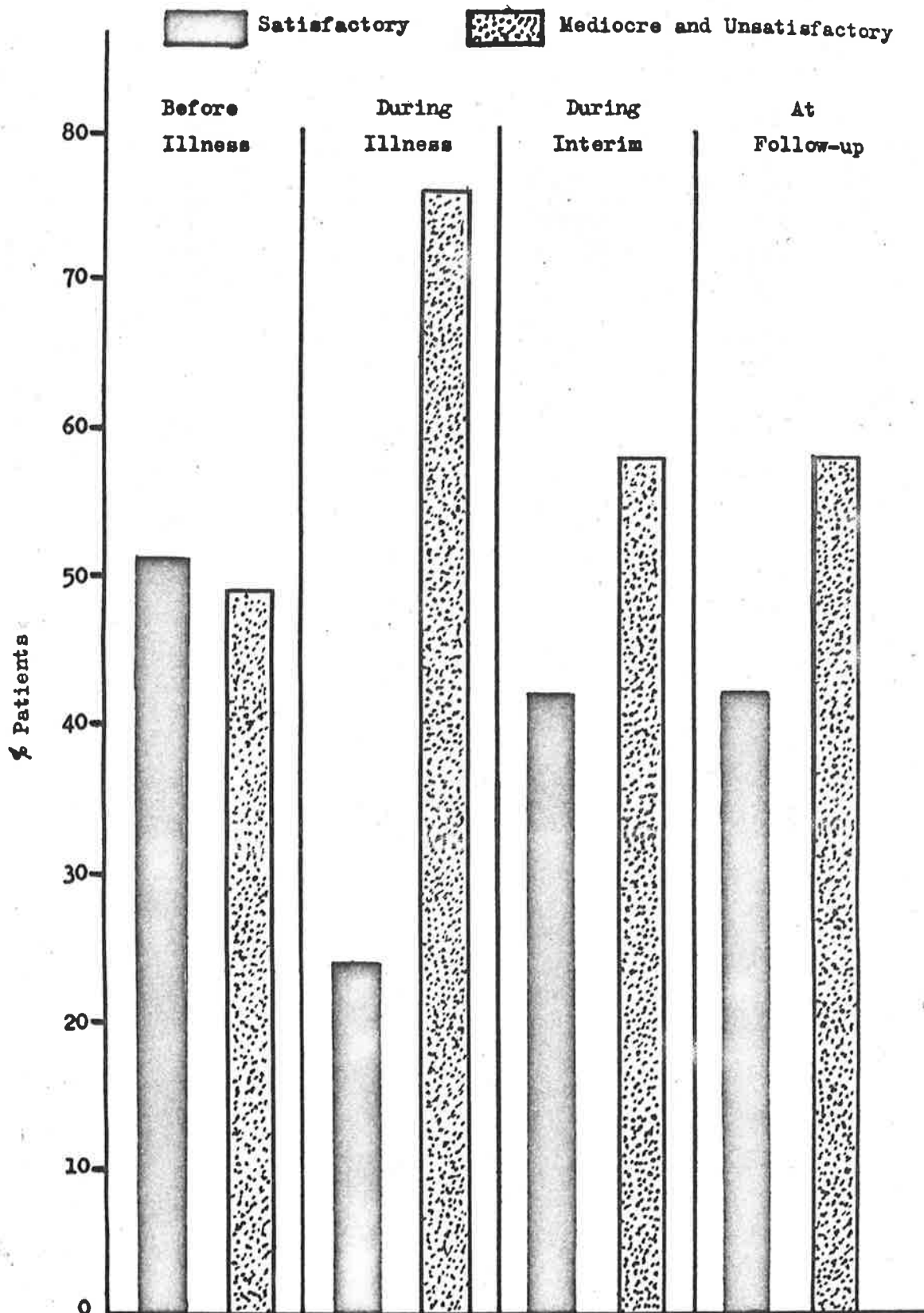


FIG. 2 - SOCIAL ADJUSTMENT BEFORE, DURING and AFTER ILLNESS

(iii) Symptomatology and Clinical Findings

Organic Disease

At follow-up 18 patients (12.3% of patients alive and traced) suffered from a variety of physical disorders, including Diabetes Mellitus (2), Asthma (2), Peptic Ulcer (3), Cholelithiasis (1), Chronic Bronchitis (4), Essential Hypertension (3), and Osteoarthritis (3).

Neurotic Symptoms and Signs

The incidence of symptoms was recorded for 154 patients during the interim period (between key discharge and follow-up); deceased patients were excluded at follow-up so that the figures for this period refer to 146 patients.

(a) Somatic Symptoms not associated with organic disease

Present during interim in 71 patients (46.1%);

at follow up in 53 patients (36.3%).

Symptoms at follow-up consisted of so-called conversion symptoms (7 cases), symptoms associated with automatic over-activity such as palpitations, trembling, sweating and cognate symptoms (23 cases), conversion symptoms together with symptoms referable to the autonomic nervous system (6 cases), and lassitude, weakness or fatigue associated with depression (6 cases). In the remaining 11 patients, a variety of somatic symptoms were found which could not be categorised as above.

(b) Disorders of Affect

Present during interim in 126 patients (81.8%);

at follow-up in 94 patients (64.4%).

Symptoms found at follow-up were grouped under the broad headings previously described. Depression principally was found in 49 cases, anxiety principally in 35 cases and depersonalisation principally in 10 cases.

(c) Disorders of Thought Content

Present during interim in 56 patients (36.4%);

at follow-up in 46 patients (31.5%).

These consisted at follow-up of obsessional ideas, ruminations or phobias alone in 7 patients, obsessional ideas accompanied by compulsive rituals in 13 patients, hypochondriacal ideas in 19 patients, and other disorders of thought content in the form of overvalued ideas or paranoid ideas in 7 cases.

(d) Disorders of Perception

Present during interim in 4 patients (2.6%);

at follow-up in 3 patients (2.1%).

These patients were subject to illusions or to visual hallucinations.

(e) Disorders of Consciousness and Memory

Present during interim in 11 patients (7.1%);

at follow-up in 8 patients (5.5%).

Symptoms consisted of episodes of amnesia, fugues and associated behaviour disturbances such as hysterical fits.

(f) Disorders of Behaviour

Present during interim in 23 patients (14.9%);

at follow-up in 18 patients (12.3%).

These disturbances consisted of aggressive behaviour, attempts at self-injury, marked restlessness or agitation, and retardation of motor activity; barbiturate addiction (4 cases) was included under this heading.

Symptomatic Course

The incidence of symptoms, grouped as above, during key illness, during interim, and at follow-up is shown in Table 10.

T A B L E 10

INCIDENCE OF SYMPTOMS DURING AND AFTER ILLNESS

(Numbers and Percentages of Patients)

Symptom Group	Incidence of Symptoms		
	During Key Illness (n=175)	During Interim (n=154)	At Follow-up (n=146)
Somatic Symptoms	81 (46.3%)	71 (46.1%)	53 (36.3%)
Disorders of Affect	161 (92%)	126 (81.8%)	94 (64.4%)
Disorders of Thought Content	74 (42.3%)	56 (36.4%)	46 (31.5%)
Disorders of Perception	6 (3.4%)	4 (2.6%)	3 (2.1%)
Disorders of Consciousness and Memory	14 (8%)	11 (7.1%)	8 (5.5%)
Disorders of Behaviour	49 (28%)	23 (14.9%)	18 (12.3%)

In each symptom group the incidence is lower at follow-up than during key illness. The sharpest fall in incidence occurs in affective symptoms which were present in 92% of patients during key illness, in 82% during interim and 64% at follow-up. The difference between the incidence during key illness and during interim is statistically significant (C.R. = 2.56, $P < .025$), as is the difference between interim period and follow-up (C.R. = 3.27, $P < .005$). Somatic symptoms are present in 46% of

patients both during key illness and during interim, but only in 36% at follow-up. This difference fails to reach statistical significance (C.R. = 1.82). Similarly the incidence of disorder of thought content falls from 42% during key illness to 32% at follow-up, but again this difference is not statistically significant (C.R. = 1.82). The incidence of disorders of behaviour falls more steeply from 28% during illness to 15% during interim (C.R. = 2.89, $P < .005$), and to 12% at follow-up (C.R. = 3.56, $P < .001$). The incidence of disorders of consciousness and memory remains relatively constant (8% during the illness and 6% at follow-up), and similarly little change occurs in the incidence of disorders of perception (3% during key illness and 2% at follow-up).

Symptomatic Outcome (at follow-up)

The symptomatic outcome was recorded on a 5-point scale, as shown in the Document (Appendix I, p.43), after assessing changes in the frequency and severity of symptoms in each group.

<u>Symptomatic Outcome</u>	<u>No. of Patients</u>
1. Recovered	27 (18.5%)
2. Much Improved	43 (29.5%)
3. Slightly Improved	26 (17.8%)
4. No change	40 (27.4%)
5. Worse	6 (4.1%)
Suicide	4 (2.7%)
TOTAL	146 (100%)

(iv) Final Overall Outcome

Ratings for Symptomatic Outcome and the Composite Index of Social Adjustment were combined as shown in the document (Appendix I, p.45) and in this way the final outcome was recorded on a 5-point scale.

<u>Final Overall Outcome</u>	<u>No. of Patients</u>
1. Recovered	44 (30.1%)
2. Much Improved	34 (23.3%)
3. Slightly Improved	24 (16.4%)
4. No change	25 (17.1%)
5. Worse	15 (10.3%)
Suicide	4 (2.8%)
TOTAL	146 (100%)
Non-suicidal deaths	4
Insufficient information	4
TOTAL	154

V. OUTCOME IN RELATION TO RECORDED VARIABLES*

In what follows, it is proposed to examine both the outcome at key discharge and the outcome at follow-up in relation to salient variables in the previous history and illness of patients. As we list each of these variables we shall discuss (a) its relationship to outcome at discharge, (b) its relationship to final outcome at follow-up and (c) the extent to which it seems to be associated with variables mentioned earlier in the list. The outcome at discharge and the final outcome were recorded in the document (Appendix I) in categories defined as Recovered, Much Improved, Slightly Improved, No change, and Worse.* *

In the analysis of relationships between each of the distinguishing factors pertaining to the patient and the outcome of the illness, we shall express the results in two ways, viz. (i) as numbers of patients falling into each of the categories specified above (No Change and Worse being grouped together for outcome at discharge) for the relevant differentials appropriate to each factor; (ii) in addition we have defined an empirical summarising index of mean outcome for any specified subclass as follows :-

Weightings are assigned to each patient according to

* I am indebted to Dr. R. Cawley for guidance with the statistical analysis of data.

** Patients who committed suicide during the follow-up period are included in the category Worse in the tabulations.

the status at discharge (or follow-up) as shown below. The index is then derived for the subclass as a whole by computing a weighted mean.

<u>Outcome</u>	<u>Weighting</u>	<u>No. of Patients in Outcome Category</u>
Recovered	1	x_1
Much Improved	2	x_2
Slightly Improved	3	x_3
No Change	4	x_4
Worse	5	x_5
TOTAL		N

Then the mean outcome for the class is given by the expression:

$$\frac{1}{N} (x_1 + 2x_2 + 3x_3 + 4x_4 + 5x_5)$$

The standard deviation, and hence the standard error, can be estimated in the usual way.

A value of 1 for this index in any subclass would imply that each member of the subclass had recovered; a value of 5 that each was worse. So within this range, a lower value indicates a better outcome. For the whole series, the mean outcome at discharge was 2.30 and the mean final outcome was 2.60. Values lower than these, if obtained in any subclass, therefore indicate that the subclass had a better outcome than the series as a whole.

For each variable investigated with respect to its possible correlation with outcome, we have therefore (i) the distribution of

outcome patterns; (ii) the mean outcome, which is a summarising index of the experience of the subclass for which it is computed.

It may be argued that mean outcome represents an artificial concept based on the assumption that the differences between clinically-assessed outcome categories have a linear and arithmetic relationship. It is indeed an abstraction from the numerical data, but within the limits of the assumptions made, it is justifiable in the same way as any summarising index of a distribution of qualitative characteristics is justifiable. We have to bear this reservation in mind when we examine the results in this way; the mean outcome is useful as a summarising index and as a way of quantifying distributions of qualitative characteristics to facilitate comparisons between such distributions.

1. AGE (key admission)

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 11A)

Differences in outcome between the various age groups are small and show no consistent trend with respect to age.

(ii) Mean Outcome Scores

Under 30 (N=54)	2.31 \pm .14
30 - 39 (N=51)	2.25 \pm .13
40 - 49 (N=47)	2.36 \pm .12
50 and over (N=23)	2.26 \pm .23

Differences in mean outcome scores for age groups as defined above are trivial and show no consistent trend.

TABLE 11

OUTCOME IN RELATION TO AGE

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Age	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
< 30	14 (25.9%)	18 (33.3%)	13 (24.1%)	9 (16.7%)	54 (100%)
30-39	11 (21.6%)	21 (41.2%)	15 (29.4%)	4 (7.8%)	51 (100%)
40-49	6 (12.8%)	23 (48.9%)	13 (27.7%)	5 (10.6%)	47 (100%)
≥ 50	7 (30.4%)	7 (30.4%)	5 (21.7%)	4 (17.4%)	23 (99.9%)
TOTAL	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

B. FINAL OUTCOME

Age	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K. *	Grand Total
< 30	16 (35.6%)	9 (20%)	6 (13.3%)	8 (17.8%)	6 (13.3%)	45 (100%)	9	54
30-39	9 (20.5%)	15 (34.1%)	10 (22.7%)	4 (9.1%)	6 (13.6%)	44 (100%)	7	51
40-49	16 (40%)	6 (15%)	6 (15%)	10 (25%)	2 (5%)	40 (100%)	7	47
≥ 50	3 (17.6%)	4 (23.5%)	2 (11.8%)	3 (17.6%)	5 (29.4%)	17 (99.9%)	6	23
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

* Throughout these tables, Not Known (N.K.) for final outcome rating includes also those cases where it was Not Applicable, i.e. patients who died in the interim period. Deaths from suicide are included in the Worse category.

(b) Relationship to Final Outcome(i) Distribution (Table 11B)

The table shows that patients aged 50 and over tend to have a worse final outcome than other age groups; for example, 18% of these patients are considered recovered and 29% worse compared with 40% and 5% respectively for patients aged 40-49. However, this difference is not statistically significant (C.R. = 1.59).

(ii) Mean Outcome ScoresAge

Under 30	(N=45)	2.53 \pm .22
30 - 39	(N=44)	2.61 \pm .20
40 - 49	(N=40)	2.40 \pm .22
50 and over	(N=17)	3.18 \pm .39

The same trends are noted; the outcome score is highest (indicating the worst outcome) for the age group 50 and over, and lowest (indicating best outcome) for age 40-49. The difference between these extremes is not statistically significant (C.R. = 1.74). Thus, there is no evidence for an association between age and outcome at discharge; the final outcome tends to be worse for patients aged 50 and over than for the other age groups, but differences do not reach statistical significance.

2. SEX(a) Relationship to Outcome at Discharge(i) Distribution (Table 12A)

The outcome for male patients does not differ significantly from that for female patients.

(ii) Mean Outcome Scores

Males	(N=56)	$2.43 \pm .13$
Females	(N=119)	$2.24 \pm .09$

Differences in mean outcome scores are small and not significant statistically (C.R. = 1.20).

(b) Relationship to Final Outcome(i) Distribution (Table 12B)

No significant differences are shown between the outcome distributions for male and for female patients.

(ii) Mean Outcome Scores

Males	(N=48)	$2.77 \pm .21$
Females	(N=98)	$2.51 \pm .14$

Differences in mean outcome scores are small and not significant statistically (C.R. = 1.03).

These findings indicate that patterns of outcome at discharge and at follow-up are similar for males and females.

T A B L E 12

OUTCOME IN RELATION TO SEX

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Males	8 (14.3%)	25 (44.6%)	14 (25%)	9 (16.1%)	56 (100%)
Females	30 (25.2%)	44 (37%)	32 (26.9%)	13 (10.9%)	119 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

B. FINAL OUTCOME

	Recovered	Much Improved	Slightly Improved	No Change	Worse	Total	N.K.	Grand Total
Males	12 (25%)	11 (22.9%)	9 (18.7%)	8 (16.7%)	8 (16.7%)	48 (100%)	8	56
Females	32 (32.7%)	23 (23.5%)	15 (15.3%)	17 (17.3%)	11 (11.2%)	98 (100%)	21	119
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

3. MARITAL STATUS (Key admission)

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 13A)

The proportions of patients showing improvement of any kind are higher for the married than for the single, although in individual categories these differences are slight. If we group together all grades of improvement and compare this grouping for married and single, we find a statistically significant difference (C.R. = 2.55, $P < .025$) indicating a somewhat more favourable outcome for married patients.

(ii) Mean Outcome Scores

Single	(N=60)	$2.52 \pm .13$
Married	(N=94)	$2.17 \pm .09$
Separated and Divorced	(N=16)	$2.19 \pm .27$
Widowed	(N=5)	$2.60 \pm .45$

The group of married patients had the best (i.e. lowest) outcome score, differing only slightly from the separated and divorced, but differing significantly from the single (C.R. = 2.22, $P < .05$).

(b) Relationship to Final Outcome

(i) Distribution (Table 13B)

Distributions of final outcome for married and for single patients differ significantly. 40% of single patients and only 23% of married patients were unchanged or worse at follow-up.

T A B L E 13

OUTCOME IN RELATION TO MARITAL STATE

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Marital State	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Single	10 (16.7%)	22 (36.7%)	16 (26.7%)	12 (20%)	60 (100.1%)
Married	24 (25.5%)	36 (38.3%)	28 (29.8%)	6 (6.4%)	94 (100%)
Separated and Divorced	4 (25%)	8 (50%)	1 (6.3%)	3 (18.7%)	16 (100%)
Widowed	—	3	1	1	5
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$\chi^2 = 12.90$ for 9 d.f. Not significant

B. FINAL OUTCOME

Marital State	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Single	17 (34%)	10 (20%)	3 (6%)	10 (20%)	10 (20%)	50 (100%)	10	60
Married	23 (28.7%)	23 (28.7%)	16 (20%)	13 (16.3%)	5 (6.3%)	80 (100%)	14	94
Separated and Divorced	2	-	5	1	3	11	5	16
Widowed	2	1	-	1	1	5	-	5
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$$\chi^2 = 22.75 \text{ for 12 d.f.} \quad P < .05$$

(ii) Mean Outcome Scores

Single	(N=50)	2.72 \pm .23
Married	(N=80)	2.43 \pm .14
Separated or Divorced	(N=11)	3.27 \pm .45
Widowed	(N=5)	2.60 \pm .91

The mean outcome is worse for single than for married patients although the difference does not reach statistical significance (C.R. = 1.08).

Outcome at discharge and at follow-up was therefore related to marital state in the present sample. The prognosis for married patients was significantly better than for single patients. No conclusions can be formed regarding the prognosis of patients who are separated, divorced or widowed as their numbers were too small for any reliability to be attached to their outcome scores.

It is of interest to note in passing that of the 17 patients in the sample who married during the interim period, 12 (71%) were judged to be recovered at follow-up, whereas only 26% of the patients who did not change their marital state (i.e. who remained single, widowed, etc., or who were previously married) were recovered.

4. SOCIAL CLASS

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 14A)

There are small differences with respect to outcome between the various social classes, pointing to a somewhat better outcome for classes II and III than for IV and V. The greatest difference is between classes III and V for the proportion recovered or much improved (Class III 68%, Class V 47%); this difference is not significant. (C.R.=1.61).

(ii) Mean Outcome Scores

Social Class: I	(N=7)	2.43 \pm .53
II	(N=26)	2.35 \pm .21
III	(N=98)	2.18 \pm .09
IV	(N=16)	2.50 \pm .21
V	(N=17)	2.59 \pm .22

The best outcome is again shown to have been for Class III and the worst for Class V. The difference between these extremes is not significant (C.R. = 1.72).

(b) Relationship to Final Outcome

(i) Distribution (Table 14B)

Differences in outcome attributable to social class are again small and not significant statistically.

T A B L E 14

OUTCOME IN RELATION TO SOCIAL CLASS

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Social Class	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
I	2	1	3	1	7
II	6 (23.1%)	9 (34.6%)	7 (26.9%)	4 (15.4%)	26 (100%)
III	24 (24.5%)	43 (43.9%)	21 (21.4%)	10 (10.2%)	98 (100%)
IV	2 (12.5%)	6 (37.5%)	6 (37.5%)	2 (12.5%)	16 (100%)
V	2 (11.8%)	6 (35.3%)	6 (35.3%)	3 (17.6%)	17 (100%)
Total	36 (22.0%)	65 (39.6%)	43 (26.2%)	20 (12.2%)	164 (100%)
N.K.	2	4	3	2	11
Grand Total	38	69	46	22	175

T A B L E 14B

FINAL OUTCOME IN RELATION TO SOCIAL CLASS

(Numbers and Percentages of Patients)

FINAL OUTCOME

Social Class	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
I	3	—	1	1	1	6	1	7
II	7 (29.1%)	6 (25%)	4 (16.7%)	3 (12.5%)	4 (16.7%)	24 (100%)	2	26
III	25 (30.9%)	21 (25.9%)	15 (18.5%)	12 (14.8%)	8 (9.9%)	81 (100%)	17	98
IV	6 (40%)	1 (6.7%)	2 (13.3%)	5 (33.3%)	1 (6.7%)	15 (100%)	1	16
V	1 (7.1%)	5 (35.7%)	1 (7.1%)	4 (28.6%)	3 (21.4%)	14 (99.9%)	3	17
Total	42 (30.0%)	33 (23.6%)	23 (16.4%)	25 (17.9%)	17 (12.1%)	140 (100%)	24	164
N.K.	2	1	1	—	2	6	5	11
Grand Total	44	34	24	25	19	146	29	175

 $\chi^2 = 15.02$ for 16 d.f. Not significant.

(ii) Mean Outcome Scores

Social Class:	I	(N=6)	$2.50 \pm .79$
	II	(N=24)	$2.63 \pm .31$
	III	(N=81)	$2.46 \pm .15$
	IV	(N=15)	$2.60 \pm .40$
	V	(N=14)	$3.21 \pm .38$

Differences are small but again the best prognosis was for patients in Class III.

The mean outcome score for patients in Classes I-IV collectively is $2.52 \pm .12$ and this score does not differ significantly from that obtaining for patients in Class V (C.R. = 1.73).

Thus the initial and subsequent outcome in the present series of patients was not significantly related to their social class, although there is a suggestion of a somewhat better prognosis for Class III than for IV and V.

5. FAMILY HISTORY(a) Relationship to Outcome at Discharge(i) Distribution (Table 15A)

For patients having a positive family history of mental illness we find a slightly higher proportion classed as recovered and as slightly improved than for those with no known family history. When we combine these

T A B L E 15

OUTCOME IN RELATION TO FAMILY HISTORY

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Family History of Mental Disorder	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Positive	17 (27.9%)	24 (39.3%)	17 (27.9%)	3 (4.9%)	61 (100%)
Negative	20 (20.2%)	39 (39.4%)	24 (24.2%)	16 (16.2%)	99 (100%)
Total	37 (23.1%)	63 (39.4%)	41 (25.6%)	19 (11.9%)	160 (100%)
Unknown	1	6	5	3	15
Grand Total	38	69	46	22	175

B. FINAL OUTCOME

Family History of Mental Disorder	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Positive	11 (22%)	15 (30%)	10 (20%)	7 (14%)	7 (14%)	50 (100%)	11	61
Negative	28 (33.7%)	17 (20.5%)	13 (15.7%)	17 (20.5%)	8 (9.6%)	83 (100%)	16	99
Total	39 (29.3%)	32 (24.1%)	23 (17.3%)	24 (18.0%)	15 (11.3%)	133 (100%)	27	160
Unknown	5	2	1	1	4	13	2	15
Grand Total	44	34	24	25	19	146	29	175

differences by considering together all patients who showed some degree of improvement. (positive history group 95%, negative history group 84%), we obtain a significant difference (C.R. = 2.07, $P < .05$). The prognosis therefore appears to have been slightly better for patients having a history of mental illness in the family.

(ii) Mean Outcome Scores

Family History of Mental Disorder:

Positive	(N=61)	$2.10 \pm .11$
Negative	(N=19)	$2.37 \pm .10$

Differences are in the same direction but are here not statistically significant (C.R. = 1.81).

(b) Relationship to Final Outcome

(i) Distribution (Table 15B)

Differences in outcome between patients with a family history of mental illness and those without are small and not significant.

(ii) Mean Outcome Scores

Family History of Mental Disorder:

Positive	(N=50)	$2.68 \pm .19$
Negative	(N=83)	$2.52 \pm .15$

Differences in mean outcome scores are negligible.

Thus we find, contrary to what we might expect, that there appears to be evidence for a better outcome on



discharge for the group of patients having a known family history of mental illness than for the group having no known family history. The difference is small and is not present at final outcome.

6. CHILDHOOD ENVIRONMENT

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 16A)

There are no consistent differences in outcome between patients with satisfactory and those with adverse childhood environment respectively; in each case 64% were recovered or much improved, although the proportion in the former category was higher for the group with adverse environment.

(ii) Mean Outcome Scores

Childhood Environment:

Adverse	(N=70)	2.16 \pm .13
Satisfactory	(N=79)	2.34 \pm .11

Differences are small and not significant statistically.

(b) Relationship to Final Outcome

(i) Distribution (Table 16B)

Differences are small except in the recovered category in which 21% of patients with adverse childhood environment and 40% of patients with satisfactory childhood environment

T A B L E 16

OUTCOME IN RELATION TO CHILDHOOD ENVIRONMENT

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Childhood Environment	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Adverse	24 (34.3%)	21 (30%)	16 (22.9%)	9 (12.9%)	70 (100.1%)
Satisfactory	13 (16.5%)	38 (48.1%)	16 (20.2%)	12 (15.2%)	79 (100%)
Total	37 (24.8%)	59 (39.6%)	32 (21.5%)	21 (14.1%)	149 (100%)
Unknown	1	10	14	1	26
Grand Total	38	69	46	22	175

B. FINAL OUTCOME

Childhood Environment	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Adverse	12 (21%)	15 (26.3%)	11 (19.3%)	12 (21%)	7 (12.3%)	57 (99.9%)	13	70
Satisfactory	27 (39.7%)	13 (19.1%)	11 (16.2%)	12 (17.6%)	5 (7.4%)	68 (100%)	11	79
Total	39 (31.2%)	28 (22.4%)	22 (17.6%)	24 (19.2%)	12 (9.6%)	125 (100%)	24	149
Unknown	5	6	2	1	7	21	5	26
Grand Total	44	34	24	25	19	146	29	175

are found. However, this cannot be interpreted as evidence of a better prognosis for patients with satisfactory environment; if patients in the recovered and much improved categories are grouped together, the difference attributable to childhood environment is small and not statistically significant (C.R. = 0.50).

(ii) Mean Outcome Scores

Childhood Environment:

Adverse (N=57) $2.77 \pm .18$

Satisfactory (N=68) $2.34 \pm .17$

Patients who had an adverse childhood environment had on the whole a slightly worse outcome than those for whom it was satisfactory but the difference is not statistically significant (C.R. = 1.74). These findings indicate that there is no reliable evidence that either initial or subsequent outcome was related to the childhood environment of these patients.

7. CHILDHOOD NEUROTIC TRAITS

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 17A)

Differences in outcome between patients with a history of childhood neurotic traits and those without such a history are small and insignificant.

T A B L E 17

OUTCOME IN RELATION TO CHILDHOOD NEUROTIC TRAITS

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Childhood Neurotic Traits	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Present	21 (28.8%)	22 (30.1%)	19 (26%)	11 (15.1%)	73 (100%)
Absent	12 (17.6%)	34 (50%)	14 (20.6%)	8 (11.8%)	68 (100%)
Total	33 (23.4%)	56 (39.7%)	33 (23.4%)	19 (13.5%)	141 (100%)
Unknown	5	13	13	3	34
Grand Total	38	69	46	22	175

B. FINAL OUTCOME

Childhood Neurotic Traits	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	16 (27.1%)	14 (23.9%)	11 (18.6%)	8 (13.5%)	10 (16.9%)	59 (100%)	14	73
Absent	22 (37.3%)	13 (22%)	9 (15.3%)	13 (22%)	2 (3.4%)	59 (100%)	9	68
Total	38 (32.2%)	27 (22.9%)	20 (17.0%)	21 (17.8%)	12 (10.2%)	118 (100.1%)	23	141
Unknown	6	7	4	4	7	28	6	34
Grand Total	44	34	24	25	19	146	29	175

(ii) Mean Outcome Scores

Childhood Neurotic Traits:

Present	(N=73)	2.29 \pm .13
Absent	(N=68)	2.26 \pm .11

The difference between mean outcome scores is trivial.

(b) Relationship to Final Outcome(i) Distribution (Table 17B)

Small differences only are shown in the outcome distributions of patients with and without a history of childhood neurotic traits.

(ii) Mean Outcome Scores

Childhood Neurotic Traits:

Present	(N=59)	2.69 \pm .19
Absent	(N=59)	2.32 \pm .17

The mean outcome is slightly better for the group who did not have a history of childhood neurotic traits, but the difference is not significant (C.R.=1.46).

Thus no relationship can be demonstrated in this series between outcome and the presence or absence of neurotic traits in childhood.

8. INTELLIGENCE

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 18A)

Patients in the various I.Q. categories do not differ significantly with respect to outcome; the greatest difference is seen between the proportion of patients with an I.Q. under 90 who have recovered (7%), and the proportion with an I.Q. of 90-110 who have recovered (24%); this difference is not significant statistically (C.R. = 1.45).

(ii) Mean Outcome Scores

I.Q. Over 130	(N=6)	$2.17 \pm .44$
111 - 130	(N=42)	$2.26 \pm .14$
90 - 110	(N=89)	$2.30 \pm .11$
under 90	(N=14)	$2.71 \pm .23$

There is a very slight but consistent association between I.Q. and outcome, the worst outcome being found in the group with lowest intelligence. None of the differences are significant (C.R. = 1.09 for difference between I.Q. over 130 and under 90).

(b) Relationship to Final Outcome

(i) Distribution (Table 18B)

The table shows only small and insignificant difference in outcome distribution according to intelligence.

T A B L E 18

OUTCOME IN RELATION TO INTELLIGENCE

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

I.Q.*	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
> 130	1	4	—	1	6
111-130	8 (19%)	19 (45.2%)	11 (26.2%)	4 (9.5%)	42 (99.9%)
90-110	21 (23.6%)	34 (38.2%)	21 (23.6%)	13 (14.6%)	89 (100%)
< 90	1 (7.1%)	4 (28.6%)	7 (50%)	2 (14.3%)	14 (100%)
Total	31 (20.5%)	61 (40.4%)	39 (25.8%)	20 (13.2%)	151 (99.9%)
Unknown	7	8	7	2	24
Grand Total	38	69	46	22	175

* (Wechsler-Bellevue or equivalent scale)

T A B L E 18B

OUTCOME IN RELATION TO INTELLIGENCE

(Numbers and Percentages of Patients)

FINAL OUTCOME

I.Q.*	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
> 130	3	—	1	1	1	6	—	6
111-130	8 (26.7%)	7 (23.3%)	5 (16.7%)	5 (16.7%)	5 (16.7%)	30 (100.1%)	12	42
90-110	23 (30.7%)	20 (26.7%)	14 (18.7%)	14 (18.7%)	4 (5.3%)	75 (100.1%)	14	89
< 90	4 (28.6%)	3 (21.4%)	2 (14.3%)	2 (14.3%)	3 (21.4%)	14 (100%)	—	14
Total	38 (30.4%)	30 (24.0%)	22 (17.6%)	22 (17.6%)	13 (10.4%)	125 (100%)	26	151
Unknown	6	4	2	3	6	21	3	24
Grand Total	44	34	24	25	19	146	29	175

* (Wechsler-Bellevue or equivalent scale)

(ii) Mean Outcome Scores

I.Q. Over 130	(N=6)	2.50 \pm .79
111 - 130	(N=30)	2.73 \pm .27
90 - 110	(N=75)	2.41 \pm .15
under 90	(N=14)	2.79 \pm .44

Differences in mean outcome scores are small and neither consistent nor statistically significant. There is no evidence of a relationship between outcome and intelligence in the present series of patients.

9. PREMORBID PERSONALITY(a) Relationship to Outcome at Discharge(i) Distribution (Table 19A)

The table shows a consistent trend, viz. patient with an abnormal premorbid personality tend to have a worse outcome than those with a normal personality. The differences, however, are not statistically significant.

(ii) Mean Outcome Scores

Premorbid Personality:

Abnormal	(N=98)	2.46 \pm .10
Normal	(N=77)	2.10 \pm .10

The difference in mean outcome scores is significant statistically (C.R. = 2.55, $P < .025$) showing that patients with an abnormal premorbid personality had a worse immediate prognosis than did those with normal premorbid personalities.

T A B L E 19

OUTCOME IN RELATION TO PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Premorbid Personality	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Abnormal	17 (17.3%)	36 (36.7%)	29 (29.6%)	16 (16.3%)	98 (99.9%)
Normal	21 (27.3%)	33 (42.8%)	17 (22.1%)	6 (7.8%)	77 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$\chi^2 = 5.86$ for 3 d.f. Not significant.

B. FINAL OUTCOME

Premorbid Personality	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Abnormal	15 (18.1%)	18 (21.7%)	17 (20.4%)	18 (21.7%)	15 (18.1%)	83 (100%)	15	98
Normal	29 (46%)	16 (25.4%)	7 (11.1%)	7 (11.1%)	4 (6.4%)	63 (100%)	14	77
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$$\chi^2 = 17.55 \text{ for 4 d.f. } P < .005.$$

(b) Relationship to Final Outcome(i) Distribution (Table 19B)

Final outcome is significantly related to premorbid personality. 71% of patients judged to have a normal premorbid personality were either recovered or much improved, compared with 40% of those with an abnormal personality. The differences are highly significant.

(ii) Mean Outcome Scores

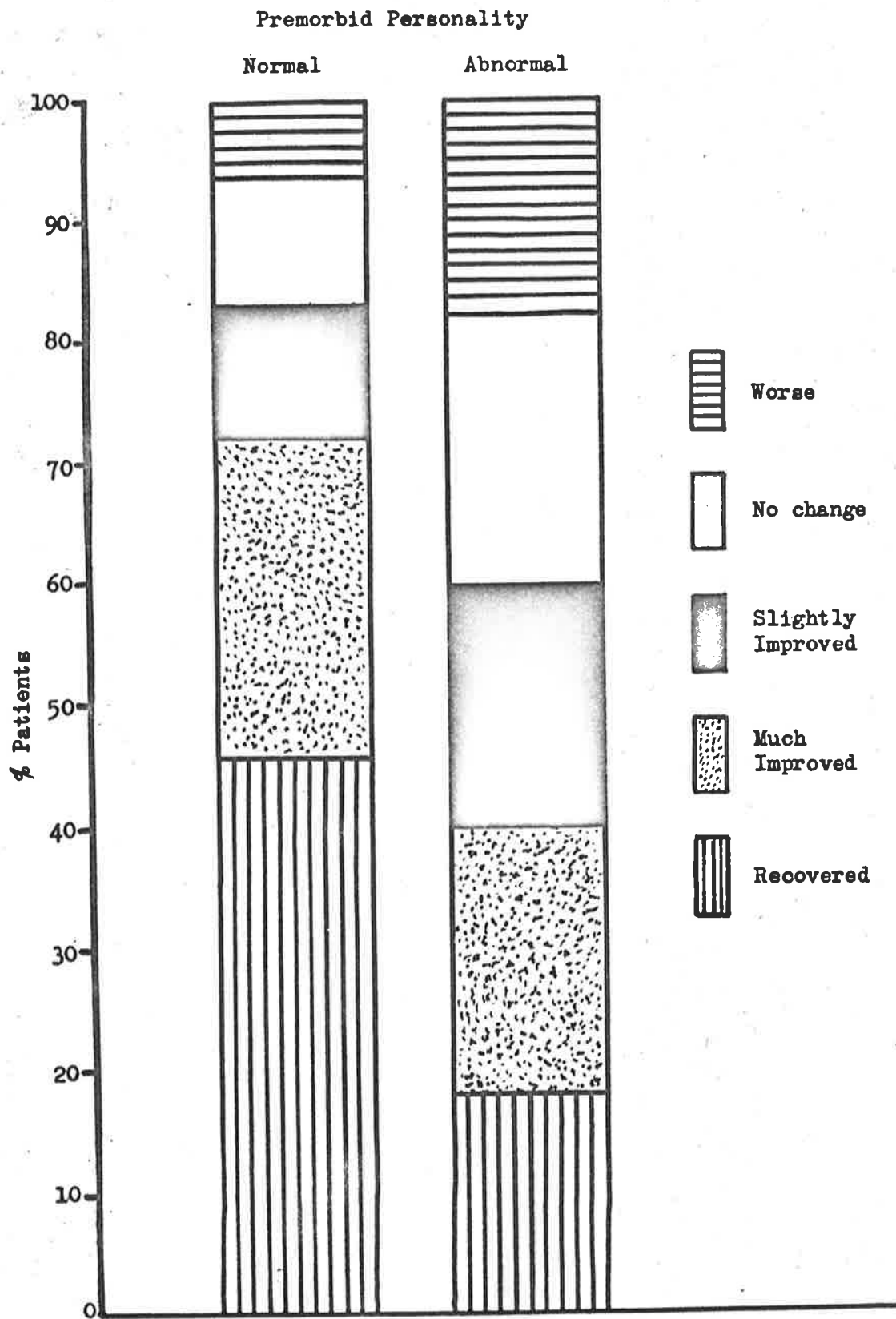
Premorbid Personality:

Abnormal	(N=83)	3.00 \pm .15
Normal	(N=63)	2.06 \pm .16

There is a large and highly significant difference in mean outcome scores (C.R. = 4.29, $P < .001$). The figures show clearly that outcome is related to premorbid personality. Patients with an abnormal premorbid personality have a worse outcome upon discharge from hospital than patients whose personality before illness was judged to be normal; at final outcome this difference becomes even more pronounced. Figure 3 illustrates the relationship of premorbid personality to final outcome.

(c) Premorbid Personality and Family History (Table 20)

43% of patients with an abnormal premorbid personality have a family history of mental illness, as compared with 32% of patients with a normal premorbid personality; this difference is not significant statistically (C.R. = 1.43).



**FIG. 3 - FINAL OUTCOME IN RELATION TO
PREMORBID PERSONALITY**

T A B L E 20

PREMORBID PERSONALITY IN RELATION TO FAMILY HISTORY

(Numbers and Percentages of Patients)

Premorbid Personality	Family History of Mental Disorder			N.K.	Grand Total
	Positive	Negative	Total		
Abnormal	39 (42.9%)	52 (57.1%)	91 (100%)	7	98
Normal	22 (31.9%)	47 (68.1%)	69 (100%)	8	77
Total	61 (38.1%)	99 (61.9%)	160 (100%)	15	175

(d) Premorbid Personality and Childhood Environment (Table 21)

A history of adverse childhood environment was found in 45% of patients with abnormal premorbid personalities and in 49% of patients with normal personalities; the difference is clearly not significant.

(e) Premorbid Personality and Childhood Neurotic Traits (Table 22)

A history of neurotic traits in childhood is obtained more often from patients with abnormal personalities (59%) than from patients with normal personalities (42%); this difference is significant statistically (C.R. = 2.00, $P < .05$).

Abnormal premorbid personality is therefore associated with presence of neurotic traits in childhood, but not with adverse family history or childhood environment.

10. SOCIAL ADJUSTMENT BEFORE KEY ILLNESS

I. WORK RECORD

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 23A)

Information about work record is relevant and reliable only in 117 of the 175 patients and in the majority (95) it was satisfactory. There is an association between satisfactory work record and satisfactory immediate outcome, but the numbers are too small for the large difference to be statistically significant.

T A B L E 21

PREMORBID PERSONALITY IN RELATION TO CHILDHOOD ENVIRONMENT

(Numbers and Percentages of Patients)

Premorbid Personality	Childhood Environment			N.K.	Grand Total
	Adverse	Satisfactory	Total		
Abnormal	39 (45.3%)	47 (54.7%)	86 (100%)	12	98
Normal	31 (49.2%)	32 (50.8%)	63 (100%)	14	77
Total	70 (47%)	79 (53%)	149 (100%)	26	175

T A B L E 22

PREMORBID PERSONALITY IN RELATION TO

CHILDHOOD NEUROTIC TRAITS

(Numbers and Percentages of Patients)

Premorbid Personality	Childhood Neurotic Traits			N.K.	Grand Total
	Present	Absent	Total		
Abnormal	48 (58.5%)	34 (41.5%)	82 (100%)	16	98
Normal	25 (42.4%)	34 (57.6%)	59 (100%)	18	77
Total	73 (51.8%)	68 (48.2%)	141 (100%)	34	175

T A B L E 23A

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)

I. WORK RECORD

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Work Record	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Satisfactory	24 (25.3%)	40 (42.1%)	20 (21%)	11 (11.6%)	95 (100%)
Mediocre	-	7 (46.7%)	5 (33.3%)	3 (20%)	15 (100%)
Unsatisfactory	1	-	3	3	7
Total	25 (21.4%)	47 (40.2%)	28 (23.9%)	17 (14.5%)	117 (100%)
N.K.	13	22	18	5	58
Grand Total	38	69	46	22	175

T A B L E 23B

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key Illness)I. WORK RECORD

(Numbers and Percentages of Patients)

FINAL OUTCOME

Work Record	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Satisfactory	27 (36%)	18 (24%)	12 (16%)	8 (10.7%)	10 (13.3%)	75 (100%)	20	95
Mediocre	3 (23.1%)	3 (23.1%)	1 (7.7%)	5 (38.4%)	1 (7.7%)	13 (100%)	2	15
Unsatisfactory	-	1	3	-	2	6	1	7
Total	30 (31.9%)	22 (23.4%)	16 (17.0%)	13 (13.8%)	13 (13.8%)	94 (99.9%)	23	117
N.K.	14	12	8	12	6	52	6	58
Grand Total	44	34	24	25	19	146	29	175

(ii) Mean Outcome Scores

Work Record:

Satisfactory (N=95) $2.20 \pm .10$ Mediocre (N=15) $2.73 \pm .21$ Unsatisfactory (N=7) $3.14 \pm .44$

Patients with a satisfactory work record had a significantly lower mean outcome score than those whose work record was mediocre. (C.R.=2.27, $P < .05$) or unsatisfactory (C.R.=2.08, $P < .05$).

(b) Relationship to Final Outcome(i) Distribution (Table 23B)

The table shows a consistent trend, the group of patients with a satisfactory work record having a better outcome than the group whose work record was rated mediocre or unsatisfactory.

(ii) Mean Outcome Scores

Work Record:

Satisfactory (N=75) $2.41 \pm .16$ Mediocre (N=13) $2.85 \pm .40$ Unsatisfactory (N=6) $3.50 \pm .54$

We can again see a consistent association between work record and outcome; however, the numbers are small so that quite large differences are not statistically significant (for comparison of unsatisfactory with mediocre, C.R.=1.02,

and for comparison of satisfactory with unsatisfactory record, C.R.=1.92).

We may conclude that there is clear evidence that a good work record before illness was associated with a good prognosis in this group of patients although the numbers are too small to render the differences significant statistically.

(c) Work Record and Premorbid Personality (Table 24)

No significant association was found between work records and premorbid personalities of these patients.

II. INTERPERSONAL RELATIONS

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 25A)

The figures show consistent trends indicating that patients whose interpersonal relations before illness were rated as satisfactory had a better discharge outcome than did those whose interpersonal relations were rated mediocre or unsatisfactory. This association is significant statistically.

(ii) Mean Outcome Scores

Interpersonal Relations:

Satisfactory	(N=82)	2.20 \pm .10
Mediocre	(N=69)	2.33 \pm .12
Unsatisfactory	(N=13)	3.08 \pm .30

T A B L E 24

WORK RECORD (before key illness) IN RELATION TO

PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Work Record				N.K.	Grand Total
	Satisfactory	Mediocre	Unsatis- factory	Total		
Abnormal	52 (76.5%)	10 (14.7%)	6 (8.8%)	68 (100%)	30	98
Normal	43 (87.8%)	5 (10.2%)	1 (2%)	49 (100%)	28	77
Total	95 (81.2%)	15 (12.8%)	7 (6%)	117 (100%)	58	175

$\chi^2 = 3.03$ for 2 d.f. Not significant.

T A B L E 25A

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)II. INTERPERSONAL RELATIONS

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Interpersonal Relations	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Satisfactory	18 (22%)	36 (43.9%)	22 (26.8%)	6 (7.3%)	82 (100%)
Mediocre	16 (23.2%)	25 (36.2%)	18 (26.1%)	10 (14.5%)	69 (100%)
Unsatisfactory	1 (7.7%)	3 (23.1%)	3 (23.1%)	6 (46.2%)	13 (100.1%)
Total	35 (21.3%)	64 (39%)	43 (26.2%)	22 (13.4%)	164 (99.9%)
N.K.	3	5	3	-	11
Grand Total	38	69	46	22	175

$$\chi^2 = 16.04 \text{ for } 6 \text{ d.f. } P < .025$$

Patients with satisfactory interpersonal relations have a better mean outcome than those with mediocre interpersonal relations, whilst the worst mean outcome is found in patients whose interpersonal relations were rated as unsatisfactory. The mean scores for both satisfactory and mediocre groups are significantly lower than the score for the unsatisfactory group. (C.R. = 2.79, $P < .01$ and C.R. = 2.33, $P < .025$ respectively).

(b) Relationship to Final Outcome

(i) Distribution (Table 25B)

The figures show clear evidence of a relationship between final outcome and ratings of interpersonal relations before key illness; the association is highly significant statistically.

(ii) Mean Outcome Scores

Interpersonal Relations:

Satisfactory	(N=68)	$2.09 \pm .16$
Mediocre	(N=56)	$2.89 \pm .18$
Unsatisfactory	(N=12)	$4.08 \pm .33$

There are very large differences between the mean outcome scores; these differences are all significant statistically.

Comparing scores for patients with satisfactory and mediocre interpersonal relations, C.R. = 3.33, $P < .001$; for scores of patients with mediocre and unsatisfactory interpersonal relations, C.R. = 3.17, $P < .005$.

T A B L E 25B

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)II. INTERPERSONAL RELATIONS

(Numbers and Percentages of Patients)

FINAL OUTCOME

Interpersonal Relations	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Satisfactory	33 (48.5%)	12 (17.6%)	11 (16.2%)	8 (11.8%)	4 (5.9%)	68 (100%)	14	82
Mediocre	9 (16.1%)	16 (28.6%)	11 (19.6%)	12 (21.4%)	8 (14.3%)	56 (100%)	13	69
Unsatisfactory	-	2 (16.7%)	-	5 (41.7%)	5 (41.7%)	12 (100.1%)	1	13
Total	42 (30.9%)	30 (22.1%)	22 (16.2%)	25 (18.4%)	17 (12.5%)	136 (100.1%)	28	164
N.K.	2	4	2	-	2	10	1	11
Grand Total	44	34	24	25	19	146	29	175

$$\chi^2 = 36.80 \text{ for 8 d.f. } P < .001.$$

The results cited above point to the conclusion that both initial and subsequent outcome of neurotic illness in these patients was related to their social adjustment in respect of interpersonal relations before illness.

(c) Interpersonal Relations and Premorbid Personality (Table 26)

The table shows that satisfactory interpersonal relationships were found in 75% of patients with normal premorbid personalities but only in 30% of those with abnormal personalities. The association is highly significant statistically.

III. MARITAL RELATIONS

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 27A)

Outcome at discharge differed little between patients whose marital relations before illness were judged satisfactory, mediocre and unsatisfactory respectively. There was no significant association between outcome at discharge and marital relations.

(ii) Mean Outcome Scores

Marital Relations:

Satisfactory	(N=47)	2.15 \pm .13
Mediocre	(N=41)	2.24 \pm .13
Unsatisfactory	(N=20)	2.00 \pm .22

Differences in mean outcome are small and not significant.

T A B L E 26

INTERPERSONAL RELATIONS (before illness)

IN RELATION TO PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Interpersonal Relations				N.K.	Grand Total
	Satis- factory	Mediocre	Unsatis- factory	Total		
Abnormal	27 (29.7%)	51 (56%)	13 (14.3%)	91 (100%)	7	98
Normal	55 (75.3%)	18 (24.7%)	0	73 (100%)	4	77
Total	82 (50%)	69 (42.1%)	13 (7.9%)	164 (100%)	11	175

$$\chi^2 = 36.81 \text{ for 2 d.f. } P < .001$$

T A B L E 27A

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)III. MARITAL RELATIONS

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Marital Relations	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Satisfactory	13 (27.7%)	17 (36.1%)	14 (29.8%)	3 (6.4%)	47 (100%)
Mediocre	7 (17.1%)	19 (46.3%)	13 (31.7%)	2 (4.9%)	41 (100%)
Unsatisfactory	7 (35%)	8 (40%)	3 (15%)	2 (10%)	20 (100%)
Total	27 (25%)	44 (40.7%)	30 (27.8%)	7 (6.5%)	108 (100%)
N.K.	11	25	16	15	67
Grand Total	38	69	46	22	175

 $\chi^2 = 4.52$ for 4 d.f. Not significant.

T A B L E 27B

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)III. MARITAL RELATIONS

(Numbers and Percentages of Patients)

FINAL OUTCOME

Marital Relations	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Satisfactory	17 (41.5%)	9 (22%)	5 (12.2%)	9 (21.9%)	1 (2.4%)	41 (100%)	6	47
Mediocre	7 (21.2%)	12 (36.4%)	7 (21.2%)	3 (9.1%)	4 (12.1%)	33 (100%)	8	41
Unsatisfactory	1 (6.7%)	3 (20%)	7 (46.7%)	1 (6.7%)	3 (20%)	15 (100.1%)	5	20
Total	25 (28.1%)	24 (27.0%)	19 (21.4%)	13 (14.6%)	8 (9.0%)	89 (100.1%)	19	108
N.K.	19	10	5	12	11	57	10	67
Grand Total	44	34	24	25	19	146	29	175

$$\chi^2 = 20.80 \text{ for } 8 \text{ d.f. } P < .025$$

(b) Relationship to Final Outcome(i) Distribution (Table 27B)

Patients whose marital relations were considered satisfactory before illness had a better outcome at follow-up than did those whose marital relations were mediocre or unsatisfactory; for example, 42% of patients with satisfactory marital relations had recovered, whereas only 7% of those with unsatisfactory marital relations had similarly recovered. The association between outcome and marital relations is significant statistically.

(ii) Mean Outcome Scores

Marital Relations:

Satisfactory	(N=41)	2.22 \pm .20
Mediocre	(N=33)	2.55 \pm .23
Unsatisfactory	(N=15)	3.13 \pm .32

These figures show a consistent trend, the outcome being better for more satisfactory marital relations. The difference between the extremes is significant, (C.R.=2.41, $P < .025$). Thus while there is no evidence of an association between marital relations and outcome at discharge, the final outcome is significantly related to marital adjustment before illness.

(o) Marital Relations and Premorbid Personality (Table 28)

Differences between patients with normal and abnormal

T A B L E 28

MARITAL RELATIONS (before Key illness) IN RELATION
TO PREMORBID PERSONALITY
 (Numbers and Percentages of Patients)

Premorbid Personality	Marital Relations				N.K.	Grand Total
	Satis- factory	Mediocre	Unsatis- factory	Total		
Abnormal	24 (41.4%)	22 (37.9%)	12 (20.7%)	58 (100%)	40	98
Normal	23 (46%)	19 (38%)	8 (16%)	50 (100%)	27	77
Total	47 (43.5%)	41 (38%)	20 (18.5%)	108 (100%)	67	175

premorbid personalities with respect to their adjustment in marital relations are clearly insignificant.

(d) Marital Relations and Interpersonal Relations (Table 29)

No significant relationship was found between patients' adjustments with respect to marital and interpersonal relations.

IV. SEXUAL ADJUSTMENT

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 30A)

There were no significant differences in outcome between patients whose sexual adjustment before illness was rated satisfactory, mediocre and unsatisfactory respectively.

(ii) Mean Outcome Scores

Sexual adjustment:

Satisfactory (N=50) $2.12 \pm .12$

Mediocre (N=27) $2.19 \pm .16$

Unsatisfactory (N=38) $2.08 \pm .14$

Differences in mean outcome scores are trivial.

(b) Relationship to Final Outcome

(i) Distribution (Table 30B)

Minor differences only were found in the final outcome between patients whose sexual adjustment was rated satisfactory, mediocre and unsatisfactory, respectively.

TABLE 29
COMPARISON OF MARITAL WITH INTERPERSONAL RELATIONS
(Numbers and Percentages of Patients)

Interpersonal Relations	Marital Relations				N.K.	Grand Total
	Satisfactory	Mediocre	Unsatisfactory	Total		
Satisfactory	26 (51%)	20 (39.2%)	5 (9.8%)	51 (100%)	31	82
Mediocre	19 (44.2%)	13 (30.2%)	11 (25.6%)	43 (100%)	26	69
Unsatisfactory	2	3	1	6	7	13
Total	47 (47%)	36 (36%)	17 (17%)	100 (100%)	64	164
N.K.	-	5	3	8	3	11
Grand Total	47	41	20	108	67	175

$\chi^2 = 4.75$ for 4 d.f. Not significant

TABLE 30A

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)IV. SEXUAL ADJUSTMENT

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Sexual Adjustment	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Satisfactory	13 (26%)	23 (46%)	9 (18%)	5 (10%)	50 (100%)
Mediocre	6 (22.2%)	11 (40.7%)	9 (33.3%)	1 (3.7%)	27 (99.9%)
Unsatisfactory	10 (26.3%)	17 (44.7%)	9 (23.7%)	2 (5.3%)	38 (100%)
Total	29 (25.2%)	51 (44.3%)	27 (23.5%)	8 (7%)	115 (100%)
N.K.	9	18	19	14	60
Grand Total	38	69	46	22	175

T A B L E 30B

OUTCOME IN RELATION TO SOCIAL ADJUSTMENT (before Key illness)IV. SEXUAL ADJUSTMENT

(Numbers and Percentages of Patients)

FINAL OUTCOME

Sexual Adjustment	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Satisfactory	11 (26.2%)	12 (28.5%)	6 (14.3%)	8 (19.1%)	5 (11.9%)	42 (100%)	8	50
Mediocre	4 (18.2%)	8 (36.4%)	8 (36.4%)	1 (4.5%)	1 (4.5%)	22 (100%)	5	27
Unsatisfactory	6 (18.2%)	10 (30.3%)	7 (21.2%)	6 (18.2%)	4 (12.1%)	33 (100%)	5	38
Total	21 (21.7%)	30 (30.9%)	21 (21.7%)	15 (15.5%)	10 (10.3%)	97 (100.1%)	18	115
N.K.	23	4	3	10	9	49	11	60
Grand Total	44	34	24	25	19	146	29	175

(11) Mean Outcome Scores

Sexual Adjustment:

Satisfactory	(N=42)	2.62 \pm .22
Mediocre	(N=22)	2.41 \pm .22
Unsatisfactory	(N=33)	2.76 \pm .23

Differences are small, show no consistent trend, and are not significant statistically; (for differences between mediocre and unsatisfactory adjustments, C.R. = 1.10).

Thus outcome at discharge and at follow-up in these patients appears to be unrelated to sexual adjustment before illness.

(o) Sexual Adjustment and Premorbid Personality (Table 31)

Differences between normal and abnormal premorbid personalities with respect to their sexual adjustment ratings are small, and the association is not significant statistically.

(d) Sexual Adjustment and Interpersonal Relations (Table 32)

As we may expect, there is some degree of association between sexual adjustment and interpersonal relations, but it is not statistically significant.

(e) Sexual Adjustment and Marital Relations (Table 33)

The association between ratings for sexual adjustment and marital relations before illness is highly significant statistically.

TABLE 31

SEXUAL ADJUSTMENT (before illness) IN RELATION

TO PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Sexual Adjustment				N.K.	Grand Total
	Satisfactory	Mediocre	Unsatisfactory	Total		
Abnormal	26 (41.9%)	13 (21%)	23 (37.1%)	62 (100%)	36	98
Normal	24 (45.3%)	14 (26.4%)	15 (28.3%)	53 (100%)	24	77
Total	50 (43.5%)	27 (23.5%)	38 (33%)	115 (100%)	60	175

$\chi^2 = 1.13$ for 2 d.f. Not significant

TABLE 32
COMPARISON BETWEEN SEXUAL ADJUSTMENT AND INTERPERSONAL RELATIONS
(Numbers and Percentages of Patients)

Interpersonal Relations	Sexual Adjustment				N.K.	Grand Total
	Satisfactory	Mediocre	Unsatisfactory	Total		
Satisfactory	32 (52.5%)	14 (23%)	15 (24.6%)	61 (100.1%)	21	82
Mediocre	13 (31.7%)	10 (24.4%)	18 (43.9%)	41 (100%)	28	69
Unsatisfactory	3	2	-	5	8	13
Total	48 (44.9%)	26 (24.3%)	33 (30.8%)	107 (100%)	57	164
N.K.	2	1	5	8	3	11
Grand Total	50	27	38	115	60	175

$\chi^2 = 7.79$ for 4 d.f. Not significant

T A B L E 33

COMPARISON BETWEEN SEXUAL ADJUSTMENT AND MARITAL RELATIONS

(Numbers and Percentages of Patients)

Marital Relations	Sexual Adjustment				N.K.	Grand Total
	Satisfactory	Mediocre	Unsatisfactory	Total		
Satisfactory	28 (66.7%)	4 (9.5%)	10 (23.8%)	42 (100%)	5	47
Mediocre	9 (25%)	16 (44.4%)	11 (30.6%)	36 (100%)	5	41
Unsatisfactory	7 (41.2%)	4 (23.5%)	6 (35.3%)	17 (100%)	3	20
Total	44 (46.3%)	24 (25.3%)	27 (28.4%)	95 (100%)	13	108
N.K.	6	3	11	20	47	67
Grand Total	50	27	38	115	60	175

$$\chi^2 = 17.38 \text{ for 4 d.f. } P < .005$$

11. PREVIOUS ILLNESSES

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 34A)

The figures for outcome according to previous illness show no consistent trend; the association is not significant statistically.

(ii) Mean Outcome Scores

Previous Illnesses:

Psychiatric	(N=41)	2.41 \pm .14
Organic with persisting handicap	(N=20)	2.65 \pm .25
Organic, no per- sisting handicap	(N=16)	2.38 \pm .23
Both organic and psychiatric	(N=12)	2.17 \pm .28
Nil	(N=86)	2.17 \pm .11

The mean outcome scores show no consistent trend and differences between the scores are not significant statistically.

(b) Relationship to Final Outcome

(i) Distribution (Table 34B)

Half of the 146 patients for whom the relevant data were available had previous illnesses of some kind; but when this group is classified according to type of illness, numbers are too small for consistent trends to emerge.

T A B L E 34A
OUTCOME IN RELATION TO PREVIOUS ILLNESSES
 (Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Previous Illnesses	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Psychiatric	5 (12.2%)	19 (46.3%)	12 (29.3%)	5 (12.2%)	41 (100%)
Organic with per- sisting handicap	3 (15%)	6 (30%)	7 (35%)	4 (20%)	20 (100%)
Organic - no per- sisting handicap	3 (18.7%)	5 (31.3%)	7 (43.7%)	1 (6.3%)	16 (100%)
Both organic and psychiatric	3 (25%)	5 (41.7%)	3 (25%)	1 (8.3%)	12 (100%)
Nil	24 (27.9%)	34 (39.5%)	17 (19.8%)	11 (12.8%)	86 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$\chi^2 = 10.48$ for 12 d.f. Not significant.

TABLE 34B
OUTCOME IN RELATION TO PREVIOUS ILLNESSES
 (Numbers and Percentages of Patients)
FINAL OUTCOME

Previous Illnesses	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Psychiatric	12 (33.3%)	10 (27.8%)	7 (19.4%)	5 (13.9%)	2 (5.6%)	36 (100%)	5	41
Organic with persisting handicap	5 (31.3%)	4 (25%)	-	7 (43.7%)	-	16 (100%)	4	20
Organic - no persisting handicap	4 (30.8%)	2 (15.4%)	3 (23.1%)	1 (7.7%)	3 (23.1%)	13 (100.1%)	3	16
Both organic and psychiatric	4	3	2	-	-	9	3	12
Nil	19 (26.4%)	15 (20.8%)	12 (16.7%)	12 (16.7%)	14 (19.4%)	72 (100%)	14	86
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$\chi^2 = 23.03$ for 16 d.f. Not significant.

For what these figures are worth, they show no evidence of any association between incidence or nature of previous illnesses and final outcome.

(11) Mean Outcome Scores

Previous Illnesses:

Psychiatric	(N=36)	$2.31 \pm .21$
Organic with persisting handicap	(N=16)	$2.56 \pm .35$
Organic, no persisting handicap	(N=13)	$2.77 \pm .46$
Both organic and psychiatric	(N=9)	$1.78 \pm .29$
Nil	(N=72)	$2.82 \pm .18$

The mean outcome score for all patients with a history of previous illness is $2.38 \pm .15$ and the difference between this score and the one obtained for patients with no history of previous illnesses is not significant statistically (C.R. = 1.88).

Two anomalous findings emerge from these results:

(1) An apparent tendency, not statistically significant, for patients with previous illnesses of any kind to have a better final outcome than those without previous illnesses, and (2) a significantly better prognosis for patients with both previous organic and psychiatric illnesses than for those with no medical history (C.R. = 3.04, $P < .005$). The numbers are very small, and it would perhaps be unwise to

infer from these results, notwithstanding the seemingly high level of statistical significance, that any such association is more than fortuitous, i.e. a product of the actions of miscellaneous unknown and coincidental variables. Whilst this must remain an open question, there can be no doubt that the figures show no evidence to support the view that a previous medical or psychiatric history is an adverse prognostic factor in this group of patients.

(c) Previous Illnesses and Premorbid Personality (Table 35)

Whereas 17% of patients with normal premorbid personalities had a history of organic illness with persisting handicap, only 7% of patients with abnormal premorbid personalities had a similar history; this difference is significant statistically (C.R. = 2.11, $P < .05$).

Patients with normal and abnormal personalities did not differ significantly with respect to other categories of previous illnesses.

The above finding suggests that, in the present sample, patients with normal premorbid personalities more commonly have organic illness with persisting handicap in association with their neurotic illness than do patients with abnormal premorbid personalities.

T A B L E 35

INCIDENCE OF PREVIOUS ILLNESSES IN RELATION TO PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Psychiatric	Organic with persisting handicap	Organic - no persisting handicap	Both Organic and Psychiatric	Nil	Total
Abnormal	26 (26.5%)	7 (7.1%)	11 (11.2%)	9 (9.2%)	45 (45.9%)	98 (99.9%)
Normal	15 (19.5%)	13 (16.9%)	5 (6.5%)	3 (3.9%)	41 (53.2%)	77 (100%)
Total	41 (23.4%)	20 (11.4%)	16 (9.1%)	12 (6.9%)	86 (49.1%)	175 (99.9%)

12. PRECIPITATING FACTORS

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 36A)

The outcome at discharge was found to be better in patients with a history of exposure to influences supposedly precipitating the illness than in those without such a history. This association is significant.

(ii) Mean Outcome Scores

Precipitating factors:

Present	(N=96)	$2.10 \pm .08$
Absent	(N=79)	$2.54 \pm .12$

The difference between the mean outcome scores is significant statistically (C.R. = 2.99, $P < .005$); the group of patients with a history of precipitating factors has a significantly lower score and thus more favourable outcome.

(b) Relationship to Final Outcome

(i) Distribution (Table 36B)

Again we find a better outcome in patients with a history of precipitating factors than in those without such a history.

(ii) Mean Outcome Scores

Precipitating factors:

Present	(N=78)	$2.24 \pm .14$
Absent	(N=68)	$3.00 \pm .18$

The mean outcome score is significantly lower in patients

TABLE 36

OUTCOME IN RELATION TO PRECIPITATING FACTORS

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Precipitating Factors	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Present	23 (24%)	45 (46.9%)	23 (24%)	5 (5.2%)	96 (100.1%)
Absent	15 (19%)	24 (30.4%)	23 (29.1%)	17 (21.5%)	79 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$$\chi^2 = 13.14 \text{ for 3 d.f. } P < .005$$

TABLE 36
OUTCOME IN RELATION TO PRECIPITATING FACTORS
 (Numbers and Percentages of Patients)
B. FINAL OUTCOME

Precipitating Factors	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	28 (35.9%)	22 (28.2%)	13 (16.7%)	11 (14.1%)	4 (5.1%)	78 (100%)	18	96
Absent	16 (23.5%)	12 (17.6%)	11 (16.2%)	14 (20.6%)	15 (22.1%)	68 (100%)	11	79
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$$\chi^2 = 12.68 \text{ for 4 d.f. } P < .025.$$

with a history of precipitating factors than in those where no precipitating factors were reported (C.R.=3.16, $P < .005$).

These findings point to the significant relationship between outcome and the presence or absence of precipitating factors. A history of definite precipitating factors was a favourable prognostic indicator in the present sample, as illustrated in Fig.4.

(o) Precipitating factors and Premorbid Personality (Table 37)

A history of precipitating factors was reported in 50% of patients with abnormal premorbid personalities and in 61% of patients whose premorbid personality was regarded as normal; this difference is small and not significant statistically. (C.R. = 1.47).

13. DURATION OF SYMPTOMS BEFORE KEY ADMISSION

(a) Relationship to Outcome at Discharge

(1) Distribution (Table 38A)

Outcome at discharge was significantly related to duration of symptoms. Patients with symptoms of less than 6 months' duration had the most favourable outcome and the association is consistent, with the worst distribution of outcome for illnesses of the longest duration. Thus while only 2% of patients with symptoms of less than 6 months' duration were regarded as unchanged or worse at discharge, this outcome obtained in 50% of patients who had life-long symptoms.

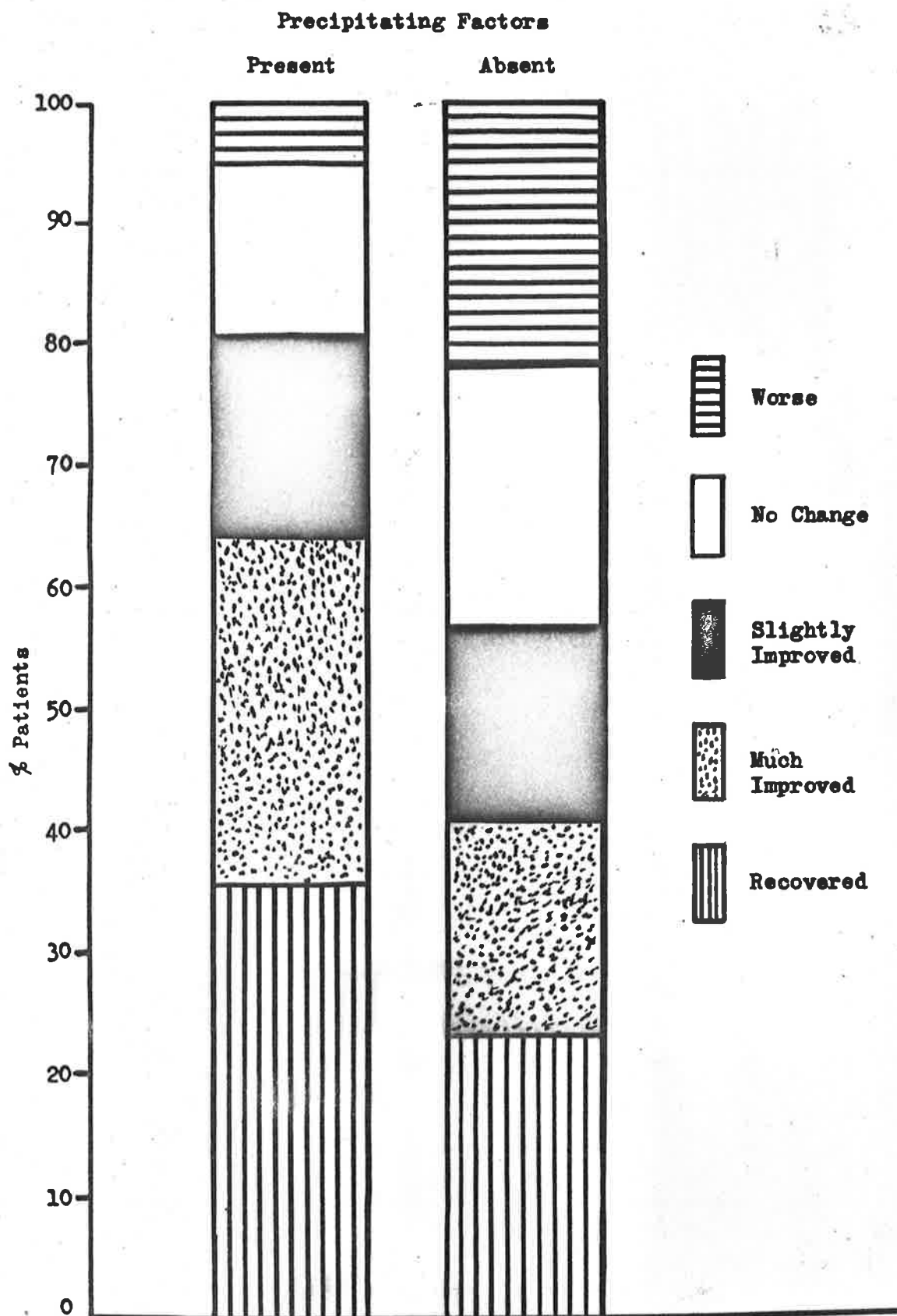


FIG. 4 - FINAL OUTCOME IN RELATION TO INCIDENCE OF PRECIPITATING FACTORS

TABLE 37

INCIDENCE OF PRECIPITATING FACTORS IN RELATION TO

PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Precipitating Factors		
	Present	Absent	Total
Abnormal	49 (50%)	49 (50%)	98 (100%)
Normal	47 (61%)	30 (39%)	77 (100%)
Total	96 (54.9%)	79 (45.1%)	175 (100%)

T A B L E 38A

OUTCOME IN RELATION TO DURATION OF SYMPTOMS

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Duration of Symptoms	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
< 6 months	19 (35.8%)	22 (41.5%)	11 (20.8%)	1 (1.9%)	53 (100%)
6 months - 2 years	14 (28%)	18 (36%)	13 (26%)	5 (10%)	50 (100%)
2 - 5 years	3 (10.7%)	13 (46.4%)	8 (28.6%)	4 (14.3%)	28 (100%)
> 5 years	2 (7.1%)	14 (50%)	8 (28.6%)	4 (14.3%)	28 (100%)
Life-long	-	2 (12.5%)	6 (37.5%)	8 (50%)	16 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$$\chi^2 = 42.67 \text{ for 12 d.f. } P < .001$$

TABLE 38B

OUTCOME IN RELATION TO DURATION OF SYMPTOMS

(Numbers and Percentages of Patients)

FINAL OUTCOME

Duration of Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
< 6 months	17 (41.4%)	8 (19.5%)	8 (19.5%)	4 (9.8%)	4 (9.8%)	41 (100%)	12	53
6 months - 2 years	14 (32.6%)	13 (30.2%)	6 (14%)	6 (14%)	4 (9.3%)	43 (100.1%)	7	50
2 - 5 years	10 (41.7%)	5 (20.8%)	3 (12.5%)	5 (20.8%)	1 (4.2%)	24 (100%)	4	28
> 5 years	2 (8.7%)	7 (30.4%)	5 (21.7%)	4 (17.4%)	5 (21.7%)	23 (99.9%)	5	28
Life-long	1 (6.7%)	1 (6.7%)	2 (13.3%)	6 (40%)	5 (33.3%)	15 (100%)	1	16
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$$\chi^2 = 27.98 \text{ for } 16 \text{ d.f. } P < .05$$

(11) Mean Outcome Scores

Duration of Symptoms:

under 6 months	(N=53)	1.89 \pm .11
6 months - 2 years	(N=50)	2.18 \pm .14
2 - 5 years	(N=28)	2.46 \pm .17
Over 5 years	(N=28)	2.54 \pm .18
Life-long	(N=16)	3.38 \pm .18

Mean outcome scores confirm and quantify the above findings; the scores become higher as the duration of symptoms increases. The mean outcome score for all patients with symptoms of less than 5 years' duration (2.12 \pm .08) differs significantly from (a) the score for patients with symptoms over 5 years (C.R. = 2.13, $P < .05$) and (b) the score for patients with life-long symptoms (C.R. = 6.40, $P < .001$).

(b) Relationship to Final Outcome(1) Distribution (Table 38B)

The relationship between duration of symptoms and final outcome is significant statistically. However, the final outcome distribution differs from that obtaining for outcome at discharge. Only small and non-significant differences in outcome are present between patients having symptoms for any period less than 5 years before admission. On the other hand final outcome is significantly worse in patients with symptoms of more than 5 years' duration and in those with life-long symptoms.

(ii) Mean Outcome Scores

Duration of symptoms:

under 6 months	(N=41)	$2.27 \pm .22$
6 months - 2 years	(N=43)	$2.37 \pm .21$
2 - 5 years	(N=24)	$2.25 \pm .28$
Over 5 years	(N=23)	$3.13 \pm .28$
Life-long	(N=15)	$3.87 \pm .32$

Differences between the mean outcome scores for patients with symptoms of less than 5 years' duration are trivial, whereas the combined mean outcome score of these patients

$(2.31 \pm .13)$ is significantly lower than the score obtaining (a) where the duration of symptoms was more than 5 years (C.R. = 2.65, $P < .01$) and (b) where the duration of symptoms was life-long (C.R. = 4.50, $P < .001$).

The relationship of duration of symptoms to outcome may be summarised as follows:-

1. The outcome at discharge and at follow-up is significantly related to duration of symptoms before key admission.
2. A linear relationship was found between symptom-duration and outcome at discharge - i.e. the longer the duration of symptoms, the worse the outcome.
3. At follow-up, this linear relationship was no longer present. Final outcome did not differ to any significant extent between groups of patients whose symptom duration was

respectively less than 6 months, 6 months to 2 years and 2 to 5 years. However, a symptom duration of more than 5 years was associated with a significantly worse prognosis, and patients whose symptoms had been present since childhood or adolescence (i.e. life-long symptoms) had the worst final outcome. Fig.5 illustrates the relationship of symptoms duration to final outcome.

(c) Duration of Symptoms and Premorbid Personality (Table 39)

Patients with normal and abnormal premorbid personalities differed little with respect to duration of symptoms with the single exception of patients in whom the duration of symptoms was life-long. Each of the 16 patients in this group were judged to have an abnormal premorbid personality. This is a reflection of the fact mentioned previously; it was not possible in these cases to distinguish the onset of neurotic illness from signs of disturbance attributable to abnormal premorbid personality.

(d) Duration of Symptoms and Precipitating Factors (Table 40)

The association between duration of symptoms and the presence or absence of precipitating factors is highly significant statistically ($\chi^2 = 44.05$, $P < .001$). Table 40 shows that as the duration of symptoms increases, precipitating factors are found less commonly in the histories of patients.



Satisfactory Outcome
(Recovered and Much Improved)



Unsatisfactory Outcome
(Slightly Improved,
No Change and Worse)

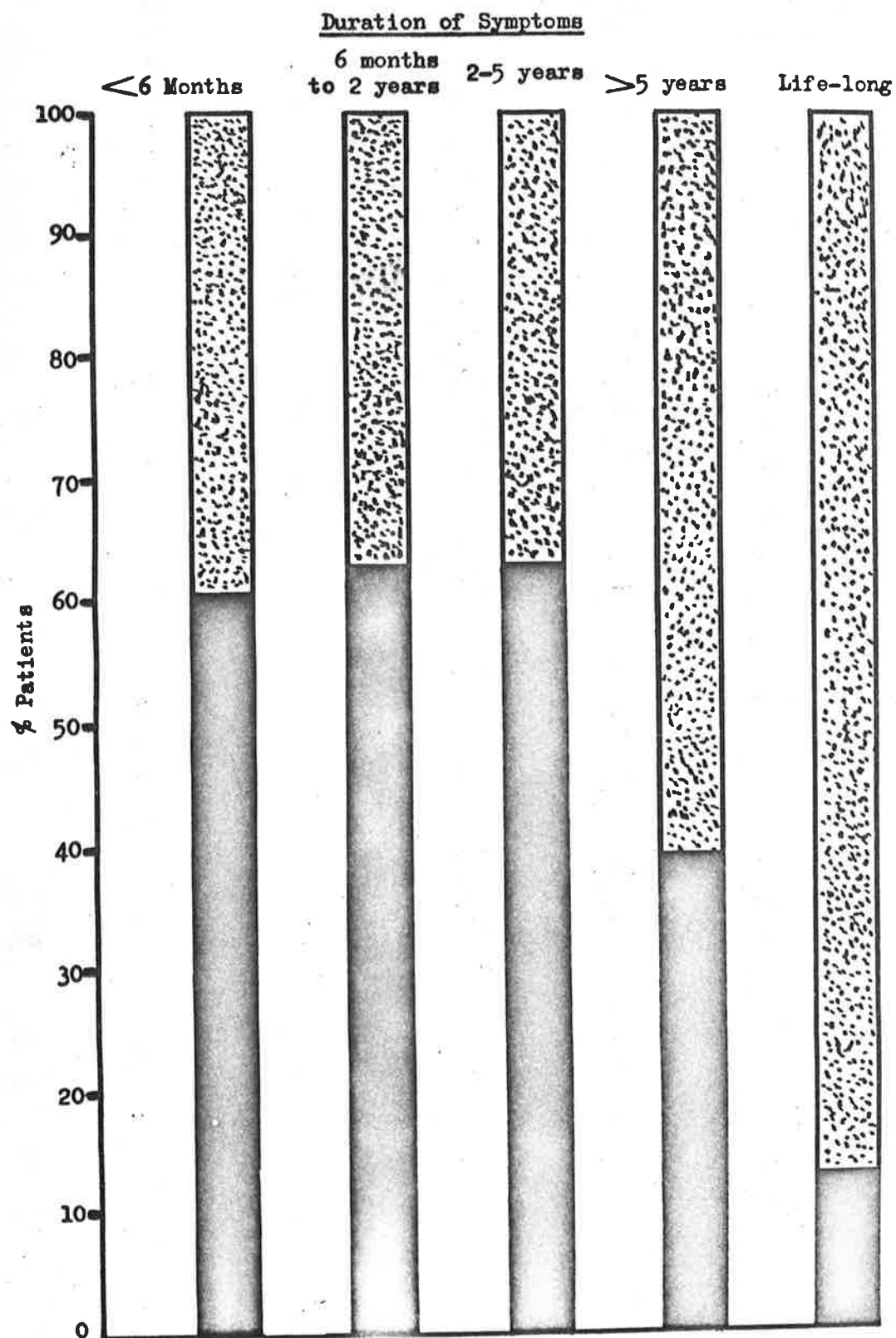


FIG. 5 - FINAL OUTCOME IN RELATION TO DURATION OF SYMPTOMS

T A B L E 39

DURATION OF SYMPTOMS IN RELATION TO PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Duration of Symptoms					
	Under 6 months	6 months - 2 years	2 - 5 years	Over 5 years	Life-long	Total
Abnormal	30 (30.6%)	23 (23.5%)	14 (14.3%)	15 (15.3%)	16 (16.3%)	98 (100%)
Normal	23 (29.9%)	27 (35.1%)	14 (18.2%)	13 (16.9%)	-	77 (100.1%)
Total	53 (30.3%)	50 (28.6%)	28 (16%)	28 (16%)	16 (9.1%)	175 (100%)

T A B L E 40

DURATION OF SYMPTOMS IN RELATION TO INCIDENCE OF PRECIPITATING FACTORS

(Numbers and Percentages of Patients)

Precipitating Factors	Duration of Symptoms					Total
	Under 6 months	6 months - 2 years	2 - 5 years	Over 5 years	Life-long	
Present	40 (41.7%)	32 (33.3%)	18 (18.8%)	6 (6.3%)	-	96 (100.1%)
Absent	13 (16.5%)	18 (22.8%)	10 (12.7%)	22 (27.8%)	16 (20.2%)	79 (100%)
Total	53 (30.3%)	50 (28.6%)	28 (16%)	28 (16%)	16 (9.1%)	175 (100%)

$$\chi^2 = 44.05 \text{ for 4 d.f. } P < .001$$

14. SYMPTOMATOLOGY DURING KEY ADMISSIONI. ASSOCIATED ORGANIC DISEASE(a) Relationship to Outcome at Discharge(i) Distribution (Table 41A)

Differences in outcome between patients with and without associated organic disease are small and not significant.

(ii) Mean Outcome Scores

Associated Organic Disease:

Present (N=29) $2.45 \pm .19$

Absent (N=146) $2.27 \pm .08$

The difference between mean outcome scores is small and not significant statistically (C.R. = 0.87).

(b) Relationship to Final Outcome(i) Distribution (Table 41B)

15 of the 22 patients (68%) who had associated organic disease at Key admission were regarded as recovered or much improved at follow-up compared with 51% of the remaining patients. However these differences are not statistically significant (C.R. = 1.30).

(ii) Mean Outcome Scores

Associated Organic Disease:

Present (N=22) $2.32 \pm .30$

Absent (N=124) $2.65 \pm .13$

The outcome is slightly better for patients who had

T A B L E 41

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

I. ASSOCIATED ORGANIC DISEASE

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Organic Disease	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Present	5 (17.2%)	10 (34.5%)	11 (37.9%)	3 (10.3%)	29 (99.9%)
Absent	33 (22.6%)	59 (40.4%)	35 (24%)	19 (13%)	146 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

TABLE 41

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESSI. ASSOCIATED ORGANIC DISEASE

(Numbers and Percentages of Patients)

B. FINAL OUTCOME

Organic Disease	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	8 (36.4%)	7 (31.8%)	-	6 (27.3%)	1 (4.5%)	22 (100%)	7	29
Absent	36 (29%)	27 (21.8%)	24 (19.4%)	19 (15.3%)	18 (14.5%)	124 (100%)	22	146
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

associated organic disease, but the difference is not statistically significant (C.R. = 1.01).

The presence or absence of associated organic disease, therefore, had no significant relationship to the initial and subsequent outcome of neurotic illness in the present series of patients.

II. SOMATIC SYMPTOMS (not attributable to organic disease)

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 42A)

The differences in outcome between patients with and without somatic symptoms are trivial.

(ii) Mean Outcome Scores

Somatic Symptoms:

Present (N=81) $2.28 \pm .11$

Absent (N=94) $2.32 \pm .10$

Mean outcome scores are almost identical.

(b) Relationship to Final Outcome

(i) Distribution (Table 42B)

Minimal differences only are shown with respect to final outcome between patients with somatic symptoms and those without such symptoms.

T A B L E 42

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

II. SOMATIC SYMPTOMS

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Somatic Symptoms	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Present	16 (19.7%)	37 (45.7%)	17 (21%)	11 (13.6%)	81 (100%)
Absent	22 (23.4%)	32 (34%)	29 (30.9%)	11 (11.7%)	94 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

T A B L E 42

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

II. SOMATIC SYMPTOMS

(Numbers and Percentages of Patients)

B. FINAL OUTCOME

Somatic Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	18 (26.5%)	18 (26.5%)	9 (13.2%)	14 (20.6%)	9 (13.2%)	68 (100%)	13	81
Absent	26 (33.3%)	16 (20.5%)	15 (19.2%)	11 (14.1%)	10 (12.8%)	78 (99.9%)	16	94
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

(11) Mean Outcome Scores

Somatic Symptoms:

Present	(N=68)	2.68 \pm .17
Absent	(N=78)	2.53 \pm .16

Again the difference in mean outcome scores is trivial. Thus no relationship was found between outcome at discharge or at follow-up and the presence or absence of somatic symptoms during key admission.

(c) Somatic Symptoms and Social Class (Table 43)

No association was found between social class and the presence or absence of somatic symptoms. This finding contrasts with reports in the American literature of an undue preponderance of somatic symptoms in the lowest two social classes; this will be discussed more fully below.

III. DISORDERS OF AFFECT(a) Relationship to Outcome at Discharge(1) Distribution (Table 44A)

94% of the group with depression as the principal symptom improved to some extent, as compared with only 71% of the group without any affective symptoms. This difference is significant (C.R. = 2.80, $P < .01$).

TABLE 43

INCIDENCE OF SOMATIC SYMPTOMS IN RELATION TO SOCIAL CLASS

(Numbers and Percentages of Patients)

Somatic Symptoms	Social Class							
	I	II	III	IV	V	Total	N.K.	Grand Total
Present	2 (2.7%)	11 (14.7%)	50 (66.7%)	5 (6.7%)	7 (9.3%)	75 (100.1%)	6	81
Absent	5 (5.6%)	15 (16.9%)	48 (53.9%)	11 (12.4%)	10 (11.2%)	89 (100%)	5	94
Total	7 (4.3%)	26 (15.8%)	98 (59.8%)	16 (9.8%)	17 (10.4%)	164 (100.1%)	11	175

(ii) Mean Outcome Scores

Disorders of Affect:

Depression principally (N=90) $2.07 \pm .10$ Anxiety principally (N=56) $2.52 \pm .12$ Depersonalisation
principally (N=15) $2.67 \pm .28$ Nil (N=14) $2.57 \pm .32$

Mean outcome scores indicate that patients with depression as the principal affective symptom have the most favourable mean outcome, and that groups with other affective symptoms and with no affective symptoms differ little between themselves.

The score of patients with depression differs significantly from that of patients with anxiety principally (C.R.= 2.88, $P < .005$), and from that of patients with depersonalisation principally (C.R.=2.02, $P < .05$).

(b) Relationship to Final Outcome(i) Distribution (Table 44B)

Again patients with depression had the most favourable outcome, whilst the worst final outcome was found in patients whose principal affective symptom was depersonalisation.

(ii) Mean Outcome Scores

Disorders of Affect:

Depression principally (N=74) $2.34 \pm .15$ Anxiety principally (N=47) $2.72 \pm .23$ Depersonalisation principally (N=13) $3.08 \pm .40$ Nil (N=12) $3.17 \pm .40$

TABLE 44

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESSIII. DISORDERS OF AFFECT

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Symptoms	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Depression principally	28 (31.1%)	34 (37.8%)	23 (25.5%)	5 (5.6%)	90 (100%)
Anxiety principally	5 (8.9%)	26 (46.4%)	16 (28.6%)	9 (16.1%)	56 (100%)
Depersonalisation principally	2 (13.3%)	5 (33.3%)	4 (26.7%)	4 (26.7%)	15 (100%)
Nil	3 (21.4%)	4 (28.6%)	3 (21.4%)	4 (28.6%)	14 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

TABLE 44

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESSIII. DISORDERS OF AFFECT

(Numbers and Percentages of Patients)

B. FINAL OUTCOME

Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Depression principally	26 (35.1%)	18 (24.3%)	14 (18.9%)	11 (14.9%)	5 (6.8%)	74 (100%)	16	90
Anxiety principally	15 (31.9%)	10 (21.3%)	4 (8.5%)	9 (19.1%)	9 (19.1%)	47 (99.9%)	9	56
Depersonalisation principally	1 (7.7%)	5 (38.5%)	2 (15.4%)	2 (15.4%)	3 (23.1%)	13 (100.1%)	2	15
Nil	2 (16.7%)	1 (8.3%)	4 (33.3%)	3 (25%)	2 (16.7%)	12 (100%)	2	14
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

The trend noted above is again present in the mean outcome scores. The lowest score was obtained in patients with depression and the highest in patients without affective symptoms; the difference between these scores, however, does not reach statistical significance (C.R. = 1.94).

Thus patients who suffered from depression during key illness tended to have a more favourable outcome both at discharge and at follow-up than (a) patients with other affective symptoms and (b) those with no disorders of affect.

IV. DISORDERS OF THOUGHT CONTENT

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 45A)

Patients without disorders of thought content had a more favourable outcome than those with such symptoms. 70% of patients without disorders of thought content were judged to be recovered or much improved at discharge, as compared with 48% of those with obsessional or hypochondriacal symptoms. This difference is significant (C.R. = 2.97, $P < .005$). Differences between groups having the specified disorders of thought content are small.

(ii) Mean Outcome Scores

Disorders of Thought Content:

Obsessional and Compulsive symptoms	(N=35)	$2.54 \pm .16$
Hypochondriacal ideas	(N=30)	$2.50 \pm .16$
Other symptoms	(N=9)	$2.11 \pm .41$
Nil	(N=101)	$2.18 \pm .10$

Differences in mean outcome scores are not significant statistically, though patients with no disorders of thought content have a lower outcome score than those with obsessional, compulsive, or hypochondriacal symptoms.

(b) Relationship to Final Outcome(i) Distribution (Table 45B)

The table shows a consistent trend - viz: patients without disorders of thought content have the most favourable outcome, and those with hypochondriacal symptoms have the worst outcome.

(ii) Mean Outcome Scores

Disorders of Thought Content:

Obsessional and Compulsive Symptoms	(N=31)	$2.55 \pm .23$
Hypochondriacal symptoms	(N=27)	$3.26 \pm .29$
Other	(N=7)	$2.29 \pm .61$
Nil	(N=81)	$2.42 \pm .16$

The findings are similar, again indicating the worst

TABLE 45
OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS
IV. DISORDERS OF THOUGHT CONTENT
(Numbers and Percentages of Patients)
A. OUTCOME AT DISCHARGE

Symptoms	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Obsessions and Compulsions	6 (17.1%)	9 (25.7%)	15 (42.9%)	5 (14.3%)	35 (100%)
Hypochondriacal ideas	3 (10%)	13 (43.3%)	10 (33.3%)	4 (13.3%)	30 (99.9%)
Other	4	1	3	1	9
Nil	25 (24.8%)	46 (45.5%)	18 (17.8%)	12 (11.9%)	101 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

T A B L E 45

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

IV. DISORDERS OF THOUGHT CONTENT

(Numbers and Percentages of Patients)

B. FINAL OUTCOME

Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Obsessions and Compulsions	7 (22.6%)	10 (32.2%)	7 (22.6%)	4 (12.9%)	3 (9.7%)	31 (100%)	4	35
Hypochondriacal ideas	5 (18.5%)	3 (11.1%)	6 (22.2%)	6 (22.2%)	7 (25.9%)	27 (99.9%)	3	30
Other	3	1	2	-	1	7	2	9
Nil	29 (35.8%)	20 (24.7%)	9 (11.1%)	15 (18.5%)	8 (9.9%)	81 (100%)	20	101
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

prognosis for patients with hypochondriacal symptoms. The difference between this group and that without disorders of thought content is significant (C.R. = 2.53, $P < .025$).

V. DISORDERS OF PERCEPTION

The outcome at discharge and the final outcome according to presence or absence of perceptual disorders during key illness have been tabulated (Tables 46A & B); however as the number of patients with disorders of perception was very small no useful information can be obtained from statistical comparisons.

VI. DISORDERS OF MEMORY AND CONSCIOUSNESS (Tables 47A & B)

Again the number of patients with these symptoms was small and no statistical comparisons have been made with respect to outcome.

VII. DISORDERS OF BEHAVIOUR

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 48A)

Only trivial differences in outcome were found between patients with, and those without, disorders of behaviour.

T A B L E 46

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

V. DISORDERS OF PERCEPTION

(Numbers of Patients)

A. OUTCOME AT DISCHARGE

Symptoms	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Present	2	2	1	1	6
Absent	36	67	45	21	169
Total	38	69	46	22	175

B. FINAL OUTCOME

Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	M.K.	Grand Total
Present	2	-	1	-	2	5	1	6
Absent	42	34	23	25	17	141	28	169
Total	44	34	24	25	19	146	29	175

T A B L E 47

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESS

VI. DISORDERS OF MEMORY AND CONSCIOUSNESS

(Numbers of Patients)

A. OUTCOME AT DISCHARGE

Symptoms	Recovered	Much Improved	Slightly Improved	No change & Worse	Total
Present	3	7	1	3	14
Absent	35	62	45	19	161
Total	38	69	46	22	175

B. FINAL OUTCOME

Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	3	1	-	1	6	11	3	14
Absent	41	33	24	24	13	135	26	161
Total	44	34	24	25	19	146	29	175

(ii) Mean Outcome Scores

Disorders of Behaviour:

Present (N=49) $2.47 \pm .14$ Absent (N=126) $2.24 \pm .09$

The difference between the mean outcome scores is small and not significant statistically (C.R. = 1.40).

(b) Relationship to Final Outcome(i) Distribution (Table 48B)

Only trivial differences were found in the distribution of final outcome according to presence or absence of disorders of behaviour.

(ii) Mean Outcome Scores

Disorders of Behaviour:

Present (N=36) $2.56 \pm .25$ Absent (N=110) $2.61 \pm .13$

The difference in mean outcome scores is again negligible. Thus no association was found between the presence or absence of disorders of behaviour during Key illness, and the outcome of illness.

OUTCOME IN RELATION TO SYMPTOMATOLOGY DURING KEY ILLNESSVII. DISORDERS OF BEHAVIOUR

(Numbers and Percentages of Patients)

A. OUTCOME AT DISCHARGE

Symptoms	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Present	8 (16.3%)	17 (34.7%)	18 (36.7%)	6 (12.2%)	49 (99.9%)
Absent	30 (23.8%)	52 (41.3%)	28 (22.2%)	16 (12.7%)	126 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

B. FINAL OUTCOME

Symptoms	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	12 (33.3%)	8 (22.2%)	5 (13.9%)	6 (16.7%)	5 (13.9%)	36 (100%)	13	49
Absent	32 (29.1%)	26 (23.6%)	19 (17.3%)	19 (17.3%)	14 (12.7%)	110 (100%)	16	126
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

Relations between symptom groups

The relationship between affective symptoms and other symptom groups is shown in Tables 49-53.

No statistical evidence was found for postulating an association between affective symptoms and:

- (a) Somatic symptoms (Table 49)
- (b) Disorders of Perception (Table 50)
- (c) Disorders of Consciousness and Memory (Table 51)
- (d) Disorders of Behaviour (Table 52).

The relationship between affective symptoms and disorders of thought content is shown in Table 53. There is a reciprocal relationship between these two symptom groups, i.e. in patients without affective symptoms, disorders of thought content were more commonly present than absent.

Relationship between Symptoms and Precipitating Factors

The incidence of precipitating factors in the various symptom groups was as follows:

<u>Symptoms</u>		<u>% with history of precipitating factors</u>
Hypochondriacal	(N=30)	33.3%
Obsessional and Compulsive	(N=35)	42.9%
Depersonalisation	(N=15)	46.7%
Disorders of Memory, Consciousness	(N=14)	50.0%
Anxiety principally	(N=56)	53.6%
Somatic Symptoms	(N=81)	56.8%
Depression principally	(N=90)	61.1%
Disorders of Behaviour	(N=49)	61.2%

TABLE 49

ASSOCIATION BETWEEN AFFECTIVE AND SOMATIC SYMPTOMS

(Numbers and Percentages of Patients)

Somatic Symptoms	Affective Symptoms		
	Present	Absent	Total
Present	76 (93.8%)	5 (6.2%)	81 (100%)
Absent	85 (90.4%)	9 (9.6%)	94 (100%)
Total	161 (92%)	14 (8%)	175 (100%)

TABLE 50

**ASSOCIATION BETWEEN AFFECTIVE SYMPTOMS AND
DISORDERS OF PERCEPTION**

(Numbers of Patients)

Disorders of Perception	Affective Symptoms		
	Present	Absent	Total
Present	5	1	6
Absent	156	13	169
Total	161	14	175

T A B L E 51

ASSOCIATION BETWEEN AFFECTIVE SYMPTOMS AND
DISORDERS OF MEMORY AND CONSCIOUSNESS

(Numbers and Percentages of Patients)

Disorders of Memory and Consciousness	Affective Symptoms		
	Present	Absent	Total
Present	13 (92.9%)	1 (7.1%)	14 (100%)
Absent	148 (91.9%)	13 (8.1%)	161 (100%)
Total	161 (92%)	14 (8%)	175 (100%)

T A B L E 52

ASSOCIATION BETWEEN AFFECTIVE SYMPTOMS AND
DISORDERS OF BEHAVIOUR

(Numbers and Percentages of Patients)

Disorders of Behaviour	Affective Symptoms		
	Present	Absent	Total
Present	46 (93.9%)	3 (6.1%)	49 (100%)
Absent	115 (91.3%)	11 (8.7%)	126 (100%)
Total	161 (92%)	14 (8%)	175 (100%)

T A B L E 53

ASSOCIATION BETWEEN AFFECTIVE SYMPTOMS AND
DISORDERS OF THOUGHT CONTENT

(Numbers and Percentages of Patients)

Disorders of Thought Content	Affective Symptoms		
	Present	Absent	Total
Present	64 (86.5%)	10 (13.5%)	74 (100%)
Absent	97 (96%)	4 (4%)	101 (100%)
Total	161 (92%)	14 (8%)	175 (100%)

$$\chi^2 = 5.35 \text{ for 1 d.f. } P < .025.$$

We can see from the above figures that disorders of thought content are least often associated with a history of precipitating factors, whereas depression and disorders of behaviour are most commonly associated with precipitating factors; these differences are significant statistically (for the difference between hypochondriacal symptoms and depression $C.R. = 2.69$, $P < .010$, and for the difference between hypochondriacal symptoms and disorders of behaviour $C.R. = 2.43$, $P < .025$).

15. DIAGNOSIS*

(a) Relationship to Outcome at Discharge

(1) Distribution (Table 54A)

Patients with Depressive and with Hysterical Reactions had the most favourable outcome at discharge, whilst those with Obsessive-Compulsive and Mixed Neurotic Reactions had the worst outcome.

The association between diagnosis and outcome was found to be highly significant.

* Phobic Reaction has not been included in calculations as there were only 6 patients with this diagnosis in the sample.

T A B L E 54A

OUTCOME IN RELATION TO DIAGNOSIS

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Diagnosis	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Depressive Reaction	23 (37.1%)	21 (33.9%)	13 (21%)	5 (8.1%)	62 (100.1%)
Hysterical Reaction	7 (41.2%)	7 (41.2%)	-	3 (17.6%)	17 (100%)
Anxiety Reaction	6 (12.5%)	26 (54.2%)	14 (29.2%)	2 (4.2%)	48 (100.1%)
Obsessive Compulsive Reaction	1 (4.3%)	5 (21.7%)	11 (47.8%)	6 (26.1%)	23 (99.9%)
Phobic Reaction	-	3	1	2	6
Mixed Neurotic Reaction	1 (5.3%)	7 (36.8%)	7 (36.8%)	4 (21.1%)	19 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$$\chi^2 = 44.53 \text{ for 15 d.f. } P < .001$$

T A B L E 54B
OUTCOME IN RELATION TO DIAGNOSIS
(Numbers and Percentages of Patients)

FINAL OUTCOME

Diagnosis	Recovered	Much Improved	Slightly Recovered	No change	Worse	Total	N.K.	Grand Total
Depressive Reaction	19 (36.6%)	13 (25%)	6 (11.5%)	8 (15.4%)	6 (11.5%)	52 (100%)	10	62
Hysterical Reaction	6 (42.9%)	2 (14.3%)	3 (21.4%)	-	3 (21.4%)	14 (100%)	3	17
Anxiety Reaction	10 (27%)	11 (29.8%)	7 (18.9%)	5 (13.5%)	4 (10.8%)	37 (100%)	11	48
Obsessive-Compulsive Reaction	3 (14.3%)	5 (23.8%)	5 (23.8%)	5 (23.8%)	3 (14.3%)	21 (100%)	2	23
Phobic Reaction	1	1	1	3	-	6	-	6
Mixed Neurotic Reaction	5 (31.2%)	2 (12.5%)	2 (12.5%)	4 (25%)	3 (18.8%)	16 (100%)	3	19
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$\chi^2 = 17.86$ for 20 d.f. Not significant

(11) Mean Outcome Scores

Depressive Reaction	(N=62) 2.00 \pm .12
Hysterical Reaction	(N=17) 2.00 \pm .31
Anxiety Reaction	(N=48) 2.25 \pm .11
Mixed Neurotic Reaction	(N=19) 2.74 \pm .21
(Phobic Reaction	(N=6) 2.83 \pm .44)
Obsessive-Compulsive Reaction	(N=23) 2.96 \pm .17

Statistically significant differences are found between mean outcome scores for:

- (a) Depressive and Obsessive-Compulsive Reactions (C.R.=4.62, $P < .001$)
- (b) Depressive and Mixed Neurotic Reactions (C.R.=3.10, $P < .005$)
- (c) Hysterical and Obsessive-Compulsive Reactions (C.R.=2.74, $P < .010$)
- (d) Anxiety and Obsessive-Compulsive Reactions (C.R.=3.51, $P < .001$)
- (e) Anxiety and Mixed Neurotic Reactions (C.R.=2.04, $P < .05$).

No significant differences are found between the scores obtaining in Depressive and Anxiety Reactions (C.R.=1.56) or between those for Hysterical and Anxiety Reactions (C.R.=0.76). Thus the mean outcome was most favourable in patients with Depressive, Hysterical and Anxiety Reactions and least favourable in those with Obsessive-Compulsive or Hypochondriacal Reactions, differences between these two groups being significant statistically.

(b) Relationship to Final Outcome(1) Distribution (Table 54B)

Although the table shows a similar trend to that noted for immediate outcome, the association between diagnosis and final outcome is not significant statistically.

(11) Mean Outcome Scores

Depressive Reaction	(N=52)	2.40 \pm .20
Hysterical Reaction	(N=14)	2.42 \pm .44
Anxiety Reaction	(N=37)	2.51 \pm .22
Mixed Neurotic Reaction	(N=16)	2.88 \pm .41
Obsessive-Compulsive Reaction	(N=21)	3.00 \pm .29

These scores again show the same trend as seen with respect to mean outcome at discharge, but the differences are smaller and are not significant statistically (for difference between Depressive and Obsessive-Compulsive Reactions, C.R.=1.70).

These findings indicate that outcome at discharge is significantly more favourable in Depressive, Hysterical and Anxiety Reactions than in Obsessive-Compulsive and Mixed Neurotic Reactions; at follow-up the same trend is present, but differences are smaller and not statistically significant.

(c) Diagnosis and Age (Table 55)

Considerable differences were found between the age distribution in the various diagnostic categories; whereas 52%

TABLE 55

DIAGNOSIS IN RELATION TO AGE

(Numbers and Percentages of Patients)

Diagnosis	Age				
	< 30	30-39	40-49	≥ 50	Total
Obsessive-Compulsive Reaction	12 (52.2%)	7 (30.4%)	2 (8.7%)	2 (8.7%)	23 (100%)
Phobic Reaction	3	1	2	-	6
Hysterical Reaction	7 (41.2%)	3 (17.6%)	2 (11.8%)	5 (29.4%)	17 (100%)
Depressive Reaction	18 (29%)	14 (22.6%)	20 (32.3%)	10 (16.1%)	62 (100%)
Anxiety Reaction	13 (27.1%)	21 (43.7%)	12 (25%)	2 (4.2%)	48 (100%)
Mixed Neurotic Reaction	1 (5.3%)	5 (26.3%)	9 (47.4%)	4 (21%)	19 (100%)
Total	54 (30.9%)	51 (29.1%)	47 (26.9%)	23 (13.1%)	175 (100%)

of patients with Obsessive-Compulsive Reactions were under 30, only 5% with Mixed Neurotic Reactions were in this age group.

Obsessional and Phobic illnesses tended to be associated with younger age groups, and Mixed Neurotic illnesses to occur in older patients; Hysterical, Depressive, and Anxiety Reactions occupied an intermediate position.

These findings are illustrated in Fig.6.

(d) Diagnosis and Sex (Table 56)

Obsessive-Compulsive and Mixed Neurotic Reactions were found in men significantly more commonly than were Hysterical and Depressive Reactions (C.R. = 3.86, $P < .001$), and Anxiety Reactions were also more common than Hysterical and Depressive Reactions (C.R. = 2.15, $P < .05$).

Thus Obsessive-Compulsive and Mixed Neurotic Reactions were found more commonly in males than in females, whereas Hysterical and Depressive Reactions were more commonly associated with female than male patients. These findings are illustrated in Fig.7.

(e) Diagnosis and Social Class (Table 57)

Differences between diagnostic categories with respect to social class were small and in no instance significant statistically.

Therefore there is no evidence from the present sample of patients to support the hypothesis of a social class differential between the various diagnostic categories.

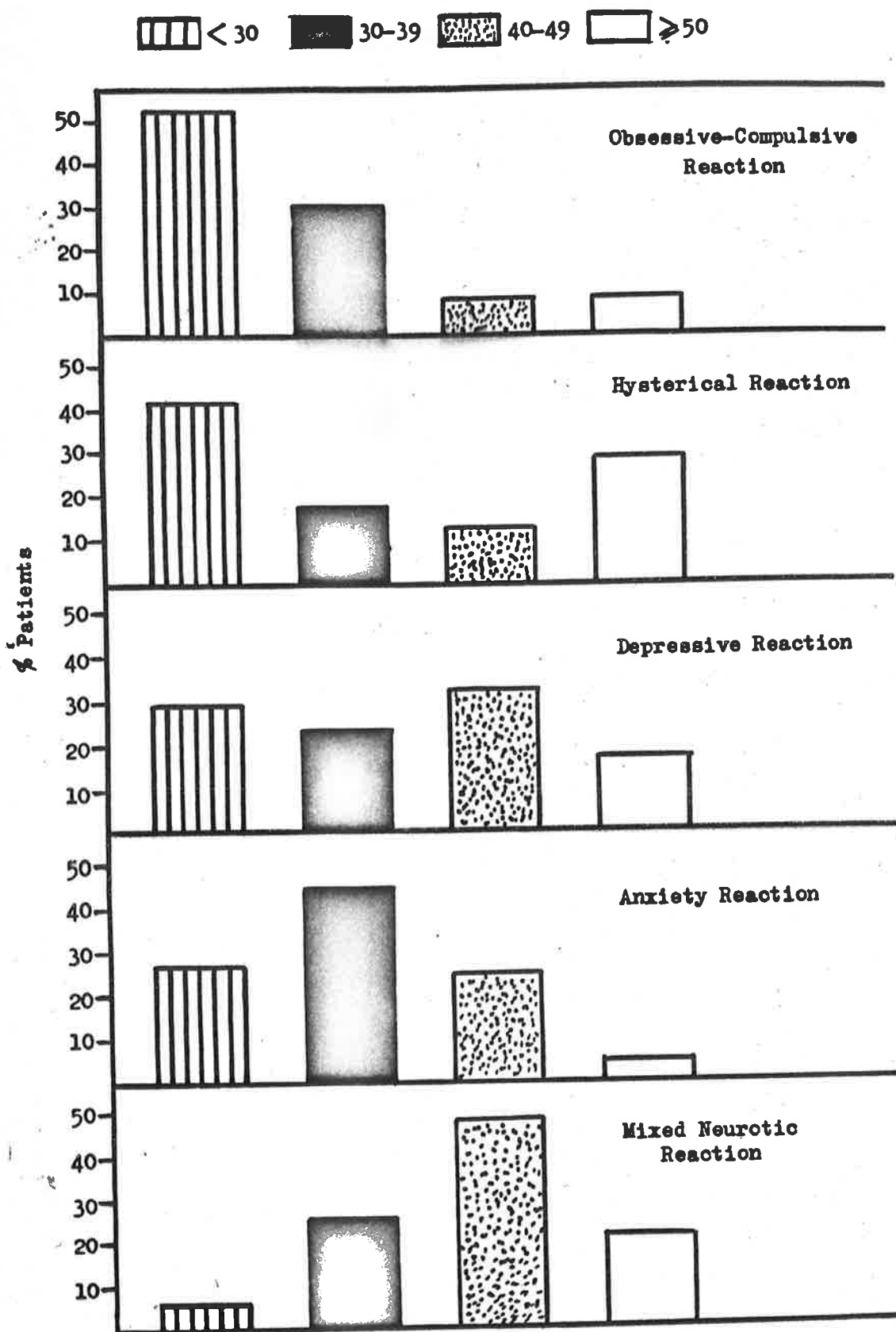


FIG. 6 - DIAGNOSIS IN RELATION TO AGE

TABLE 56

SEX-DIFFERENTIALS IN DIAGNOSTIC CATEGORIES

(Numbers and Percentages of Patients)

Diagnosis	Sex		
	Male	Female	Total
Hysterical Reaction	2 (11.8%)	15 (88.2%)	17 (100%)
Depressive Reaction	12 (19.4%)	50 (80.6%)	62 (100%)
Anxiety Reaction	17 (35.4%)	31 (64.6%)	48 (100%)
Phobic Reaction	3	3	6
Obsessive-Compulsive Reaction	12 (52.2%)	11 (47.8%)	23 (100%)
Mixed Neurotic Reaction	10 (52.6%)	9 (47.4%)	19 (100%)
Total	56 (32%)	119 (68%)	175 (100%)

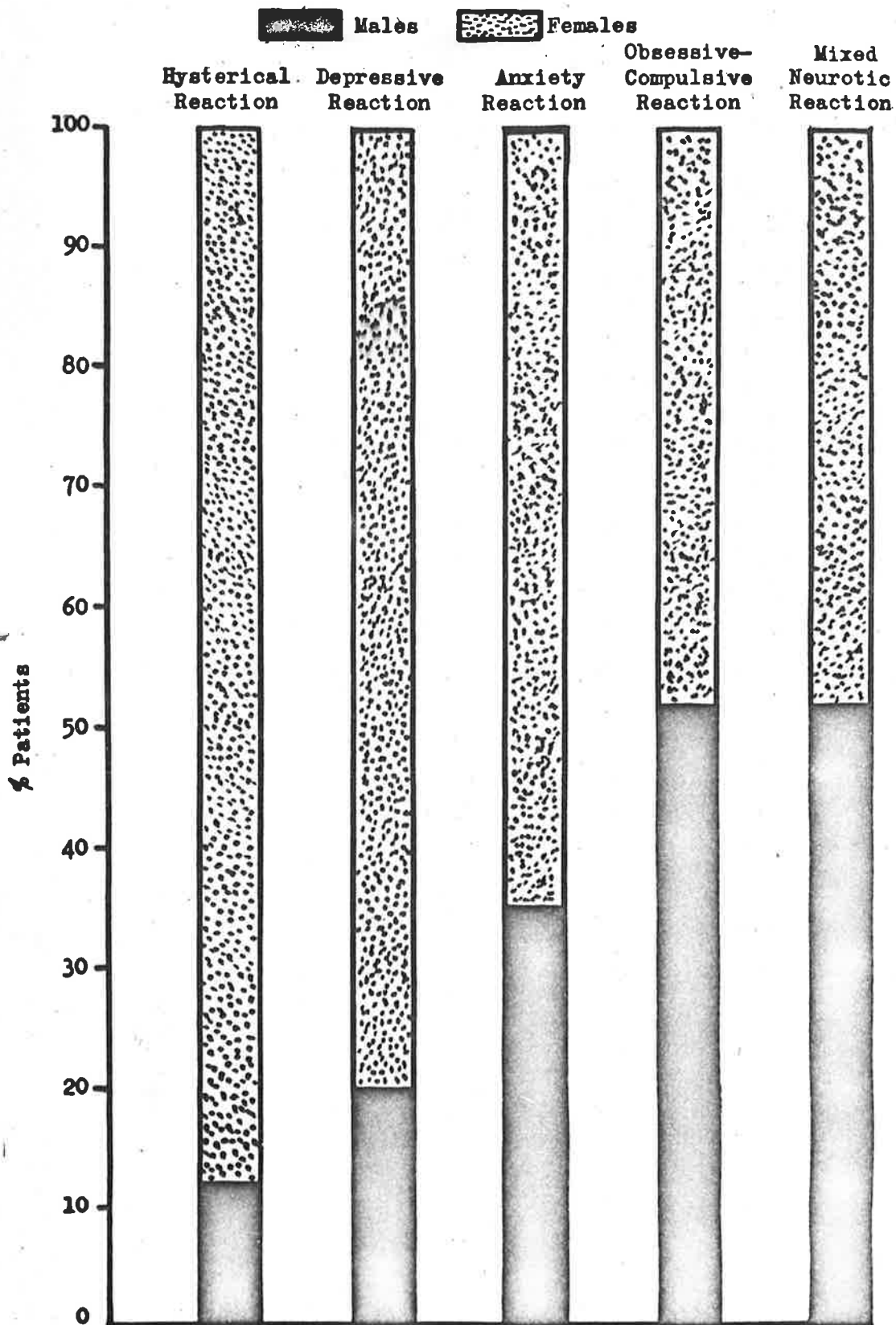


FIG. 7 - SEX DIFFERENTIALS IN DIAGNOSTIC CATEGORIES

T A B L E 57

DIAGNOSIS IN RELATION TO SOCIAL CLASS

(Numbers and Percentages of Patients)

Diagnosis	Social Class							Grand Total
	I	II	III	IV	V	Total	N.K.	
Depressive Reaction	3 (5.1%)	13 (22%)	32 (54.2%)	4 (6.8%)	7 (11.9%)	59 (100%)	3	62
Anxiety Reaction	3 (7%)	4 (9.3%)	29 (67.4%)	5 (11.6%)	2 (4.7%)	43 (100%)	5	48
Obsessive-Compulsive Reaction	0	3 (14.3%)	10 (47.6%)	3 (14.3%)	5 (23.8%)	21 (100%)	2	23
Hysterical Reaction	0	2 (11.8%)	11 (64.7%)	3 (17.6%)	1 (5.9%)	17 (100%)	0	17
Phobic Reaction	0	1	4	0	1	6	0	6
Mixed Neurotic Reaction	1 (5.6%)	3 (16.7%)	12 (66.7%)	1 (5.6%)	1 (5.6%)	18 (100.2%)	1	19
Total	7 (4.3%)	26 (15.8%)	98 (59.8%)	16 (9.8%)	17 (10.4%)	164 (100.1%)	11	175

(f) Diagnosis and Family History (Table 58)

Differences between various diagnostic categories with respect to incidence of family history of mental illness are shown in the table. Patients with Obsessive-Compulsive Reactions had the highest incidence of a positive family history (53%) and patients with Hysterical Reactions the lowest incidence (25%), but this difference is not significant statistically (C.R. = 1.68).

(g) Diagnosis and Childhood Environment (Table 59)

The proportions of patients with adverse and satisfactory childhood environment respectively did not differ significantly in the various diagnostic categories.

(h) Diagnosis and Childhood Neurotic Traits (Table 60)

Only small differences were found in the incidence of childhood neurotic traits in the various diagnostic categories; the highest incidence was found in patients with Obsessive-Compulsive Reactions (63%) and the lowest incidence in patients with Hysterical Reactions (42%), but this difference is not significant statistically (C.R. = 1.14).

(j) Diagnosis and Premorbid Personality (Table 61)

The highest proportion of patients with abnormal premorbid personalities was found in those with Obsessive-Compulsive Reactions (70%) and the lowest proportion in patients with Hysterical Reactions (41%); the difference is not significant statistically (C.R. = 1.84). No statistical evidence was found for an association between diagnosis and premorbid personality.

T A B L E 58

DIAGNOSIS IN RELATION TO FAMILY HISTORY

(Numbers and Percentages of Patients)

Diagnosis	Family History				
	Nil	Mental Illness	Total	N.K.	Grand Total
Depressive Reaction	38 (66.7%)	19 (33.3%)	57 (100%)	5	62
Anxiety Reaction	25 (56.8%)	19 (43.2%)	44 (100%)	4	48
Hysterical Reaction	12 (75%)	4 (25%)	16 (100%)	1	17
Obsessive-Compulsive Reaction	9 (47.4%)	10 (52.6%)	19 (100%)	4	23
Mixed Neurotic Reaction	11 (61.1%)	7 (38.9%)	18 (100%)	1	19
Phobic Reaction	4	2	6	-	6
Total	99 (61.9%)	61 (38.1%)	160 (100%)	15	175

T A B L E 59

DIAGNOSIS IN RELATION TO CHILDHOOD ENVIRONMENT

(Numbers and Percentages of Patients)

Diagnosis	Childhood Environment				
	Adverse	Satisfactory	Total	N.K.	Grand Total
Depressive Reaction	25 (45.5%)	30 (54.5%)	55 (100%)	7	62
Anxiety Reaction	20 (47.6%)	22 (52.4%)	42 (100%)	6	48
Obsessive-Compulsive Reaction	7 (41.2%)	10 (58.8%)	17 (100%)	6	23
Hysterical Reaction	9 (56.3%)	7 (43.8%)	16 (100.1%)	1	17
Phobic Reaction	3	2	5	1	6
Mixed Neurotic Reaction	6 (42.9%)	8 (57.1%)	14 (100%)	5	19
Total	70 (47%)	79 (53%)	149 (100%)	26	175

TABLE 60

DIAGNOSIS IN RELATION TO INCIDENCE OF CHILDHOOD NEUROTIC TRAITS

(Numbers and Percentages of Patients)

Diagnosis	Childhood Neurotic Traits				
	Present	Absent	Total	N.K.	Grand Total
Depressive Reaction	29 (54.7%)	24 (45.3%)	53 (100%)	9	62
Anxiety Reaction	21 (50%)	21 (50%)	42 (100%)	6	48
Obsessive-Compulsive Reaction	12 (63.2%)	7 (36.8%)	19 (100%)	4	23
Hysterical Reaction	5 (41.7%)	7 (58.3%)	12 (100%)	5	17
Phobic Reaction	1	3	4	2	6
Mixed Neurotic Reaction	5 (45.5%)	6 (54.5%)	11 (100%)	8	19
Total	73 (51.8%)	68 (48.2%)	141 (100%)	34	175

TABLE 61**DIAGNOSIS IN RELATION TO PREMORBID PERSONALITY****(Numbers and Percentages of Patients)**

Diagnosis	Premorbid Personality		
	Normal	Abnormal	Total
Depressive Reaction	26 (41.9%)	36 (58.1%)	62 (100%)
Anxiety Reaction	20 (41.7%)	28 (58.3%)	48 (100%)
Obsessive-Compulsive Reaction	7 (30.4%)	16 (69.6%)	23 (100%)
Hysterical Reaction	10 (58.8%)	7 (41.2%)	17 (100%)
Phobic Reaction	4	2	6
Mixed Neurotic Reaction	10 (52.6%)	9 (47.4%)	19 (100%)
Total	77 (44%)	98 (56%)	175 (100%)

(k) Diagnosis and Precipitating Factors (Table 62)

A history of precipitating factors before the onset of illness was found most frequently in patients with Depressive Reactions (71%) and least commonly in patients with Obsessive-Compulsive Reactions (30%) and Mixed Neurotic Reactions (26%). These differences were significant statistically (for difference between Depressive and Obsessive-Compulsive Reactions, C.R. = 3.47, $P < .001$, and for difference between Depressive and Mixed Neurotic Reactions, C.R. = 3.46, $P < .001$).

The incidence of precipitating factors in the various diagnostic groups is illustrated in Fig.8.

(1) Diagnosis and Duration of Symptoms (Table 63)

The association between diagnosis and duration of symptoms is highly significant statistically.

Patients with Obsessive-Compulsive and Mixed Neurotic Reactions were found to have the longest duration of symptoms and patients with Depressive Reactions the shortest duration of symptoms before key illness; for example 70% of patients with Obsessive-Compulsive Reactions had been ill for more than 5 years compared with 2% of patients with Depressive Reactions. Anxiety Reactions and Hysterical Reactions had similar patterns of symptom-duration, longer than for Depressive Reactions but shorter than for Obsessive-Compulsive and Mixed Neurotic Reactions.

TABLE 62

DIAGNOSIS IN RELATION TO INCIDENCE OF PRECIPITATING FACTORS

(Numbers and Percentages of Patients)

Diagnosis	Precipitating Factors		
	Present	Absent	Total
Depressive Reaction	44 (70.9%)	18 (29.1.)	62 (100%)
Anxiety Reaction	30 (62.5%)	18 (37.5%)	48 (100%)
Hysterical Reaction	8 (47.1%)	9 (52.9%)	17 (100%)
Obsessive-Compulsive Reaction	7 (30.4%)	16 (69.6%)	23 (100%)
Mixed Neurotic Reaction	5 (26.3%)	14 (73.7%)	19 (100%)
Phobic Reaction	2	4	6
Total	96 (54.9%)	79 (45.1%)	175 (100%)

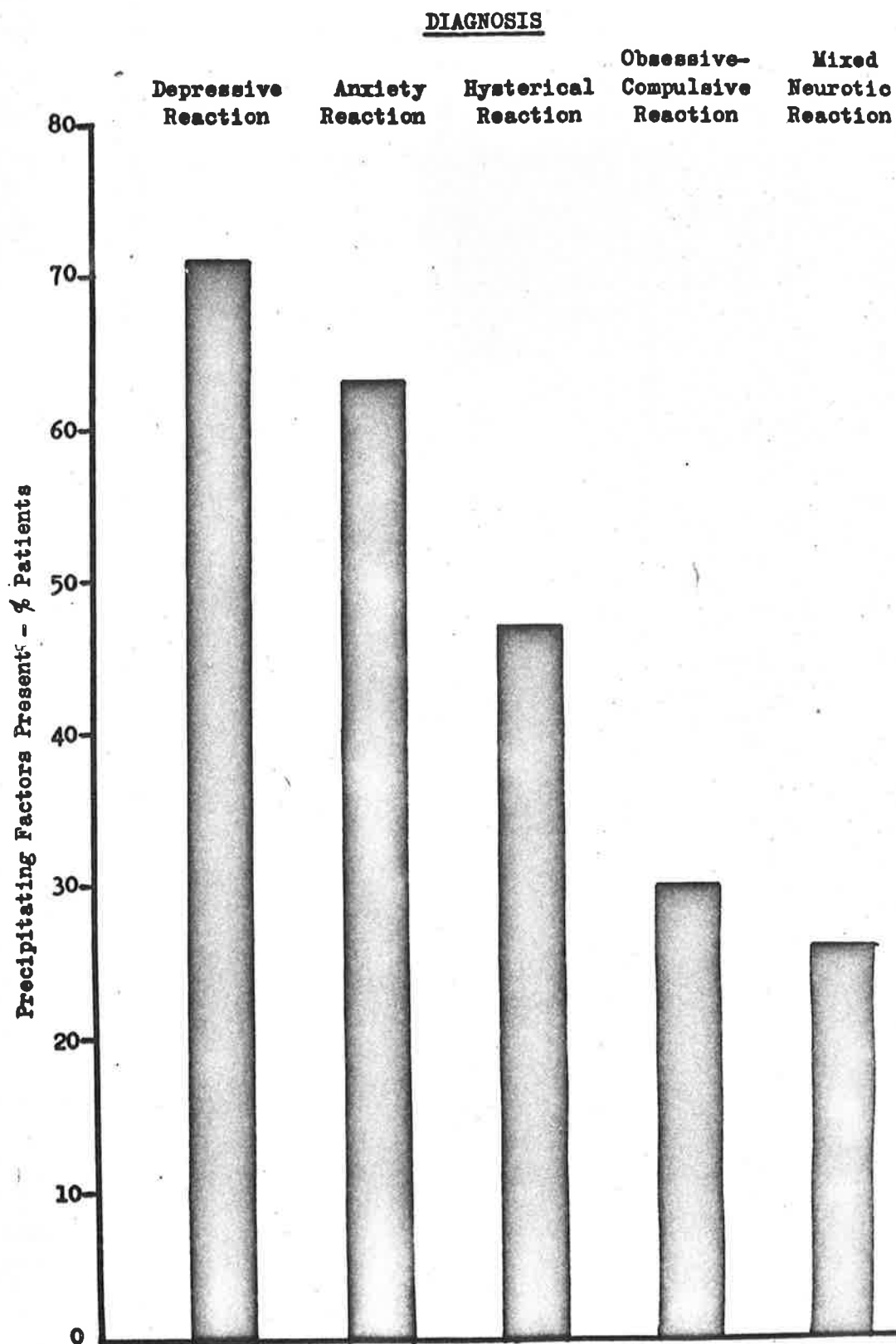


FIG. 8 - PRECIPITATING FACTORS AND DIAGNOSIS

TABLE 63

DIAGNOSIS IN RELATION TO DURATION OF SYMPTOMS

(Numbers and Percentages of Patients)

Diagnosis	Duration of Symptoms					
	< 6 months	6 months - 2 years	2 - 5 years	> 5 years	Life-long	Total
Depressive Reaction	28 (45.2%)	24 (38.7%)	9 (14.5%)	1 (1.6%)	-	62 (100%)
Anxiety Reaction	16 (33.3%)	14 (29.2%)	7 (14.6%)	9 (18.7%)	2 (4.2%)	48 (100%)
Hysterical Reaction	6 (35.3%)	2 (11.8%)	5 (29.4%)	3 (17.6%)	1 (5.9%)	17 (100%)
Obsessive-Compulsive Reaction	1 (4.3%)	4 (17.4%)	2 (8.7%)	9 (39.1%)	7 (30.4%)	23 (99.9%)
Mixed Neurotic Reaction	2 (10.5%)	5 (26.3%)	2 (10.5%)	4 (21.1%)	6 (31.6%)	19 (100%)
Phobic Reaction	-	1	3	2	-	6
Total	53 (30.3%)	50 (28.6%)	28 (16%)	28 (16%)	16 (9.1%)	175 (100%)

$$\chi^2 = 64.19 \text{ for } 20 \text{ d.f. } P < .001$$

16. DURATION OF STAY IN HOSPITAL

(a) Relationship to Outcome at Discharge

(i) Distribution (Table 64A)

There is a significant association between outcome at discharge and duration of stay in hospital. Patients who were in hospital for a short period had a more favourable outcome than did those who required prolonged hospitalisation; thus 48% of patients who stayed in hospital for less than 4 weeks were considered recovered at discharge, whereas only 7% of those who were hospitalised for more than 25 weeks were regarded as recovered. When we consider the proportions who were recovered and much improved together, there is no notable association between outcome and duration of stay if this is not over 25 weeks.

(ii) Mean Outcome Scores

Duration of Stay in Hospital:

under 4 weeks	(N=21)	2.14 \pm .29
4 - 8 weeks	(N=38)	2.13 \pm .13
9 - 13 weeks	(N=33)	2.00 \pm .14
14 - 25 weeks	(N=52)	2.23 \pm .12
over 25 weeks	(N=31)	3.06 \pm .16

These scores show only trivial differences between groups of patients for whom the length of stay was less than 6 months.

However the mean outcome score for all these patients

(2.14 \pm .08) is significantly lower than that for those who

TABLE 64A

OUTCOME IN RELATION TO LENGTH OF HOSPITALISATION

(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Length of Hospitalisation	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
< 4 weeks	10 (47.6%)	3 (14.3%)	3 (14.3%)	5 (23.8%)	21 (100%)
4-8 weeks	8 (21%)	19 (50%)	9 (23.7%)	2 (5.3%)	38 (100%)
9-13 weeks	8 (24.2%)	19 (57.6%)	4 (12.1%)	2 (6.1%)	33 (100%)
14-25 weeks	10 (19.2%)	24 (46.2%)	14 (26.9%)	4 (7.7%)	52 (100%)
> 25 weeks	2 (6.5%)	4 (12.9%)	16 (51.6%)	9 (29%)	31 (100%)
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$$\chi^2 = 47.15 \text{ for 12 d.f. } P < .001$$

OUTCOME IN RELATION TO LENGTH OF HOSPITALISATION

(Numbers and Percentages of Patients)

FINAL OUTCOME

Length of Hospitalisation	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
< 4 weeks	6 (35.3%)	2 (11.8%)	2 (11.8%)	5 (29.4%)	2 (11.8%)	17 (100.1%)	4	21
4-8 weeks	8 (26.7%)	6 (20%)	7 (23.3%)	6 (20%)	3 (10%)	30 (100%)	8	38
9-13 weeks	9 (30%)	9 (30%)	7 (23.3%)	1 (3.3%)	4 (13.3%)	30 (99.9%)	3	33
14-25 weeks	14 (34.1%)	10 (24.4%)	6 (14.6%)	5 (12.2%)	6 (14.6%)	41 (99.9%)	11	52
> 25 weeks	7 (25%)	7 (25%)	2 (7.1%)	8 (28.6%)	4 (14.3%)	28 (100%)	3	31
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$\chi^2 = 13.82$ for 16 d.f. Not significant

remained in hospital more than 25 weeks (C.R. = 5.20, $P < .001$); thus the outcome is significantly worse in the latter group.

(b) Relationship to Final Outcome

(1) Distribution (Table 64B)

Differences in final outcome according to length of hospitalisation are trivial.

(11) Mean Outcome Scores

Duration of stay in hospital:

under 4 weeks	(N=17)	$2.71 \pm .38$
4 - 8 weeks	(N=30)	$2.67 \pm .25$
9 - 13 weeks	(N=30)	$2.40 \pm .25$
14 - 25 weeks	(N=41)	$2.49 \pm .23$
over 25 weeks	(N=28)	$2.82 \pm .28$

Differences in mean outcome scores are small; though the score is highest for patients hospitalised for over 25 weeks, the difference between this score and that for all patients hospitalised for less than 25 weeks ($2.54 \pm .13$) is not significant statistically (C.R. = 0.91).

We can see from the above findings that whereas the outcome at discharge was worst in patients whose stay in hospital during key admission was prolonged (over 6 months), the final outcome was not related to duration of stay in hospital.

17. TREATMENT (During key admission)(a) Relationship to Outcome at Discharge(i) Distribution (Table 65A)

Although the association between treatment and outcome at discharge was not significant statistically, certain trends are revealed in the table. Patients who had received psychotherapy appeared to have the most favourable outcome - viz: 75% of this group were recorded as recovered or much improved at discharge, as were 74% of the patients who had psychotherapy and physical treatment combined, as compared with 61% for the whole sample.

(ii) Mean Outcome Scores

Treatment:

Supportive	(N=63)	$2.33 \pm .12$
Physical	(N=42)	$2.55 \pm .16$
Psychotherapy	(N=28)	$1.96 \pm .16$
Physical and Psychotherapy combined	(N=19)	$2.11 \pm .19$
Leucotomy	(N=10)	$2.60 \pm .17$
Nil	(N=13)	$2.15 \pm .37$

The lowest mean outcome score was obtained in patients who had received psychotherapy and this score differs significantly from the outcome score ($2.37 \pm .08$) for all other patients, including those who had received no treatment (G.R. = 2.29, $P < .025$).

Thus the group of patients receiving psychotherapy had a significantly more favourable outcome than the remainder.

TABLE 65A

OUTCOME IN RELATION TO TREATMENT
(Numbers and Percentages of Patients)

OUTCOME AT DISCHARGE

Treatment	Recovered	Much Improved	Slightly Improved	No change and Worse	Total
Supportive	13 (20.6%)	25 (39.7%)	16 (25.4%)	9 (14.3%)	63 (100%)
Physical	6 (14.3%)	16 (38.1%)	12 (28.6%)	8 (19%)	42 (100%)
Psychotherapy	9 (32.1%)	12 (42.9%)	6 (21.4%)	1 (3.6%)	28 (100%)
Physical and Psychotherapy combined	4 (21.1%)	10 (52.6%)	4 (21.1%)	1 (5.3%)	19 (100.1%)
Leucotomy	-	4	6	-	10
Nil	6	2	2	3	13
Total	38 (21.7%)	69 (39.4%)	46 (26.3%)	22 (12.6%)	175 (100%)

$\chi^2 = 23.43$ for 15 d.f. Not significant

TABLE 65B

OUTCOME IN RELATION TO TREATMENT
(Numbers and Percentages of Patients)
FINAL OUTCOME

Treatment	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Supportive	12 (25%)	9 (18.8%)	9 (18.8%)	9 (18.8%)	9 (18.8%)	48 (100.2%)	15	63
Physical	7 (19.4%)	8 (22.2%)	7 (19.4%)	7 (19.4%)	7 (19.4%)	36 (99.8%)	6	42
Psychotherapy	10 (43.5%)	7 (30.4%)	4 (17.4%)	1 (4.4%)	1 (4.4%)	23 (100.1%)	5	28
Physical and Psychotherapy combined	9 (50%)	6 (33.3%)	2 (11.1%)	1 (5.6%)	-	18 (100%)	1	19
Leucotomy	-	3	1	4	1	9	1	10
Nil	6	1	1	3	1	12	1	13
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	29	175

$\chi^2 = 28.56$ for 20 d.f. Not significant

(b) Relationship to Final Outcome(i) Distribution (Table 65B)

The association between treatment and final outcome is not significant statistically. However, the trend noted with respect to outcome at discharge can be seen again in relation to final outcome; patients who had received either psychotherapy, or physical treatment combined with psychotherapy, had the most favourable outcome.

(ii) Mean Outcome Scores

Treatment:

Supportive	(N=48)	2.88 \pm .21
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Physical	(N=36)	2.97 \pm .24
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Psychotherapy	(N=23)	1.96 \pm .24
---------------	--------	----------------

Physical and Psychotherapy combined	(N=18)	1.72 \pm .22
--	--------	----------------

Leucotomy	(N=9)	3.33 \pm .40
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Nil	(N=12)	2.33 \pm .47
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The mean outcome score for patients who had received psychotherapy is significantly lower than (a) the score for patients who had received supportive treatment (C.R.=2.88, $P < .010$), and (b) the score for patients who had received physical treatment (C.R.=2.98, $P < .005$). The difference between scores for patients receiving psychotherapy and those who had physical treatment combined with psychotherapy is small. Leucotomised patients had the worst outcome, but their numbers are small.

These findings suggest that the initial and subsequent outcome was more favourable in patients who had received psychotherapy, either solely or in combination with physical methods of treatment, than in those who had received supportive treatment, physical treatment alone, or who had been leucotomised.

In attempting to assess the prognostic significance of the above findings, we shall compare the 28 patients who had received psychotherapy with all other patients in the sample with respect to certain relevant variables.

18. COMPARISON OF TREATMENT GROUPS

For convenience we shall refer to patients who had received psychotherapy as Group A and all other patients as Group B.

(1) Marital State (Table 66)

75% of patients who had received psychotherapy were married, whereas only 50% of group B were married; this difference is significant statistically (C.R. = 2.43, $P < .025$).

(11) Social Class (Table 67)

No association can be discerned between social class and type of treatment; differences between Groups A and B with respect to social class distribution are trivial.

(111) Intelligence (Table 68)

Differences between Groups A and B with respect to intelligence are small; but no patient whose I.Q. was less than 90 received psychotherapy.

T A B L E 66

COMPARISON OF TREATMENT GROUPS

(I) MARITAL STATE DURING KEY ADMISSION

(Numbers and Percentages of Patients)

Treatment	Marital State				
	Single	Married	Widowed	Separated and Divorced	Total
Group A (Psychotherapy)	5 (17.9%)	21 (75%)	0	2 (7.1%)	28 (100%)
Group B (Other Treatment)	55 (37.4%)	73 (49.7%)	5 (3.4%)	14 (9.5%)	147 (100%)
Total	60 (34.3%)	94 (53.7%)	5 (2.9%)	16 (9.1%)	175 (100%)

TABLE 67
COMPARISON OF TREATMENT GROUPS

II. SOCIAL CLASS

(Numbers and Percentages of Patients)

Treatment	Social Class							
	I	II	III	IV	V	Total	N.K.	Grand Total
Group A (Psychotherapy)	2 (7.7%)	6 (23.1%)	15 (57.7%)	2 (7.7%)	1 (3.8%)	26 (100%)	2	28
Group B (Other Treatment)	5 (3.6%)	20 (14.5%)	83 (60.1%)	14 (10.1%)	16 (11.6%)	138 (99.9%)	9	147
Total	7 (4.3%)	26 (15.8%)	98 (59.8%)	16 (9.8%)	17 (10.4%)	164 (100.1%)	11	175

T A B L E 68

COMPARISON OF TREATMENT GROUPSIII. INTELLIGENCE

(Numbers and Percentages of Patients)

Treatment	I.Q. (Wechsler-Bellevue or equivalent scale)						
	> 130	111-130	90-110	< 90	Total	N.K.	Grand Total
Group A (Psychotherapy)	2 (7.4%)	7 (25.9%)	18 (66.7%)	0 -	27 (100%)	1	28
Group B (Other Treatment)	4 (3.3%)	35 (28.2%)	71 (57.3%)	14 (11.3%)	124 (100.1%)	23	147
Total	6 (4%)	42 (27.8%)	89 (58.9%)	14 (9.3%)	151 (100%)	24	175

(iv) Premorbid Personality (Table 69)

Differences with respect to premorbid personality between Groups A and B are small. 13 of the 28 patients (46%) who received psychotherapy were judged to have abnormal premorbid personalities. This proportion is lower than that in Group B (58%); the difference is not statistically significant (C.R.=1.17) but may reflect a practice of regarding certain kinds of abnormal premorbid personality as unsuitable for psychotherapy.

(v) Interpersonal Relations before Key Illness (Table 70)

Differences between Groups A and B with respect to adjustment in interpersonal relations are negligible.

(vi) Precipitating Factors (Table 71)

All patients who received psychotherapy had a history of precipitating factors associated with onset of key illness, whereas only 46% of patients in Group B had a similar history; this difference is highly significant statistically (C.R.=5.24, $P < .001$).

(vii) Duration of Symptoms (Table 72)

Apart from patients who had a history of life-long duration of symptoms, only trivial differences were found between Groups A and B in terms of symptom duration before key admission. None of the 16 patients whose symptoms were regarded as life-long had received psychotherapy.

From these comparisons we can see that the group of patients

T A B L E 69

COMPARISON OF TREATMENT GROUPS

IV. PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Treatment	Premorbid Personality		
	Normal	Abnormal	Total
Group A (Psychotherapy)	15 (53.6%)	13 (46.4%)	28 (100%)
Group B (Other Treatment)	62 (42.2%)	85 (57.8%)	147 (100%)
Total	77 (44%)	98 (56%)	175 (100%)

TABLE 70
COMPARISON OF TREATMENT GROUPS

V. INTERPERSONAL RELATIONS BEFORE KEY ILLNESS

(Numbers and Percentages of Patients)

Treatment	Interpersonal relations					
	Satisfactory	Mediocre	Unsatisfactory	Total	N.K.	Grand Total
Group A (Psychotherapy)	16 (57.1%)	10 (35.7%)	2 (7.1%)	28 (99.9%)	-	28
Group B (Other Treatment)	66 (48.5%)	59 (43.4%)	11 (8.1%)	136 (100%)	11	147
Total	82 (50%)	69 (42.1%)	13 (7.9%)	164 (100%)	11	175

T A B L E 71

COMPARISON OF TREATMENT GROUPS

VI. PRECIPITATING FACTORS

(Numbers and Percentages of Patients)

Treatment	Precipitating Factors		
	Present	Absent	Total
Group A (Psychotherapy)	28 (100%)	0	28 (100%)
Group B (Other Treatment)	68 (46.3%)	79 (53.7%)	147 (100%)
Total	96 (54.9%)	79 (45.1%)	175 (100%)

T A B L E 72

COMPARISON OF TREATMENT GROUPS

VII. DURATION OF SYMPTOMS

(Numbers and Percentages of Patients)

Treatment	Duration of Treatment					
	< 6 months	6 months - 2 years	2-5 years	> 5 years	Life-long	Total
Group A (Psychotherapy)	9 (32%)	8 (28.6%)	7 (25%)	4 (14.3%)	0 -	28 (99.9%)
Group B (Other Treatment)	44 (29.9%)	42 (28.6%)	21 (14.3%)	24 (16.3%)	16 (10.9%)	147 (100%)
Total	53 (30.3%)	50 (28.6%)	28 (16%)	28 (16%)	16 (9.1%)	175 (100%)

$\chi^2 = 4.86$ for 4 d.f. Not significant

T A B L E 73

RELATIONSHIP OF FINAL OUTCOME TO OUTCOME AT DISCHARGE

(Numbers and Percentages of Patients)

Outcome at Discharge	Final Outcome						Mean Final Outcome Scores
	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	
Recovered	12	6	6	2	4	30	2.33
Much Improved	19	19	10	6	4	58	2.25
Slightly Improved	11	7	6	8	6	38	2.76
No change	2	1	2	9	5	19	3.74
Worse	0	1	0	0	0	1	2.00
Total	44 (30.1%)	34 (23.3%)	24 (16.4%)	25 (17.1%)	19 (13.1%)	146 (100%)	2.60
Mean Discharge Outcome Score	2.07	2.18	2.17	3.32	2.63	2.34	

who received psychotherapy differed from the other group in several important respects:-

- (i) a significantly higher proportion of psychotherapy patients were married;
- (ii) all patients receiving psychotherapy had a history of precipitating factors;
- (iii) no patient who had received psychotherapy had a history of life-long symptoms before admission.

We have seen previously that marital state, precipitating factors and duration of symptoms are all significantly related to outcome. So patients who had received psychotherapy would be expected to have a more favourable prognosis, irrespective of treatment; we are therefore not justified in ascribing the difference in outcome between this group and the rest of the sample to the effect of psychotherapy. This theme will be elaborated in the discussion.

19. RELATIONSHIP OF OUTCOME AT DISCHARGE TO FINAL OUTCOME (Table 73)

60% of patients were regarded as recovered or much improved on discharge from hospital (p.71), and 53% were so rated on follow-up examination (p.89). The correlation between immediate and final outcome (Table 73) is low ($r = 0.19$, S.D. = 0.08).

The data of Table 73 may be summarised in the statement that outcome was satisfactory on discharge and at follow-up for 38% of the sample; satisfactory on discharge but not at follow-up for 22%; unsatisfactory on discharge but satisfactory at follow-up in 15% and unsatisfactory on each occasion for 25%.

SALIENT FEATURES IN THE ENVIRONMENT SINCE KEY DISCHARGE

1. TYPE OF DOMICILE AND ATTITUDE OF DOMESTIC GROUP TOWARDS PATIENT

(a) Relationship to Final Outcome

(i) Distribution (Table 74)

Patients who lived in a domestic group the members of which exhibited a positive attitude towards the patient had the most favourable outcome (66% recovered and much improved), whereas the worst outcome was found in patients who lived alone (32% recovered and much improved) or who spent the greater part of the interim period between key discharge and follow-up in mental hospitals. The association between final outcome and domicile was statistically highly significant (comparing patients in the category Domestic Group positive with all other patients, ($\chi^2=24.5$ for 4 d.f., $P < .001$).

OUTCOME IN RELATION TO TYPE OF DOMICILE SINCE KEY DISCHARGE

(Numbers and Percentages of Patients)

Domicile	Final Outcome							
	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Domestic Group; attitude positive	37 (42.5%)	20 (23%)	11 (12.6%)	15 (17.2%)	4 (4.6%)	87 (99.9%)	3	90
Domestic Group; attitude mixed or negative	2 (7.7%)	8 (30.8%)	9 (34.6%)	3 (11.5%)	4 (15.4%)	26 (100%)	3	29
Solitary	4 (16%)	4 (16%)	4 (16%)	5 (20%)	8 (32%)	25 (100%)	1	26
Mental Hospital	-	1	-	1	3	5	1	6
Other	1	1	-	1	-	3	-	3
Total	44	34	24	25	19	146	8	154
N.K.	-	-	-	-	-	-	21	21
Grand Total	44	34	24	25	19	146	29	175

(ii) Mean Outcome Scores

Domiciles:

Domestic Group; attitude positive (N=87) $2.18 \pm .14$ Domestic Group; attitude mixed
or negative (N=26) $2.96 \pm .24$ Solitary (N=25) $3.36 \pm .31$

Patients whose domicile was recorded as domestic group, attitude positive were found to have the lowest mean outcome score; this score differs significantly from that for patients whose domicile was recorded as domestic group, attitude mixed or negative (C.R.=2.81, $P < .010$), and from the score for patients in solitary domicile (C.R.=3.46, $P < .001$).

The above findings, which are illustrated in Figure 9, indicate that the type of domicile in which patients lived since discharge from hospital was significantly related to their final outcome; patients who lived in a domestic group which showed a tolerant and sympathetic attitude had the most favourable outcome, whereas patients living alone (and, of course, those who were in mental hospitals) had the worst outcome.

(b) Domicile and Premorbid Personality (Table 75)

77% of patients who lived alone were judged to have abnormal premorbid personalities, whilst only 53% of those living in a domestic group whose attitude was positive, and 45% of those

Satisfactory Outcome
 (Recovered and Much Improved)

Unsatisfactory Outcome
 (Slightly Improved, No Change and Worse)

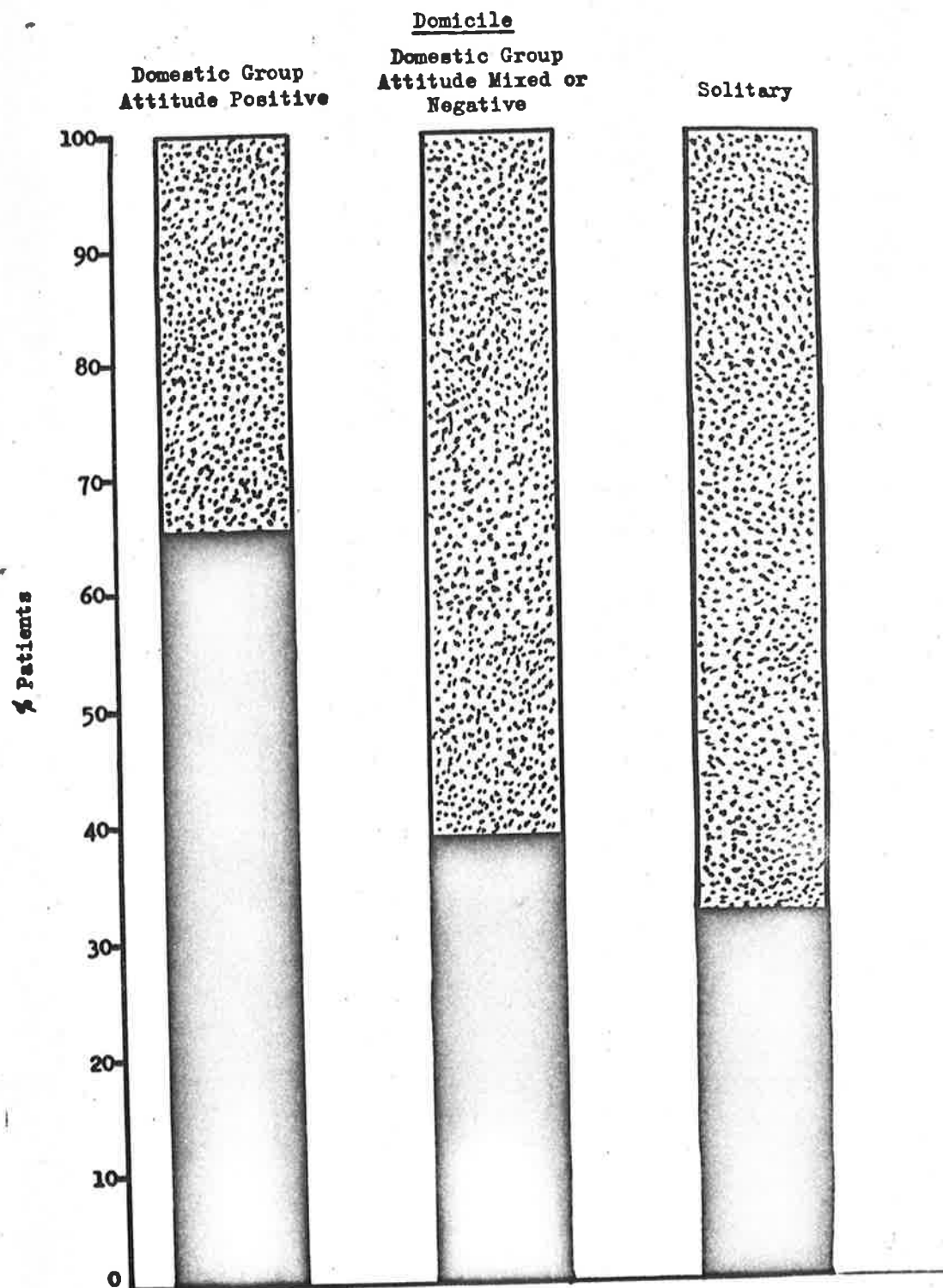


FIG. 9 - FINAL OUTCOME IN RELATION TO DOMICILE AFTER KEY DISCHARGE

T A B L E 75

RELATIONSHIP BETWEEN DOMICILE (AFTER KEY DISCHARGE)

AND PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Domicile	Premorbid Personality		
	Normal	Abnormal	Total
Domestic Group; attitude positive	42 (46.7%)	48 (53.3%)	90 (100%)
Domestic Group; attitude mixed or negative	16 (55.2%)	13 (44.8%)	29 (100%)
Solitary	6 (23.1%)	20 (76.9%)	26 (100%)
Mental Hospital	2	4	6
Other	2	1	3
Total	63 (44.2%)	86 (55.8%)	154 (100%)
Unknown	9	12	21
Grand Total	77	98	175

living in a domestic group whose attitude was mixed or negative had abnormal premorbid personalities; differences between the group living alone and the other two groups are significant statistically (C.R.=2.18, $P < .05$, and C.R.=2.46, $P < .025$ respectively).

Thus patients with abnormal premorbid personalities lived in solitary domicile significantly more frequently than in a domestic group.

2. MATERIAL CIRCUMSTANCES

(a) Relationship to Final Outcome

(i) Distribution (Table 76)

The outcome of patients whose material circumstances after discharge from hospital were judged to be poor was worse than that of those whose material circumstances were considered adequate. 32% with adequate circumstances had recovered, but only 14% with poor circumstances had similarly recovered; however this difference is not significant statistically (C.R.=1.39) as the numbers whose material circumstances were poor was small (14 patients).

(ii) Mean Outcome Scores

Material Circumstances:

Adequate (N=132) $2.53 \pm .12$

Poor (N=14) $3.21 \pm .33$

The differences between mean outcome scores was not significant statistically (C.R. = 1.94).

T A B L E 76

OUTCOME IN RELATION TO MATERIAL CIRCUMSTANCES

(Numbers and Percentages of Patients)

FINAL OUTCOME

Material Circumstances	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Adequate	42 (31.8%)	33 (25%)	20 (15.2%)	19 (14.4%)	18 (13.6%)	132 (100%)	6	138
Poor	2 (14.3%)	1 (7.1%)	4 (28.6%)	6 (42.9%)	1 (7.1%)	14 (100%)	2	16
Total	44(30.1%)	34(23.3%)	24(16.4%)	25(17.1%)	19(13.1%)	146(100%)	8	154
N.K.	-	-	-	-	-	-	21	21
Grand Total	44	34	24	25	19	146	29	175

Patients whose material circumstances were adequate during the interim period between discharge from hospital and follow-up, had a more favourable outcome than those with poor material circumstances; but the latter group consisted of only 14 patients, so that no firm conclusion can be reached with respect to the association between material circumstances and outcome.

3. OCCURRENCE OF STRESS SINCE KEY DISCHARGE

(a) Relationship to Final Outcome

(i) Distribution (Table 77)

Only minor differences are found with respect to final outcome according to presence or absence of stress in the interim.

(ii) Mean Outcome Scores

Stress:

Present (N=78) $2.54 \pm .16$

Absent (N=63) $2.54 \pm .18$

There is no difference between mean outcome scores.

Thus there is no evidence of any association between final outcome and the presence or absence of stress subsequent to key discharge.

(b) Relationship to Premorbid Personality (Table 78)

Table 78 shows only negligible differences between patients with normal and abnormal premorbid personalities with respect to occurrence of stress after discharge from hospital.

TABLE 77

OUTCOME IN RELATION TO OCCURRENCE OF STRESS (since Key discharge)

(Numbers and Percentages of Patients)

FINAL OUTCOME

Stress	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Present	23 (29.5%)	19 (24.4%)	16 (20.5%)	11 (14.1%)	9 (11.5%)	78 (100%)	2	80
Absent	20 (31.7%)	15 (23.8%)	8 (12.7%)	14 (22.2%)	6 (9.5%)	63 (99.9%)	1	64
Total	43 (30.5%)	34 (24.1%)	24 (17.0%)	25 (17.7%)	15 (10.6%)	141 (99.9%)	3	144
N.K.	1	-	-	-	4	5	26	31
Grand Total	44	34	24	25	19	146	29	175

TABLE 78

OCCURRENCE OF STRESS IN RELATION TO

PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Stress				
	Present	Absent	Total	N.K.	Grand Total
Normal	37 (42.2%)	27 (57.8%)	64 (100%)	13	77
Abnormal	43 (46.3%)	37 (53.7%)	80 (100%)	18	98
Total	80 (55.6%)	64 (44.4%)	144 (100%)	31	175

4. RESPONSE TO STRESS

(a) Relationship to Final Outcome

(1) Distribution (Table 79)

The correlation between final outcome and response to stress is not significant statistically. However the figures show a consistent trend - patients upon whom stress had no obvious effect had a more favourable outcome (41% recovered) than those in whom stress was followed by a deterioration in mental state (21% recovered).

(ii) Mean Outcome Scores

Response to stress:

Detrimental effect on mental state	(N=44) $2.84 \pm .21$
---------------------------------------	-----------------------

No obvious effect	(N=34) $2.15 \pm .21$
-------------------	-----------------------

The difference between these mean outcome scores is statistically significant (C.R.=2.32, $P < .025$)

A significant relationship between response to stress and final outcome is indicated by the above findings.

(b) Response to Stress and Premorbid Personality (Table 80)

No significant relationship is found between premorbid personality and response to stress. Of those patients in whom stress was accompanied by deterioration in the mental state, the proportions with normal and abnormal personalities were almost identical (57% and 58% respectively).

TABLE 79

OUTCOME IN RELATION TO RESPONSE TO STRESS

(Numbers and Percentages of Patients)

FINAL OUTCOME

Effect of Stress on Mental State	Recovered	Much Improved	Slightly Improved	No change	Worse	Total	N.K.	Grand Total
Detrimental	9 (20.5%)	11 (25%)	9 (20.5%)	8 (18.2%)	7 (15.9%)	44 (100.1%)	2	46
No obvious effect	14 (41.2%)	8 (23.5%)	7 (20.6%)	3 (8.8%)	2 (5.9%)	34 (100%)	-	34
Total	23 (29.5%)	19 (24.4%)	16 (20.5%)	11 (14.1%)	9 (11.5%)	78 (100%)	2	80

 $\chi^2 = 5.68$ Not significant

T A B L E 80

RESPONSE TO STRESS IN RELATION TO

PREMORBID PERSONALITY

(Numbers and Percentages of Patients)

Premorbid Personality	Effect of Stress upon Mental State		
	Detrimental	No obvious Effect	Total
Normal	21 (56.8%)	16 (43.2%)	37 (100%)
Abnormal	25 (58.1%)	18 (41.9%)	43 (100%)
Total	46 (57.5%)	34 (42.5%)	80 (100%)

(o) Response to Stress and Treatment (Table 81)

49% of patients who had received psychotherapy responded unfavourably to stress, compared with 60% of those who had received other treatment; this difference is not significant statistically (C.R. = 0.92).

In the present sample, therefore, psychotherapy during key admission did not appear to appreciably alter the subsequent response of patients to stress.

CORRELATION BETWEEN SYMPTOMATIC AND SOCIAL OUTCOME (Table 82)

The final outcome was obtained, as previously described, from rating of symptomatic and social outcome. The association between these was highly significant statistically, indicating a close correlation between outcome with respect to symptoms and outcome with respect to social adjustment.

TABLE 81

RESPONSE TO STRESS IN RELATION TO TREATMENT

(Numbers and Percentages of Patients)

Treatment	Effect of Stress on Mental State		
	Detrimental	No obvious effect	Total
Psychotherapy	7 (48.7%)	8 (51.3%)	15 (100%)
Other	39 (60%)	26 (40%)	65 (100%)
Total	46 (57.5%)	34 (42.5%)	80 (100%)

T A B L E 82

RELATIONSHIP BETWEEN SYMPTOMATIC

AND SOCIAL OUTCOME

(Numbers and Percentages of Patients)

Symptomatic Outcome	Social Outcome			
	Satisfactory	Mediocre	Unsatisfactory	Total
Recovered	22 (81.5%)	5 (18.5%)	-	27 (100%)
Much Improved	22 (51.2%)	21 (48.8%)	-	43 (100%)
Slightly Improved	8 (30.8%)	15 (57.7%)	3 (11.5%)	26 (100%)
No change	8 (20%)	22 (55%)	10 (25%)	40 (100%)
Worse*	-	2	4	6
Total	60 (42.3%)	65 (45.8%)	17 (11.9%)	142* (100%)

$$\chi^2 = 54.40 \text{ for } 8 \text{ d.f. } P < .001$$

* Patients who committed suicide are excluded.

VI. DISCUSSION

In reviewing the experience of the present sample of neurotic patients admitted to hospital, it must be emphasised that it is only justifiable to draw clear-cut conclusions with reference to the group of patients studied. It is tempting to assume the general applicability of the results of a survey such as the present; and indeed the only value of studies of this type is to lead towards general formulations and predictive statements. But this must be done only with the reservations due to an awareness of the many unspecifiable variables which have contributed towards the results obtained in this study, and which may contribute differently in other seemingly comparable studies.

It is of value to state the experience of a more or less randomly selected group of patients clearly and in as much detail as possible; it is also necessary to summarise this experience in a way which allows the formulation of generalisations which can be applied with the necessary reserve to a wide group of patients of which the group studied is supposedly representative. In order to enhance the value of these provisional generalisations, all specifiable attributes of the sample studied must be reviewed.

We shall discuss the results of the survey under the following headings:-

1. Scope of the Present Study
2. Demographic and Social Characteristics of the Sample
3. Features of the Neurotic Illnesses
4. Results of Follow-Up Examinations
5. Prognostic Factors and their Interactions
6. The Heterogeneity of Neurotic Illnesses.

1. Scope of the Present Study

Before discussing the findings disclosed by this investigation and the bearing they have on the formulation of some of the salient features in the natural history of neuroses, it is necessary to re-state the scope of the study in terms of the nature of the disorders studied, the population at risk and selection of the sample, and the methods used in collecting and analysing the data.

(1) Definition of Neurotic Disorders

No precise definition of the disorders studied is possible. As we have no objective criteria for diagnosing neurotic illnesses, an arbitrary definition based on descriptive clinical observations must be adopted. Even in descriptive terms, it is difficult to demarcate neurotic disorders on the one hand from so-called neurotic traits occurring in normal people, and on the other hand from functional psychoses. Some authors, e.g. Bowman & Rose (1951), Alexander (1953(b)), and Diethelm (1953), regard all functional psychiatric illnesses

as reactions of varying severity on a continuum, from normal to psychotic, and consider any distinction between neuroses and psychoses as pointless. Others, e.g. Lemkau (1955) insist that: "...differences in distribution of the Neuroses, Schizophrenia, and Manic-Depressive Psychoses.....are so marked that they leave no doubt as to the specificity of these broad types of reaction or illness".

In view of these difficulties it is necessary to define in operational terms the group of illnesses studied in the present investigation. These illnesses were characterised by the following features:-

- (a) the presence of somatic symptoms or of psychological symptoms (disorders of affect, thought content, perception, memory and consciousness, or behaviour disturbances), occurring either singly or in various combinations, in the absence of any constant structural lesion;
- (b) the retention of contact with reality - in particular the absence of any systematised delusions;
- (c) disturbances in one or more areas of social adjustment (such as work, interpersonal relations, marital relations, and sexual adjustment).

In all cases these disorders resulted in definite disability, i.e. patients were handicapped to a greater or less extent in carrying out their daily tasks and in maintaining normal social relationships.

(11) Population at Risk and Selection of Sample

The present sample consisted of a consecutive series of patients admitted to the Professorial Unit at the Maudsley Hospital during a 3 year period, who were domiciled in Great Britain. While it is not possible to be fully explicit about the criteria of selection for admission, it follows that the sample was restricted in the following ways:

- (i) only patients domiciled in this country were included;
- (ii) the illness was judged severe enough to warrant admission to hospital;
- (iii) the patients were accepted for admission to a Post-Graduate Teaching Unit. It may be said that they formed a selected group of all hospital patients from the area, in much the same way as any teaching hospital selects its patients. Such criteria for selection are not specifiable but it is perhaps likely that this selective factor is less potent for psychiatric patients than for those requiring unusual and highly specialised facilities for investigation and treatment in medicine and surgery. It is clear that only a small proportion of the total population of people with neurotic disorders became sufficiently disabled to require hospital admission. A greater proportion remain in the care of General Practitioners, or are seen in hospital out-patient departments. Moreover in view of the nature of these

disabilities, it is likely that some neurotics never seek medical advice, but go to faith-healers, chiropractors and the like.

The present sample may be considered to be a fair representation of patients with severe neurotic illnesses necessitating in-patient care in London.

The sample is similarly distributed with respect to age, sex and marital state to the series investigated by Eitinger (1955) at the Oslo University Psychiatric Clinic. The only other comparable study of in-patient neurotics is that of Ernst (1959) in Zurich. His patients also showed a similar age and sex distribution, but in contrast to the present sample, Ernst's series contained a greater proportion of single than married patients.

Finally we must consider whether the patients who were actually followed up can be regarded as representative of the sample as a whole. 12% of the total sample (21 patients) were untraced or refused interviews and these cases have been compared with the remainder of the sample in respect of salient features in the previous history (Appendix IV). From this appendix we can see that in respect of age, sex, social class, family history, childhood environment, neurotic traits in childhood, intelligence, premorbid personality, previous illness, the presence or absence of precipitating factors, and diagnosis, no statistically significant differences were found between untraced patients and the rest of the sample. A significantly higher proportion of separated and

divorced patients were found in the untraced group than among traced patients; also in the former group a significantly greater percentage of patients had a symptom-duration of less than 6 months before admission as compared with the group of patients who were traced.

In the present study these variables were found not to be related to outcome so that we may assume that the patients who were actually followed up (88% of the total sample) are likely to be representative of the sample as a whole.

(iii) Collection of Data

Information concerning the previous history of patients was abstracted by the investigator from case-notes. In the practice of the Professorial Unit a detailed record is kept for each patient. This record includes family, personal and medical history documented from as many sources as possible, together with an assessment of the mental state, results of physical examination and such laboratory investigations and psychological tests as are carried out; in addition an account of treatment, and a description of the patient's progress in hospital and his status at discharge are contained in each record.

Data concerning the subsequent progress of patients were obtained from personal interviews with patients and relatives, and in a small proportion by means of questionnaires, or from General Practitioners, hospital records and relatives in cases where patients had died since discharge.

Information regarding the history of the illness itself was retrospective, and the investigation therefore has the disadvantages of any study relying on retrospective data; in particular the scope of the study is limited by the type and amount of information contained in the case-notes. It may be argued that bias may be introduced into the results of follow-up examination by the investigator's prior knowledge of the patient's history. This possibility was eliminated as far as possible by arranging that the investigator did not have access to any previous information concerning the patient during the follow-up interview, except for a list of symptoms present on admission.

Despite the disadvantage of using a retrospective method of enquiry, this is considered more suitable than the prospective method for a study such as this, where a large number of factors of doubtful significance have to be investigated and no precise hypothesis can be formulated in the present state of our knowledge. A prospective study would be time-consuming (taking many years to complete) and expensive, and would be fraught with many technical difficulties. It would perhaps only be justifiable when directed towards testing previously-formulated hypotheses such as may be derived from a retrospective study.

(iv) Analysis of Data

In the circumstances appertaining to the present study, where outcome was dependent on a number of interacting variables,

3 main approaches are possible in analysing data:

- (i) By simple enumeration of data and comparisons of successive pairs of variables, using simple tests of statistical significance where relevant;
- (ii) If a very large sample is available, this may be broken down into sub-samples and the interaction of particular variables may be evaluated whilst other variables are held constant;
- (iii) The relative importance of the interacting variables may be assessed by recourse to various statistical techniques of multivariate analysis for assigning values to the variation due to each factor independently of the others. The logic of such techniques is complex, and depends upon making various assumptions about the validity, objectivity and the natural relationships of the data. Their application is outside the scope of the present study.

In the present study, in view of the size of the sample, the first of these 3 methods has been employed in the analysis of data. In the relevant literature only 3 studies contain any statistical analysis of data, and in these studies the techniques used were those employed in the present investigation.

In analysing data of this kind, it is customary to regard a difference between two groups, with respect to a mean or a proportion, as statistically significant wherever a difference as

large as that observed would be likely in less than one out of 20 trials ($P < .05$) if the null hypothesis (that both groups derive from the same parent universe) were true. Similarly, associations between variables are said to be statistically significant if not expected more than once in 20 trials according to the null hypothesis. Whilst higher levels of significance, e.g. $P < .025$, $P < .001$, etc., may be defined, the critical level for regarding a difference as significant is conventionally taken as $P = .05$; where this is not reached, the difference is not significant. In a study of complex interacting variables, such as the present work, there are many suggestive associations which do not reach statistical significance; with these, one cannot dismiss the possibility that, had larger numbers or more homogeneous groups been available, such differences would have been significant. In yet other comparisons, the data have shown significant differences when examined in one way (e.g. by mean outcome scores), and no significant differences when examined in a different framework (e.g. by χ^2 tests). So it is clear that the interpretation of these data, even with the help of statistical methods, may be a somewhat arbitrary and subjective matter. The author has adopted the practice of singling out those variables where the most evidence for significant relationships has accumulated, and of regarding other associations as not proven. The main part of the discussion will be focussed on the former group, i.e. on the positive findings from the data.

2. Demographic and Social Characteristics of the Sample

The total sample consisted of 181 patients; progress since discharge was ascertained in 160. In six patients, diagnosis was changed at follow-up. These are discussed separately in Appendix III. The discussion which follows refers to the remaining 175 patients, of whom 154 were followed up.

The age distribution shows approximately equal numbers in age groups under 30 (mostly over 20), 30-39, and 40-49, the 50 and over age group having about half as many patients as each of the rest. The sex ratio is constant throughout the age-range, at 2:1 (females: males). 54% of the patients were married, 34% single, and 10% separated, widowed or divorced. 53% were employees and 33% housewives.

It is not possible to define the values of these demographic and social variables in the total population at risk; patients were drawn from a large urban area and of course other hospitals and clinics also served the needs of the same area. There is no obvious reason why patients at the Maudsley Hospital should be selected in respect of age (over 16), sex, marital status or employment status, so we may tentatively advance the following conclusions:

- (1) The ages between 20 and 50 years seem to carry approximately equal risk of admission to hospital for neurotic disorders. This risk diminishes over the age of 50. One reason for this may be that older patients, or those who have had several previous

admissions, are admitted to other hospitals or remain in other hospitals as chronic patients; but the finding of diminished risk over 50 is in accord with general clinical experience.

- (ii) The risk of admission to hospital with a neurotic illness is approximately twice as high for females as for males in all age groups.

It would be unwise to hazard any guesses comparing the specific risks for married and single or for employees and housewives, as the age-standardised data pertaining to the total population at risk are not available.

60% of the sample were in social Class III, and the remainder were equally distributed between the higher and the lower social classes. The proportion of the total population of England and Wales who were in social Class III in 1957 (General Register Office, 1958) was 52-54% for employed and retired males and for married and for single women. Figures showing the social class distribution for Greater London are not available, but are unlikely to differ very significantly from those for the country as a whole. There is no evidence, therefore, for supposing that our sample was selected in respect of social class. This finding is in contrast with that of American investigators who reported a relatively high incidence of diagnosed neuroses in the higher social classes, and a lower incidence in social classes IV and V. (Redlich, Hollingshead,

Roberts, Robinson, Freedman & Myers 1953).

Two of these authors have also subsequently described differences in symptomatology between different social classes; they found that neurotic patients in the lowest two classes presented relatively more commonly with somatic symptoms than did those in the other classes (Hollingshead and Redlich, 1958). This finding was not confirmed in the present study in which no differences in symptomatology were found between patients in different social classes.

The explanation for these contrasting findings may lie partly in the differing criteria which are used in England and America for determining social class (in England occupation is the only criterion, whereas in America educational standard and area of residence are taken into account in addition to occupation); certainly the social class distribution of the normal population differs in the two countries.

Other reasons would appear to be the differing socio-economic conditions and prevailing cultural attitudes towards psychiatric treatment; and the differing diagnostic practice in the two countries.

32% of the sample had I.Q.s. over 110, and only 9% below 90. Reliable data concerning the distribution of I.Q. in an urban population are lacking; however from the way in which I.Q. scales are constructed we should expect approx. one quarter of the general population to score below 90 and approx. one quarter

above 110. The figures therefore provide tentative evidence that our population of neurotic patients had a somewhat higher distribution of intelligence than the normal population at risk. We are not justified in concluding that a greater risk of neurotic illness accompanies a higher intelligence, as the findings may again reflect some aspect of the practice of the hospital or some characteristics of the population referred to the hospital. But the results suggest that further investigation of the distribution of intelligence among neurotic patients, both in and out of hospital, may be rewarding.

3. Features of the Neurotic Illnesses

A diagnosis of Depressive Reaction accounted for over one-third of the group; Anxiety Reaction came next in order (27%), followed by Obsessive Compulsive Reaction (13%), Mixed Neurotic Reaction (11%), and Hysterical Reaction (10%). Phobic Reactions formed the smallest group (3%).

Whilst these relative frequencies may well reflect the diagnostic practice of the Consultants concerned, and thus be invalid for comparison with other series, the large differences are worthy of comment. Depressive and Anxiety Reactions are often difficult to differentiate; indeed, some experienced clinicians regard any attempt at doing so as arbitrary and perhaps meaningless, and prefer to group the two together as a group characterised by a predominantly affective disorder. But the diagnoses of Obsessive-Compulsive Reactions, Hysterical

Reaction, and Phobic Reaction leave less room for variation in diagnostic practice. The conclusions from this series of patients are as follows:

- (i) The largest group (over 60%) of in-patients admitted for neurotic disorders may be diagnosed as suffering from Depressive and/or Anxiety Reactions.
- (ii) Obsessive-Compulsive, Hysterical and Mixed Neurotic Reactions each occur with approximately equal frequency (10%).
- (iii) Phobic Illnesses are rare as a cause of admission to hospital.

A family history of mental illness (in patients and siblings) was found in 38% of patients. This compares closely with the findings of other authors; evidence of mental illness was found in the families of 37% of Luff & Garrod's (1935) large series of patients with neurotic disorders; in 41% of Brown's (1942) series of neurotics and in 13% of his controls (medical in-patients); in 47% of Ingham's (1949) series of undergraduates with psychoneuroses and in 3% of his unmatched healthy controls; and in 41% of Brill & Beebe's (1955) series of American ex-servicemen with psychoneurosis. Our conclusion is that considerably more than one-third of neurotic patients may be expected to have a family history of neurotic illnesses, and Brown's control series as well as common experience suggest that this incidence is higher than would be expected in the families of a group of healthy people or of a group of non-psychiatric hospital patients.

Detailed aetiological enquiry is outside the scope of this thesis, but it is important to emphasize that the finding of a positive family history in a high proportion of patients does not of itself provide any evidence to support the hypothesis that genetic mechanisms play a specific role in the causation of neurotic illnesses. It is a commonplace that the presence of mental illness in a family will affect the family milieu; in some cases this may be a sufficient determinant of later illness, irrespective of supposed genetic mechanisms. The interplay of genetic and environmental influences is likely to be especially complex in these conditions, and we can only regard the eventual development of a neurotic illness as the end-result of the cumulative influence of the particular environmental influences to which the patient has been subject acting upon the potentialities determined by the genotype. Studies using very carefully recorded and controlled observations will be necessary before we can assign the relative importance of nature and nurture, if indeed this is still a meaningful dichotomy.

Childhood environment was judged to be definitely adverse in 47% of patients. Other investigators have used various yardsticks in assessing childhood environment, but Ljungberg (1957) and Ernst (1959) both used criteria similar to those of the present investigation. Ljungberg reported that early environment had been unsatisfactory in 35% of his series of hysterical patients; Ernst cited a figure of 40% for his group of neurotics. It seems fair to conclude that a

history of adverse childhood environment may be expected in between one-third and a half of neurotic patients. Such evidence as can be found from reports comparing the childhood environment of neurotic patients and normal controls (e.g. Madow & Hardy, 1947; Ingham, 1949) could perhaps be held to justify the postulate of an aetiological relationship between adverse early environment and later neurotic illness. In the absence of reliable data concerning the childhood environment of normal adults, this postulate must be regarded as one which awaits further investigation by closely controlled studies. Such investigations, if they are to have any value, should also throw light on which features, if any, of an adverse environment are most closely linked with particular neurotic manifestations occurring subsequently.

Neurotic traits in childhood were reported in the histories of 52% of the sample. Again this incidence appears to be higher than one would expect in normal subjects, but to date no reliable evidence is available in the literature to confirm or deny this supposition.

The premorbid personality was judged (from information in the case-notes) to be abnormal in 56% of patients. In the relevant literature, the proportion of patients reported as having abnormal premorbid personalities ranges from 90% (Langen & Veit, 1954) to 55% (Eitinger, 1955).

As assessments of personality must necessarily be a matter of clinical judgment from whatever data are available, and as the

criteria used in making these assessments cannot be made fully explicit, it is not surprising that findings differ considerably. Moreover, the findings are of uncertain significance because no information is available regarding the incidence of so-called normal and abnormal personalities among people who do not suffer from neurotic illnesses. Nevertheless, such assessments of personality are of importance in view of the undoubted significance of premorbid personality in the prognosis of neurotic disorders, subsequently to be discussed.

Previous illnesses were reported in half the present sample; 23% had suffered from psychiatric illness, 20% from organic illnesses and 7% from both psychiatric and organic illnesses.

The onset of neurotic illness was associated in 55% of patients with a history of precipitating factors. No information regarding the incidence of precipitating factors in neurotic illness as a whole can be found in the literature, although with respect to Obsessional States, Pollitt (1957) reports that 62% of his sample had definite precipitating factors.

It is customary to regard as precipitating factors all events remembered by the patient or other informants as having been stressful in some way to the patient within 6 weeks before the onset of illness. These events include physical illnesses, happenings related to the material environment, and psychological factors ranging from bereavement to engagement. The semantic assumption implicit in the word precipitating is that these factors were causally related to

the appearance of particular symptoms within 6 weeks. This assumption is made tacitly, first because without it we could conclude nothing about the varying aetiological role of the physical and psychological environment; and secondly because any significant happening is likely to have its expression in any neurotic illness starting soon afterwards, whether the event caused the illness itself, caused it to appear at the particular time, caused it to take a particular form, or whether it did not play any causal role.

(Indeed, it may in some cases have represented the earliest symptom of an incipient illness). But consideration of the type and variety of so-called precipitating agents must lead to a more wary acceptance of the foregoing assumption. Stresses at work, changes of abode, financial embarrassment, death of relatives, and marital and premarital conflict, to mention only a few, are all common occurrences which form part of the context of life itself; if they were causally quite unrelated to the onset of neurotic illnesses, we should still expect a proportion of patients to be able to report their occurrence within 6 weeks before onset of their symptoms. It is not possible to say how large this proportion would be; everyday experience prompts the assertion that it would not approach 50%. We cannot be more precise in discussing the incidence of precipitating factors; it is necessary to recall (i) that this item is subject to errors of retrospective falsification or distortion, (ii) that the use of the concept is justifiable subject to the reservations outlined above. What we have recorded would more properly be described periphrastically

as the incidence of recalled significant unpleasant or traumatic happenings in the life of the patient within 6 weeks before the onset of the illness. So defined, it is likely to be invaluable in differentiating groups of patients in respect of circumstances in which the illnesses started; and it will subsequently be discussed as a factor of demonstrable prognostic significance.

The duration of symptoms before admission was less than 6 months in 30%, 6 months to 2 years in 29%, 2 to 5 years in 16%, and more than 5 years in 16%. The remaining 9% of patients were considered to have symptoms since childhood or adolescence.

During admission the commonest symptoms were affective symptoms, present in 92% of all patients; somatic symptoms were found in 46%, and obsessional, compulsive and hypochondriacal symptoms in 42%. Various disturbances of behaviour, such as agitation, restlessness, aggressive outbursts, and retardation of motor activity were present in 28% (including 8 patients who had made suicidal attempts or gestures before admission); 8% exhibited various disorders of consciousness and memory such as amnesia, fugues, and trance-like states, and 3% visual hallucinations and illusions as part of a clinical picture of Hysteria. 17% of the sample showed evidence of organic disease in addition to their neurotic illness; it was not always possible to judge to what extent the neurotic illness was related to the organic disease, but in no case was the presence of neurotic symptoms considered to be wholly attributable to organic pathology.

Social adjustment with respect to work record, interpersonal relations, marital relations and sexual adjustment was assessed by means of rating scales using explicit criteria. Whereas 81% of patients were noted as having a satisfactory work record before the onset of illness, this proportion dropped to 32% during key illness, the difference being significant statistically. With respect to interpersonal relations, little difference was found between ratings before and during illness; in 50% of patients interpersonal relations were rated as satisfactory before illness and in 43% during illness. Marital relations similarly showed little change, the proportions rated as having satisfactory marital relations being 44% before illness and 39% during illness. Sexual adjustment was significantly worse during illness than before illness; the proportion whose sexual adjustment was satisfactory dropped from 44% before illness to 34% during illness, and the proportion whose adjustment was wholly unsatisfactory rose from 33% before illness to 50% during illness.

Treatment consisted solely of supportive measures, such as routine medical and nursing care, occupational therapy, social casework and psychiatric interviews of a supportive kind, in 36% of patients. Physical methods such as E.C.T. and various drugs were used in 24%; psychotherapy (as previously defined) was conducted with 16%, these patients receiving from 12-37 interviews (mean 18.7). In a further 11%, physical methods and psychotherapy were used in conjunction. 6% (10 patients), who were suffering from severe and

intractable Obsessional or Anxiety Reactions were submitted to leucotomy. The remainder (7%) received no treatment as they remained in hospital for less than 2 weeks and, in most cases, discharged themselves against medical advice.

12% of patients remained in hospital for less than 4 weeks and 52% for less than 3 months, whilst 18% stayed for longer than 6 months.

At discharge, outcome was recorded by the doctor concerned as recovered or much improved in 61%, slightly improved in 26%, and unchanged or worse in 13%.

4. Results of Follow-Up Examinations

Patients were followed up 4-6 years (mean 5.3 years) after discharge from hospital. In 6 patients the diagnosis was changed as a result of follow-up examination. These patients are described separately in Appendix 3, and have been excluded from consideration in the remainder of this discussion.

An attempt was made to assess certain aspects of the environment in which patients lived in the interim period between discharge from hospital and follow-up. 77% of patients were found to have lived in a domestic group, i.e. with their spouse or relatives, 17% lived alone, 4% spent the greater part of the intervening 5 years in mental hospitals, and the remainder (2%) resided in students' hostels or were in the Army. Where patients lived with their spouse or relatives, an attempt was made in the course of the follow-up

interviews with patients and relatives to gauge the attitude of members of the household towards the patient. In 76% of cases this attitude was judged to be one of acceptance and tolerance (termed positive attitude), but in the remainder relatives exhibited a mixed or negative attitude, evinced by fear, intolerance or open hostility towards the patient. The material circumstances of patients were judged adequate in 90% of cases; the remainder lived on National Assistance in poor circumstances.

In assessing whether patients had been subjected to any environmental stresses since discharge from hospital, the investigator recorded stress as present in those cases where any untoward events had occurred which the patient regarded as stressful. Stress was found to have been experienced by 56% of patients; the nature of the events reported as stressful varied widely, and included financial hardship, job dismissal, physical illnesses, deaths in the family, unwanted pregnancy, broken engagements and unhappy love affairs, sexual difficulties or trauma, and gross marital discord. Stress was followed by a recrudescence of neurotic symptoms in 58% of cases in which it had occurred; the remaining 42% had apparently been able to withstand stresses without any deterioration in their mental state.

As has been stated above it was not possible to identify any particular type of stressful event which was invariably associated with deterioration in the mental state; where this deterioration was found, it was clearly due to the impact of the stress situation on the current outlook and life-situation of the patient rather than due

to the nature of the stress per se. Detrimental effects were presumably determined by various unspecified personality factors and by psychiatric status as much as by the circumstances of stress, and no attempt could be made to separate these interacting variables. However, stresses such as marital discord and difficulties in interpersonal relationships were more frequently followed by deterioration than were external stresses.

The fluctuations in social adjustment can be seen most clearly from the figures obtained for the Composite Index of Social Adjustment which was derived as shown in Appendix I, p.44. This gives numerical expression to social adjustment in the 4 areas which were here investigated, equal emphasis being given to each area.

Before the illness 51% of the sample had a rating of 1 (satisfactory), 41% a rating of 2 (mediocre) and 8% a rating of 3 (unsatisfactory). During the illness the proportion with a satisfactory rating dropped to 24%, and the proportions with mediocre and unsatisfactory ratings rose to 55% and 21% respectively. These results indicate a significant deterioration in social adjustment associated with the onset of neurotic illness. In the interim period after discharge from hospital, figures show a significant improvement in social adjustment, until at follow-up 5 years later the adjustment index had returned almost to pre-morbid levels, (satisfactory in 42%, mediocre in 46%, and unsatisfactory in 12%).

When the incidence of symptoms elicited at follow-up is compared with the incidence during key admission, some striking differences are revealed between the various symptom groups. The

incidence of affective symptoms dropped significantly (from 92% to 64%), as did that of disorders of behaviour (from 28% to 12%).

On the other hand the incidence of the other symptom groups (disorders of thought content, somatic symptoms, disorders of perception, and disorders of consciousness and memory) did not alter significantly, though a slight drop in incidence was noted in each group.

In assessing symptomatic outcome both severity and frequency of symptoms were taken into account. Only 19% of patients were found to be entirely free of symptoms at follow-up; in 30% symptoms were infrequent and mild; in a further 18% symptoms were slightly less frequent and severe than during key illness, and the remaining patients were unchanged or worse.

The prognosis in terms of symptoms in this series of patients was therefore not very favourable; the symptomatic outcome can be considered satisfactory in only 49% of cases. Furthermore we can predict that in patients with neurotic disorders severe enough to require hospitalisation, all neurotic symptoms, with the exception of affective symptoms and disorders of behaviour, are likely to remain for at least 5 years.

The final outcome index comprises a 5 point scale derived from summation of ratings for symptomatic and for social outcome. These two aspects of outcome are closely associated ($\chi^2 = 54.4$ for 8 d.f., $P < .001$). The index is based on the arbitrary but simple assumptions that it is empirically justifiable (1) to assign values

of 1-5 respectively to the several grades of outcome, (ii) to give equal weight to the symptomatic outcome and to the combined social outcome (comprising work, marital, sexual and interpersonal adjustment) and (iii) to summate the two indices.

30% of patients were rated as recovered, 23% as much improved, 16% as slightly improved and the remainder were unchanged or worse. The terms recovered, much improved, slightly improved, no change and worse are here used to describe the ratings 1 to 5 on the 5-point scale.

The final outcome after 4 - 6 years could thus be considered satisfactory in 53% of cases; this result is closely similar to that obtained by Eitinger (1955) in a 10-year follow-up study, in which he found a satisfactory outcome in 55% of his sample. The results of other authors cited in the literature are not comparable with the present study, either because the sample differed from the present one or the criteria used in assessing outcome were not made explicit.

Comparison of Eitinger's result with that of the present investigation suggests that results of a 5-year follow-up may hold for subsequent years. Ljungberg (1957), who followed up patients with Conversion Hysteria for as long as 20 years, found that symptomatic improvement occurred in the first 5 years, and thereafter little change could be expected.

Outcome was regarded as satisfactory at discharge more frequently (61%) than at follow-up. Initial and subsequent outcome

were not highly correlated ($r = 0.19$); therefore outcome at the time of discharge from hospital is seemingly not a reliable predictor of the subsequent course of the neurotic illness.

4 patients in the sample committed suicide; these patients (3 females and one male) had all been diagnosed as Depressive Reactions, and two had abnormal premorbid personalities described as hysterical. It is noteworthy that these patients had previously made suicidal threats on more than one occasion, (one woman left suicide notes in prominent places) and that these had not been regarded as serious, but rather as attempts to gain attention and sympathy from relatives. The fate of these patients emphasises the danger of underestimating the importance of apparently histrionic suicidal threats and gestures. The comments of Lewis (1934) are particularly apt:- "Gestures, when they are made, are usually regarded as play acting; the patients who take elaborate steps or announce their intentions freely are usually regarded as hysterical, seekers after sympathy or attention.....; many such succeed in killing themselves.....".

5. Prognostic Factors and their Interactions

It is necessary at this stage to classify the variables studied in this investigation according to their prognostic significance, and to discuss the relationships of those factors found to have some correlation with outcome of illness.

Variables investigated and found to have no significant

association with final outcome in this study may be listed as follows:

- (i) Demographic and Social Factors: Age, Sex, Social Class.
- (ii) Family History of Mental Illness
- (iii) Early life: Childhood environment, neurotic traits in childhood.
- (iv) Intelligence
- (v) Premorbid Sexual Adjustment
- (vi) History of Previous Psychiatric Illnesses
- (vii) Illness: associated organic disease.
duration of stay in hospital.
- (viii) Environment after discharge: occurrence of stress.
material circumstances.

The duration of stay in hospital was found to be related to outcome at discharge; the group of patients who remained in hospital for more than 6 months had a significantly worse immediate outcome than all other patients. This finding was not unexpected as neurotics who required a lengthy stay in hospital are likely to have more intractable illnesses. At follow-up, however, the outcome was not significantly worse.

Figure 10 lists the variables which were found to be of prognostic importance. These variables, and their inter-relationships, will now be discussed seriatim.

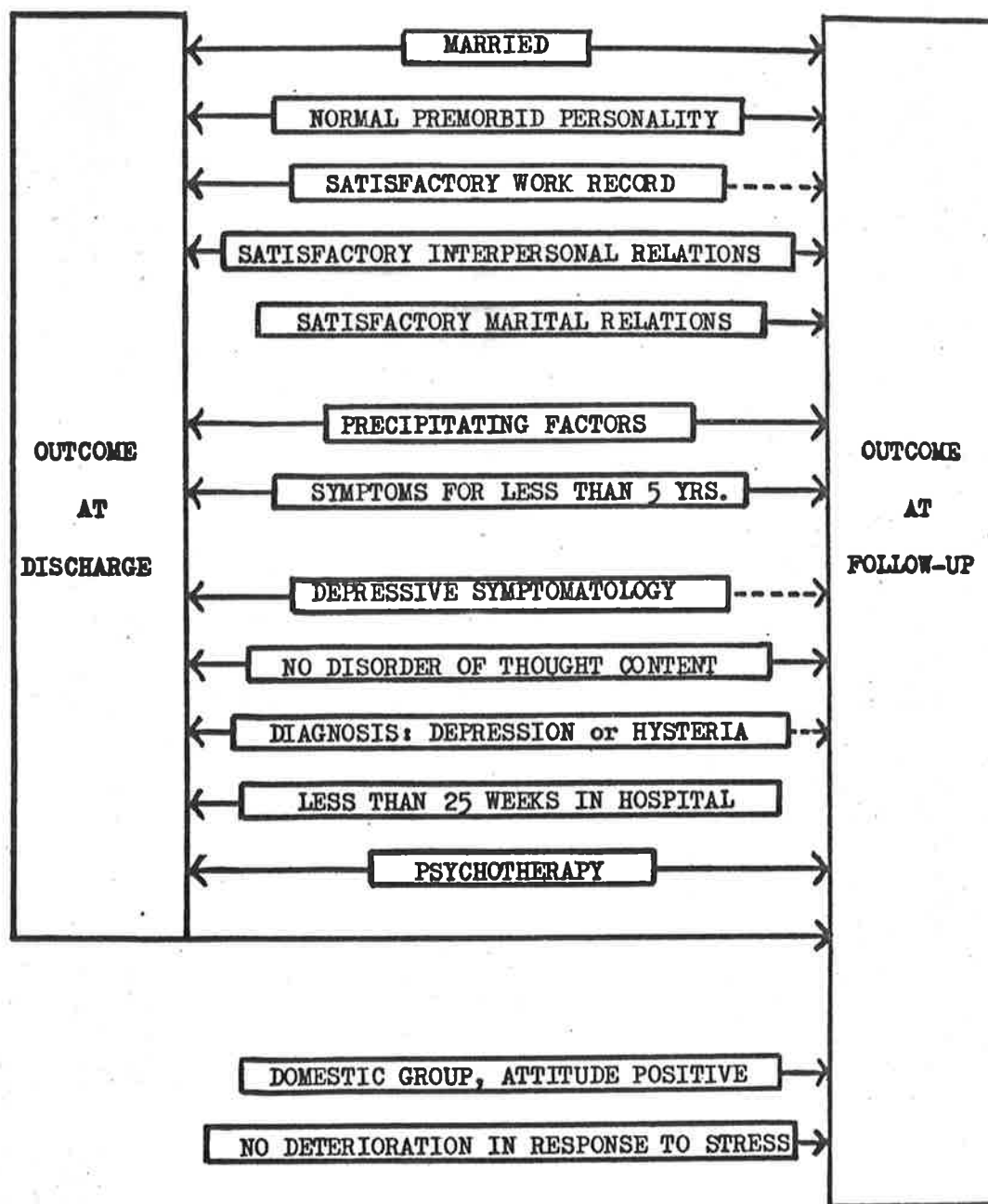


FIG. 10 INDICATIONS OF FAVOURABLE PROGNOSIS

Factors in the previous history (above), in the illness itself and its management, and in the environment after discharge (below), are shown where associations with outcome are statistically significant (continuous lines), or marked without being statistically significant (broken lines).

(i) Marital State

Married patients had a somewhat more favourable initial and final outcome than did single patients. No conclusions can be drawn regarding the prognosis of separated, divorced and widowed patients as their numbers were too small.

(ii) Premorbid Personality

Patients whose premorbid personalities were rated as normal had a better outcome both at discharge and subsequently than did those with abnormal premorbid personalities. Abnormal premorbid personality was associated with the presence of neurotic traits in childhood, a variable which itself shows an association with outcome which is not however statistically significant. The conclusion is that an abnormal premorbid personality may follow the exhibition of neurotic traits in childhood and may in turn serve as a bad prognostic factor in any ensuing neurotic illness.

The prognostic importance of premorbid personality in neurotic disorders has been stressed by several authors (Harris, 1938; Brill & Beebe, 1955; Eitinger, 1955; Ljungberg, 1957; Ernst, 1959; Wallace & Whyte, 1959).

(iii) Premorbid Social Adjustment

Social adjustment with respect to work record, interpersonal relations, and marital relations was correlated with outcome; patients rated as having a satisfactory

adjustment in these areas were in each case found to have a more favourable outcome than were those rated as having mediocre or unsatisfactory adjustment. The highest and most significant association with outcome was found in respect of interpersonal relations and this alone among the indices of social adjustment is significantly correlated with premorbid personality.

We may conclude that thus far there is evidence for linking the presence of neurotic traits in childhood, an abnormal premorbid personality, and impaired interpersonal and marital relations, as a collective having bad prognostic implications. These associations are of course somewhat loose, and it would be unwise to regard this statement as one describing any sort of unique causal sequence.

(iv) Precipitating Factors

The group of patients in whom the onset of illness was associated with supposed precipitating factors had a significantly better initial and subsequent outcome than did the group characterized by absence of obvious precipitating factors. Such factors were somewhat more commonly found in the group whose premorbid personalities were regarded as normal, than in the group with abnormal personalities, although this association was not close or statistically significant.

(v) Duration of Symptoms before admission

Outcome at discharge and follow-up was correlated with

duration of symptoms; the former showed a linear relationship, with a worse outcome for successive durations of symptoms whilst final outcome was more or less constant for all groups with duration of symptoms less than 5 years but worse for the group with duration of symptoms over 5 years. The latter group included patients with symptoms stated to have been life-long, who were by definition regarded as abnormal personalities. The difficulty of attempting to differentiate neurotic illnesses from personality disorders is brought sharply into focus by reference to this group of patients having life-long symptoms and a bad prognosis.

There was a strong association between duration of symptoms and the incidence of precipitating factors; the groups with longer duration of symptoms showed a relative paucity of precipitating factors. The fact that patients with a long duration of symptoms may have difficulty in recalling precipitating factors is inadequate to explain this finding because of the association between presence of precipitating factors and diagnoses having a favourable outcome (vide infra).

(vi) Symptomatology

The presence of depressive symptomatology was found to be associated with a relatively good immediate and subsequent outcome; disorders of thought content, and hypochondriacal symptoms in particular, were associated

with unfavourable outcome. Depression and disorders of behaviour were the symptoms most commonly associated with precipitating factors, but the group of patients with disorders of behaviour did not have a more satisfactory outcome than those without. A tentative conclusion from these associations is that depressive symptoms are most commonly associated with precipitating factors and a favourable outcome, whilst disorders of thought content, which are least commonly associated with precipitating factors have an unfavourable outcome. It may be that precipitating factors indicate a favourable outcome when preceding depressive symptoms but not when preceding disorders of behaviour.

- No other symptom groups were found to be of prognostic significance.

(vii) Diagnosis

The most favourable outcome was found in Depressive, Hysterical, and Anxiety Reactions and the worst in Obsessive-Compulsive and Mixed Neurotic Reactions. The latter comprised a group of illnesses in which hypochondriacal symptoms predominated. The differences are statistically significant with respect to outcome at discharge; at follow-up the same trend was noted, but was not significant.

The diagnostic groups associated with favourable outcome - depressive, hysterical and anxiety reactions -

occurred more commonly in the middle of the age range covered by our sample, and were also the predominant illnesses in the women in the sample. But neither age nor sex per se had any association with outcome.

Precipitating factors occurred most commonly in patients with depressive reactions, and the shortest duration of symptoms was associated with this diagnosis.

It is clear from what has been said that among variables in the history of patients and in the illnesses themselves, the outstanding correlates of a good prognosis are (i) normal premorbid personality; (ii) unimpaired interpersonal relations; (iii) the presence of precipitating factors; (iv) duration of symptoms less than 5 years; and (v) depressive symptomatology and diagnosis of depressive or hysterical reaction.

These five variables are themselves variously inter-related, and from the present data it is difficult, and perhaps meaningless, to attempt to determine the unique importance of each with respect to prognosis. This matter will be discussed below.

(viii) Treatment

Both immediate and final outcome were significantly more favourable for the group of patients treated with psychotherapy than for the remainder of the sample. This statement holds whether or not physical treatment was

administered in addition to psychotherapy. Study of the mean outcome scores shows that the group who did not have any special treatment has the next most favourable prognosis, followed by the groups treated with supportive measures and with physical treatments respectively. Leucotomised patients had the worst immediate and final outcome. Apart from the group treated with psychotherapy as compared with the remainder, none of the differences between treatment groups are significant; but it is of some interest to note that the sequence of these treatments with respect to outcome is the same for final as for immediate prognosis.

Evaluation of outcome in relation to the specific effects of the several kinds of treatment is outside the scope of the present study. It would entail recourse to a specialised and as yet incomplete methodology whereby treatments would be allocated at random to homogeneous sub-groups, full records of all aspects of progress would be kept, and differences in outcome between treatment groups would be carefully assessed in the light of all the relevant influences. In a retrospective study of patients seen in routine clinical practice, we cannot even guess with any cogency what might be the whole range of variables differentiating the treatment groups. As retrospective determination of the indications for a specific treatment is not possible, the above results carry no implications regarding the relative efficacy of the

different forms of management.

It is nevertheless of interest to recall that, as shown in the previous Chapter, the group of patients having psychotherapy were distinguished from the other groups in that (i) a significantly higher proportion were married, (ii) all had a history of precipitating factors, (iii) abnormal personalities were somewhat under-represented, and (iv) none had a history of life-long neurotic symptoms. On the results of our findings alone, therefore, a better outcome might be expected for patients having psychotherapy, whether or not the treatment procedures were specifically beneficial.

This argument does not necessarily demonstrate that psychotherapy was ineffective in these patients. From the findings of the present study, we are not entitled to draw any conclusions regarding the efficacy of psychotherapy.

(ix) Domicile after discharge from hospital

The group of patients discharged to a domestic group (i.e. living with their relatives) had a better outcome at follow-up than did the group who lived alone. The best outcome was for the group living with relatives whose attitude was judged to be sympathetic and tolerant.

Interpretation of these results may not be the simple matter it appears. Certainly one might expect a domestic group with an attitude of support and understanding to be the most favourable milieu for recovery from or improvement in

neurotic symptoms. But a selective factor again might be expected to operate; a group of patients having a bad prognosis might well be out of the running for acceptance into a domestic group, having rejected or been rejected by their families; or, if they return to their families, their attitudes and behaviour might be such as to provoke scepticism and hostility in the most tolerant of relatives. The finding that abnormal personalities have a higher frequency among patients living alone is what might be anticipated, and lends support to these reservations. But with due regard to the caveat, our data support the hypothesis that a domestic group with a positive attitude may be specifically beneficial to the neurotic patient.

(x) Response to Stress

Whilst the presence or absence of events regarded as stressful had no prognostic implications, the response to stress was significantly related to outcome. As might be expected, the group of patients who were able to withstand various stresses had a more favourable outcome than did those in whom stress was followed by recrudescence or intensification of their symptoms.

It is of interest at this stage to investigate the possibility of ranking the variables of prognostic significance, shown in Fig. 10, in order of their apparent strength as indicators of final

outcome. We have earlier discussed the value and limitations of the mean outcome score as a summarising index of the distribution of a defined group of patients with respect to outcome. We may recall that the score has a range from 1 to 5; a lower score indicates a better outcome, and citing any one of the integers from 1 to 5 can respectively be equated to saying that the outcome for the group as a whole is recovered, much improved, slightly improved, no change, or worse. The mean outcome at discharge for the whole sample is 2.30, i.e. rather nearer to much improved than to improved; whilst the mean final outcome for the whole sample is 2.60.

The outcome at discharge was decided by the doctor responsible for the patient on a basis of overall clinical judgment, in which impressions of symptomatic and social outcome were blended to an unspecified extent; whilst outcome at follow-up was derived by giving equal weight to symptomatic and to overall social outcome as determined by the investigator. The difference between the values at discharge and follow-up do not therefore necessarily indicate a better outcome at discharge than at follow-up. But comparison of mean final outcome scores of different subgroups is a valid way of comparing the criteria by which the sub-groups are defined, (as is comparison of the various discharge outcome scores inter se).

The variables of favourable prognostic significance may be ranked according to their strength as indicators of short-term

prognosis as follows:

<u>Prognostic Criterion</u>	<u>Mean Outcome at Discharge</u>
1. Psychotherapy	1.96
2. Diagnosis of depression or hysteria	2.00
3. Depressive Symptoms	2.07
4. (Precipitating factors (Normal Premorbid Personality	2.10
5. Duration of Symptoms < 5 years	2.12
6. Less than 6 months in hospital	2.14
7. Satisfactory Marital Relations	2.15
8. Married	2.17
9. No disorder of thought content	2.18
10. (Satisfactory interpersonal relations (Satisfactory work record	2.20
<hr/>	
Index for whole sample	2.30

They may be ranked according to their strength as indicators of long-term prognosis as follows:

<u>Prognostic Criterion</u>	<u>Mean Final Outcome</u>
1. Psychotherapy	1.96
2. No disorder of thought content	2.02
3. Normal premorbid personality	2.06
4. Satisfactory interpersonal relations	2.09
5. No deterioration in response to stress*	2.15

* During interim period.

6. Domestic group, attitude positive*	2.18
7. Satisfactory marital relations	2.22
8. Precipitating Factors	2.24
9. Duration of Symptoms < 5 years.	2.31
10. Depressive Symptoms	2.34
11. {Diagnosis of Depression or Hysteria (Satisfactory work record	2.41
12. Married	2.43
13. Less than 6 months in hospital	2.54
<hr/>	
Index for whole sample	2.60

The relative importance of these prognostic criteria at discharge and at follow-up may be summarised as follows:

- (i) The group of patients having psychotherapy had the best immediate and the best ultimate prognosis. This group was selected on the basis of a constellation of characteristics of which those specifiable are discussed above.
- (ii) A normal premorbid personality is of high prognostic importance with respect to both immediate and final outcome.
- (iii) Features of the illness itself - precipitating factors, duration of symptoms, diagnosis, depressive

* During interim period

symptomatology, and duration of stay in hospital, are the most outstanding factors with respect to the determination of immediate prognosis.

- (iv) Disorder of thought content was of much greater significance in long-term than in immediate prognosis.
- (v) After disorder of thought content, premorbid personality and its correlates - interpersonal and marital relations, domicile and response to stress in the interim - were of supreme importance among factors associated with final outcome.

The differences between the items on the above lists are small, and conclusions derived from ranking them in this way are subject to the reservations due to consideration of this fact and to the already-stated arbitrary nature of our crude indices. But these conclusions are nevertheless suggestive and in accord with general clinical experience.

From considerations of the interaction of the variables we have discussed, we can say that two broad groups of variables appear to have prognostic significance. In the first group are premorbid interpersonal relations, marital relations, and type of domicile. All of these are significantly related to premorbid personality, which may well be the predominant factor.

Secondly, we have a group of prognostic factors deriving from the nature of the illness, viz. presence of precipitating factors,

duration of symptoms, diagnosis and symptomatology; these factors are all inter-related but have no close association with premorbid personality.

The findings therefore suggest that two main factors are of prognostic significance in neurotic illness, (i) premorbid personality, and (ii) the nature of the illness. One cannot of course advance this hypothesis with an air of finality; the crucial test can only be performed by studying a large number of patients, preferably by the prospective rather than retrospective method. The application of such statistical techniques as factor analysis may or may not be relevant to the results of such a large and carefully-documented study; but the present data do not permit of more rigorous analysis.

It is hardly necessary to reiterate that the conclusions about prognostic factors refer to groups of patients sharing the attributes stated. In the individual patient numerous inter-related and unspecified variables act in concord to determine outcome, and our conclusions must be read as broad generalisations, applicable to the individual patient only as part of the matrix of particular circumstances; the practice of clinical psychiatry is dependent upon full study of each individual patient before assessing prognosis. Conclusions such as the present can only provide the necessary but very preliminary background understanding of the natural history in terms of descriptive features of the patient, his environment, and his illness. Insofar as they lead to statements about prognosis, they provide a framework for statistical prediction. Reliable

clinical prediction must take into account both the statistical predictors and the particular clinical, social, and other individual factors relevant to the patient.

We have been able to speak of the correlates of a good prognosis in neurotic disorders, and it is tempting to impute a causal relationship between the incidence of the stated factors and the outcome of the illness. The epidemiological method, as here used, does not allow us to do more than show associations, but it generally leads to implied hints at causal sequences which may be responsible at least for some part of a demonstrable association between variables. The hints to be derived from the results of this study are that certain features of the illness itself and its history are important in determining a relatively satisfactory immediate outcome - viz: a diagnosed depressive (or hysterical) illness starting in association with precipitating factors, having a short duration of symptoms and affecting a previously normal personality. Likewise we may hint that a final outcome will be satisfactory if premorbid personality and social relationships are satisfactory, and if there is no preponderance of obsessional or hypochondriacal thought content. But in view of the bewildering array of interacting variables disclosed by this study, and in view of the undoubted existence and prognostic significance of many others unspecified and often unspecifiable, we must use great reserve when we imply causal relationships.

6. THE HETEROGENEITY OF NEUROTIC ILLNESSES

Most psychiatrists are agreed that the present classification of neurotic disorders into various sub-groups is unsatisfactory. Neyes & Kolb (1958) have summed up this view as follows: "The so-called "types" are not disease entities in genesis, mechanisms or manifestations. Rather should the psychoneuroses be regarded as a series of varying types of reaction brought about by multiple causative factors which vary from case to case. The more carefully the reactions of the neurotic are examined, the more frequently it will be found that there are no sharply defined lines among the various types of neuroses". Clinical experience is in accord with this view, but it does not seem justifiable to jump from this step to the conclusion that any attempted classification is therefore useless. Our lack of knowledge in this field precludes any but a descriptive classification, but if such a classification is based on a detailed study of symptomatology and course of these illnesses, valuable information may be gleaned with respect to prognosis and with respect to possible aetiological factors in neurotic disorders.

The present investigation was directed towards prognosis rather than towards the study of the nature of neurotic disorders. Nevertheless some interesting findings have emerged. Obsessive-Compulsive Reactions and Mixed Neurotic Reactions (which in the present sample have a predominantly hypochondriacal symptomatology) appear to form a distinct group compared to other neurotic reactions; they are found relatively more commonly in men, their onset is least

often associated with obvious precipitating factors, they have a longer symptom duration and finally the worst prognosis. They differ however with respect to age, Obsessive-Compulsive Reactions being more common in young age groups, and Mixed Neurotic Reactions in older patients. No conclusions can be shown regarding Phobic Reactions as numbers in the present sample were too small.

Differentiation between Depressive, Anxiety and Hysterical Reactions appears difficult; in many cases admixtures of symptoms were found in all these categories. The group of patients diagnosed as Hysterical Reaction rarely had classical conversion symptoms or symptoms of dissociation; it was more common to find that the principal manifestations were various disturbances in behaviour, and affective symptoms were commonly present. Thus patients labelled Hysterical Reactions themselves formed a heterogeneous group, and this diagnostic label in particular appeared inadequate.

However these disorders and the Depressive and Anxiety Reactions all appeared to be fairly clearly demarcated from Obsessive-Compulsive and Mixed Neurotic Reactions with respect to the variables outlined above.

From our findings in the present series of patients we may therefore tentatively suggest that the class of neurotic disorders appears to contain at least 2 distinct syndromes; on the one hand are obsessive-compulsive and hypochondriacal reactions, whilst on the other are found depressive, anxiety and hysterical reactions. These groups differ both in respect of salient features of the history

and clinical findings, and in terms of prognosis. These are however still tenuous conclusions and do not permit of generalisations regarding neurotic disorders. But they suggest that studies specially designed to investigate differences between various clinical sub-groups of neuroses may yield valuable information.

VII. SUMMARY AND CONCLUSIONS

1. Study of the literature yields conflicting evidence regarding the natural history and outcome of neurotic disorders. Reported recovery rates range from 14% to 91%; the disparities can be ascribed mainly to inadequate surveillance, to selective sampling, and to lack of uniformity in the criteria for assessing outcome. Indeed, the requisite criteria are rarely stated. It follows, as has been pointed out by several authors, that the dearth of valid and long-term studies on the outcome of neurotic conditions makes impossible the accurate forecast of natural course and prognosis.
2. The present communication reports the results of a 4-6 year follow-up investigation of 181 patients consecutively admitted to the Professorial Unit, Maudsley Hospital, London, diagnosed as suffering from Psychoneurotic Disorders.
3. Follow-up information was obtained from detailed, structured psychiatric interviews with patients and, wherever possible, their relatives. In 6 cases who could not be interviewed, information was obtained by means

of a questionnaire designed to cover the same ground as the interview. Assessments were made as far as possible on the basis of precise and verified data, and to this end rating scales were devised with clearly specified criteria.

4. Outcome was assessed in terms of (a) clinical symptoms and (b) social adjustment with respect to 4 areas:- work record, interpersonal relations, marital relations, and sexual adjustment. Final overall outcome was derived from a summation of ratings for symptomatic outcome and social adjustment on a 5-point scale.
5. 160 patients (88% of the original sample) were traced, the mean follow-up period being 5.3 years. Comparison of untraced patients with the rest of the sample in terms of salient variables in their history, clinical features and social characteristics showed no important differences; the 160 patients who were followed up are therefore considered representative of the whole sample.
6. 87% of patients were under 50 years of age

and a sex ratio of 2 females : 1 male was found. The age and sex distribution of the present sample is similar to that generally reported in neurotic disorders.

7. The social class distribution did not differ significantly from that of the general population in England and Wales, and no relationship was found between symptomatology and social class. These findings are at variance with those of Hollingshead & Redlich (1958) in America; possible explanations for the differing findings are advanced.
8. Investigation of the previous history of patients revealed that 47% came from a definitely adverse childhood environment, and 52% exhibited neurotic symptoms in childhood. A family history of psychiatric illness was elicited in 38% of the sample. 56% of neurotic patients were judged to have an abnormal premorbid personality. The onset of the neurotic illness was apparently precipitated by stressful events in 55% of all cases.
9. Social adjustment, derived from a summation of ratings for each of the 4 specified areas, was rated as satisfactory:- (a) in 51% of patients before the onset of their illness, (b) in 24% during the illness, and

(c) in 42% at follow-up.

The findings provide evidence for a significant impairment of social adjustment during the neurotic episode and a return to almost premorbid levels within 5 years of discharge from hospital.

10. Symptomatic outcome and social adjustment were found to be closely related.

11. Final Overall Outcome was found to be satisfactory in 53% of neurotic patients at follow-up; these patients were either symptom-free or subject to only mild and infrequent symptoms and their social adjustment was rated as satisfactory in at least 3 of the 4 specified areas.

12. The correlation between outcome on discharge and that at follow-up was low. Immediate outcome seems not to be a reliable indicator of the subsequent course of neurotic illnesses. Outcome was satisfactory on discharge and at follow-up for approximately two-fifths of the sample; satisfactory on discharge but not at follow-up for one-fifth; unsatisfactory on discharge but satisfactory at follow-up in one-sixth; and unsatisfactory on each occasion for one quarter.

13. Variables found to be significantly associated with a favourable prognosis include:

- (a) married civil status; (b) normal premorbid personality; (c) satisfactory premorbid social adjustment

with respect to work record, interpersonal relations and marital relations; (d) evidence of precipitating factors preceding the onset of illness; (e) less than 5 years' duration of symptoms; (f) presence of depressive symptoms and absence of disorders of thought content - in particular hypochondriacal preoccupations; (g) a diagnosis of Depressive or Hysterical Reaction; (h) a domicile, after discharge, in which the patient lives in a domestic group, the members of which show a sympathetic and tolerant attitude towards him; (j) the ability to withstand stressful situations without recurrence of neurotic symptoms.

14. Analysis of the inter-relations between the above variables shows that they fall into 2 main groups:

- (a) Premorbid interpersonal relations, marital relations, and type of domicile after discharge; all of these are significantly related to premorbid personality, which may well be the predominant factor.
- (b) Evidence of precipitating factors, duration of symptoms, symptomatology and diagnosis; these

factors are all inter-related but have no close associations with premorbid personality.

There is therefore evidence suggesting that two of the principal prognostic indicators in neurotic illnesses are (i) premorbid personality and (ii) the nature of the illness; these indicators appear to be unrelated to each other.

15. Variables which appear to have no significant relationship to outcome in neurotic disorders include: age, sex, social class, family history, childhood environment, neurotic traits in childhood, intelligence, premorbid sexual adjustment, a history of previous psychiatric illness, length of stay in hospital, presence or absence of associated organic disease, material circumstances after discharge from hospital and occurrence of stressful events since discharge.

16. Patients who were treated by psychotherapy had the best immediate and final outcome. However, these patients were distinguished from other groups in that (a) a higher proportion were married, (b) the onset of illness was in all cases associated with precipitating factors, and (c) none had a history of life-long neurotic symptoms. Consequently the group of patients receiving psychotherapy would be expected to have a satisfactory outcome irrespective of

treatment. No conclusion can therefore be drawn from the present findings regarding the efficacy of psychotherapy.

17. Obsessive-Compulsive Reactions and Mixed Neurotic Reactions (which in this patient sample consisted of principally hypochondriacal symptoms) seemed to form a subgroup of neurotic illnesses which differed from all other syndromes in the following respects: (a) these reactions occurred relatively more commonly in men; (b) their onset was least often associated with precipitating factors; (c) the symptom duration before admission was longer than that of other neurotic syndromes; and (d) they were associated with the worst prognosis. Obsessive-Compulsive and Mixed Neurotic Reactions differed, however, with respect to age; the former occurring more commonly in younger age groups and the latter in older patients.

No conclusions can be drawn regarding Phobic Reactions as numbers in the present sample were too small.

Depressive, Anxiety, and Hysterical Reactions were all associated with a relatively favourable prognosis. From the viewpoint of symptomatology it was often impossible to

differentiate clearly between them, as many patients with these diagnoses showed admixtures of depression, anxiety and hysterical symptoms. The term Hysterical Reaction in particular appears to be an unsatisfactory diagnostic label; patients in this category showed a variety of affective symptoms and disturbances of behaviour, and the classical symptoms of Hysteria - viz: conversion symptoms and symptoms of dissociation - were rarely present.

18. 4 patients (2% of the total sample) committed suicide. 2 of these patients had made several previous suicidal threats and gestures in a demonstrative and histrionic manner; the danger of underestimating the importance of such suicidal threats is thereby emphasised.

19. Diagnosis was changed at follow-up in six cases.

(a) Organic disease.

One patient, originally diagnosed as Mixed Neurotic Reaction (Depersonalisation Syndrome), was subsequently shown to have Disseminated Sclerosis. This was the only case where symptoms of organic disease were mistakenly attributed to neurotic

illness, but in another patient a diagnosis of carcinoma of cervix was made in hospital and the consequences of this were subsequently regarded as a sufficient explanation of the psychiatric symptoms which developed.

(b) Functional Psychoses.

2 patients were regarded in retrospect as having suffered from so-called Endogenous Depressive Illnesses.

2 further patients, originally diagnosed as suffering from Neurotic Depressive Reaction, developed Paranoid Schizophrenia during the follow-up period. It was not possible to judge retrospectively whether the original neurotic symptoms were the prodromata of Schizophrenia, or whether these patients were suffering from genuine neurotic disorders until the schizophrenic illness supervened. But irrespective of this issue, the incidence of Schizophrenia in the present sample did not exceed the expected incidence in the community.

These findings suggest that the risk of developing Schizophrenia is not higher for neurotic patients than for the general population.

20. Statements with respect to prognosis, if derived from studies such as the present, are essentially broad generalisations. In clinical assessment of an individual patient, our conclusions can only provide part of the background for making prognostic statements; if these are to be accurate they will be based on a detailed clinical appraisal of the patient and of his immediate environment. But the implications of many of these variables can only be understood in the light of generalisations made by recourse to the experience of a group of patients.

21. Further study of populations of neurotic patients will be necessary before we can claim any substantial understanding of the phenomena of neurotic illnesses. Exploration of the following themes, inter alia, should prove to be profitable in this context:

(1) Further follow-up studies such as the present, using explicit criteria, may confirm or refute the conclusions outlined above with respect to outcome of neurotic disorders and to the relevant prognostic factors. Such further studies on different hospital populations may also help to pinpoint

differences arising from population differentials or from variations in hospital practice.

(ii) Full recording of all relevant and specifiable information about patients made both when they are admitted to hospital and in the course of serial follow-up examinations after discharge will yield more accurate and direct information about patterns of outcome and prognostic factors. Retrospective studies such as the present are of value in pointing out the appropriate areas of enquiry for this kind of prospective study of neurotic illnesses.

(iii) A more complete understanding of the epidemiology of neurotic illness will require investigation of the milder degrees of disability such as do not require hospital admission. Detailed study of groups of patients so affected may lead to the evolution of more refined clinical methods for describing all relevant aspects of the mental state and of personal and social disabilities. Application of these to the development of survey methods for study of Out-patients, patients seen by General Practitioners, and patients suffering

from organic illnesses who exhibit neurotic symptomatology, may eventually disclose information regarding the aetiology and prevalence of neurotic disorders in the community. Such further understanding of aetiological mechanisms as may be disclosed by investigations of this type may contribute in some measure towards clarification of the concept of preventive psychiatry.

(iv) In the course of perspective studies, some attempt may be made at critical evaluation of specific treatments for neurotic illnesses. Assessment of the efficacy of the several forms of psychotherapy and of behaviour therapy poses many as yet unanswered methodological and technical problems. The findings of the present study, if confirmed, are relevant to this issue, since they indicate some of the prognostic factors which should be controlled in treatment comparisons.

APPENDIX I

INTERVIEW DOCUMENT

P A R T 1

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SCHOOL	3	10
MEDICAL HISTORY	3	11
PREVIOUS PSYCHIATRIC ILLNESS	4	12
PREVIOUS PSYCHIATRIC TREATMENT	4	13
INTELLIGENCE & PREMORBID PERSONALITY	5	14
KEY ILLNESS:		
Precipitating Factors; Duration of Symptoms etc.	5	15-16
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P A R T 2

INFORMATION FROM FOLLOW-UP INTERVIEWS

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P A R T 3

SUMMARISING INDICES AND ADDITIONAL CODING	44-45	74-79
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NAME:

Serial No.

Hospital No.

Address:

Age Group at Key Discharge
Code 1

	<u>Males</u>	<u>Females</u>
Under 20	0	5
20-29	1	6
30-39	2	7
40-49	3	8
50 +	4	9

Marital State at Key Discharge
Code 2

Single	0
Married	1
Widowed	2
Separated	3
Divorced	4

Religion
Code 3

C.of E.	0
Nonconformist	1
R.C.	2
Jewish	3
Other	4
None	5

Employment Status
Code 4

Employee	0
Self-employed	1
Retired	2
Unemployed	3
Housewife	4
Student	5
Otherwise dependent	6

Duration of Key Stay in Hospital
Code 5

Under 4 weeks	0
4 - 8 weeks	1
9 - 13 weeks	2
14 - 25 weeks	3
over 25 weeks	4

Diagnosis
Code 6

W.H.O.	0	5
Code	1	6
310 +	2	7
	3	8
	4	

Number of Previous admissions
to Psychiatric I.P.Unit

Code 7

0
1
2
3 or more

FAMILY HISTORY

Parents and sibs only.

Code 8

NIL	0
Evidence doubtful	1
<u>IN ONE MEMBER ONLY</u>	
Neurotic illness	2
Psychopathy	3
Other mental illness	4
<u>IN MORE THAN ONE MEMBER</u>	
Neurotic illness with or without other mental illness	5
Neurotic illness, Psychopathy with or without other mental illness	6
Psychopathy with or without other mental illness	7
Other mental illness only	8

EARLY CHILDHOOD

Code 9

		Neurotic Traits *		
		Present	Absent	Insufficient evidence
Adverse early ** environment	Yes	0	1	2
	No	3	4	5
	Insufficient evidence	6	7	8

* Neurotic Traits: i.e. enuresis after the age of 4, marked fears, night terrors, sleepwalking, stammering, nailbiting, thumbsucking, eating difficulties, temper tantrums and cognate evidence of anxiety.

** Adverse early environment: i.e.

(a) Physical - impoverishment.

(b) Parental absences:- total absence of one parent or prolonged absence (12 months or more) of mother in early childhood (first 5 years), upbringing in orphanage.

(c) Unsatisfactory home atmosphere:- constant serious parental quarrels, definite rejection by one or both parents, frequent beatings, marked emotional disturbance in either parent.

Specify:

S C H O O L

Code 10

	Normal Adjustment	Adjustment socially or at work unsatisfactory at some stage	Adjustment Unknown (Insufficient information)
<u>Primary (Elementary) only</u>	0	1	2
<u>Secondary, Grammar or Technical</u>	3	4	5
<u>University or Equivalent</u>	6	7	8

M E D I C A L H I S T O R Y

Code 11

		No history of significant <u>organic illness</u>	History of organic illness(es) resulting in total or partial incapacity for school or work for more than 6 months (total)	
			Persisting handicap *	No persisting handicap
<u>No history of previous psychiatric illness</u> <u>Previous psychiatric illness(es) resulting in partial or total incapacity for school or work.</u>		0	1	2
	Main symptoms of <u>all</u> as in present illness.	3	4	5
	Main symptoms of <u>any</u> different from present illness.	6	7	8

* Persisting handicap - i.e. residual symptoms or other features requiring continued medical supervision, persisting at the time of key admission.

- (a) Specify nature of organic illness and persisting handicap if any
- (b) Specify number of previous psychiatric illnesses
- (c) Specify main symptoms of any previous psychiatric illness if different from present illness.

PREVIOUS PSYCHIATRIC ILLNESS - DURATION AND TREATMENT

Code 12

No previous illnesses		0	
<u>Duration of illness(es)</u>	<u>Psychiatric treatment *</u>	<u>Other medical treatment only</u>	<u>No treatment</u>
Less than 2 months	1	2	3
2 - 6 months	4	5	6
More than 6 months	7	8	9

* Psychiatric treatment - including treatment by a qualified lay analyst.

PREVIOUS PSYCHIATRIC TREATMENT

(including any treatment of present illness before key admission)

Code 13

Nil - i.e. remained in hospital less than two weeks, followed hospital routines but otherwise received no treatment	0
Primarily Supportive - (including counselling, social case-work, limited use of sedatives)	1
Primarily Physical (E.C.T. and/or drug therapy)	2
Systematic Psychotherapy * as main treatment	3
Hypnosis and/or Abreaction as main treatment	4
Systematic Psychotherapy plus physical treatment	5
Systematic Psychotherapy plus physical treatment plus hypnosis and/or abreaction	6
Systematic Psychotherapy plus hypnosis and/or abreaction	7
Physical treatment plus hypnosis and/or abreaction	8
Leucotomy	9

* i.e. psychotherapy of whatever nature or level aiming at relief or removal of symptoms through resolution of the underlying conflicts, where sessions are held at least once a week and the duration of such treatment is not less than 3 months.

INTELLIGENCE & PREMORBID PERSONALITY

Code 14

		Premorbid Personality *	
		Normal	Abnormal
<u>I.Q.</u> **	Over 130	0	1
	111 - 130	2	3
	90 - 110	4	5
	under 90	6	7
	unknown	8	9

* Premorbid Personality: is regarded as abnormal where there is definite evidence of paranoid, obsessional, schizoid, cyclothymic, hysterical or psychopathic traits which results in marked peculiarities in behaviour, either continuous or recurrent.

Specify:

** I.Q. as measured on Wechsler-Bellevue or equivalent intelligence tests administered after admission,

KEY ILLNESS

1. Precipitating Factor(s)

i.e. definite evidence of adverse change in the physical state or environment of the patient immediately preceding (within six weeks) the onset of the key illness,

Code 15

<u>Physical</u> - illness or accident	0
<u>Occupational</u> - dismissal from job, failure in examinations, financial failure	1
<u>Bereavement</u>	2
<u>Other</u> Specify:	3
<u>Combination of two or more of above factors</u> Specify:	4
<u>No obvious precipitating factors</u>	5

2. Duration of Symptoms prior to key admissions:

Code 16

Less than 6 months	0
7 - 12 months	1
13-24 months	2
2 - 5 years	3
More than 5 years	4
Uncertain	5

SYMPTOMATOLOGY AND CLINICAL FINDINGS

1. SOMATIC SYMPTOMS

Code 17

A. Associated with organic disease *

- (i) Judged to be completely attributable to organic disease

Specify:

- (ii) Judged to be partially attributable to organic disease

Specify:

- (iii) None

0

1

2

B. Not associated with organic disease

Code 18

- (i) Symptoms relating to particular functions or organs innervated by the sensorimotor nervous system only (i.e. 'conversion' symptoms)

Specify:

- (ii) Symptom relating to particular functions or organs innervated by the autonomic nervous system only

Specify:

- (iii) (i) and (ii) in conjunction

Specify:

- (iv) Diffuse or ill-defined somatic symptoms with undue fatigue, lassitude or weakness as leading complaint.

Specify:

- (v) Symptoms not classifiable as above

Specify:

- (vi) None

0

1

2

3

4

5

* Include psychosomatic disorders where there is evidence of organic pathology.

2. DISORDERS OF AFFECT

Code 19.

- (A) Depression with anxiety, subjective tension, irritability, lack of confidence, inability to concentrate and cognate symptoms with or without concomitant disturbance of sleep and/or food intake.

0

Specify:

- (B) Any affective symptoms as above without depression

1

Specify:

- (C) Acute anxiety attacks only

2

Specify:

- (D) Acute anxiety attacks associated with specific non-compulsive phobias*

3

Specify:

- (E) (C) or (D) with any other affective symptoms as above

4

Specify:

- (F) Depersonalisation and/or derealisation only

5

Specify:

- (G) Depersonalisation and/or derealisation with any other affective symptoms

6

Specify:

- (H) Other disorders of affect

7

Specify

- (J) None

8

* Phobias which lack the compulsive quality and subjective feeling of internal resistance characteristic of obsessional phobias.

3. DISORDERS OF THOUGHT CONTENT

Code 20.

- (A) Obsessional ideas, ruminations, impulses or phobias only

0

Specify:

- (B) Obsessional ideas, ruminations, impulses or phobias accompanied by compulsive rituals

1

Specify:

- (C) Hypochondriacal ideas only

2

Specify:

- (D) Hypochondriacal ideas with obsessional symptoms as above

3

Specify:

- (E) Other manifestations of disorder of thought content

4

Specify:

- (F) None

5

4. DISORDERS OF PERCEPTION

Code 21.

- (A) Present

0

Specify:

- (B) Absent

1

5. DISORDERS OF CONSCIOUSNESS, MEMORY AND ASSOCIATIVE BEHAVIOUR

Code 22.

(A) Amnesia only. Specify:	0
(B) Fugues, twilight states Specify:	1
(C) Pseudodementia Specify:	2
(D) Multiple personality Specify:	3
(E) Other manifestations of disorders of consciousness, memory and associative behaviour Specify:	4
(F) None	5

6. DISORDERS OF MOTOR ASPECTS OF BEHAVIOUR AND OF HABIT

Code 23.

(A) <u>Quantitative abnormality only</u> - e.g. retardation of speech and activity, overactivity, restlessness, agitation Specify:	0
(B) <u>Qualitative abnormality only</u> - e.g. aggression, destructive behaviour, self-injury Specify:	1
(C) (A) and (B) in conjunction Specify:	2
(D) Addiction to alcohol and/or drugs Specify:	3
(E) (B) and (D) in conjunction Specify:	4
(F) None	5

EFFECT OF KEY ILLNESS ON SOCIAL ADJUSTMENT

1. WORK

OCCUPATION

(Husband's occupation if patient is housewife)

	Before illness (where pos. 5 years)	Since onset of <u>illness</u>
A. <u>PATIENTS IN FULL-TIME EMPLOYMENT OR SELF-EMPLOYED</u>		
(1) <u>Employment Ratio (E.R.)</u> i.e. fraction of time employed in periods specified (e.g. E.R. 5/6 = working 50 months in 5 years) <u>Exclude inability to work due to:</u> (a) physical illness (b) unemployment resulting from local conditions (c) other external circumstances		
(2) <u>History of Dismissal(s)</u> i.e. for reasons other than redundancy if YES - specify	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(3) <u>History of Complete Dis-satisfaction with and/or Constant Friction at Work:</u> if YES - specify	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(4) <u>Number of Jobs:</u> If frequent job changes i.e. one or more job changes per year, give reasons:- <u>A. Adequate external reasons:</u> e.g. chance of advancement, type of work where frequent job changes are the rule, redundancy etc. <u>B. No adequate external reasons:</u> e.g. where in the absence of adequate external reasons, frequent job changes appear to be due to patient's personal difficulties Specify: Unknown A B Unknown A B

(5) Occupational Level

Record whether rising, stationary or falling as classified in Hall-Jones scale:

Before
illness
(where pos.
5 years)

(a) Rising
(b) Staty.
(c) Falling

Since
onset of
illness

(a) Rising
(b) Staty.
(c) Falling

WORK ADJUSTMENT RATING SCALE

24

Code

25

Satisfactory: i.e. E.R.1 - Occupational level stationary or rising. No evidence as above, of disturbed adjustment

1

1

Mediocre: i.e. E.R.1 - occupational level falling or if stationary, other evidence as above of disturbed adjustment OR employment ratio 9/10 to 5/6

2

2

Unsatisfactory: i.e. E.R. 5/6 or less with other evidence as above of disturbed adjustment

3

3

Disagreement between Investigators' ratings:

Satisfactory

4

4

Mediocre

5

5

Unsatisfactory

6

6

Specify with reasons:

Information insufficient for rating

7

7

Not applicable

8

8

B. HOUSEWIVES

WORK ADJUSTMENT RATING SCALE

26 Code 27

<u>Satisfactory</u> : i.e. consistently efficient at performing all household tasks with no more than minor difficulties	1	1
<u>Mediocre</u> : i.e. able to manage household but only with considerable difficulty; OR generally efficient but some periods when completely incapable	2	2
<u>Unsatisfactory</u> : i.e. frequently or always incapable of managing household	3	3
<u>Disagreement between Investigators' Ratings:</u>		
<u>Satisfactory</u> :	4	4
<u>Mediocre</u> :	5	5
<u>Unsatisfactory</u> :	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8
C. <u>STUDENTS</u>		
<u>Examination Results:</u>	Before illness (where pos. illness 5 years)	Since onset of illness
A. Passes exams usually or always, fails rarely or never	A	A
B. Some failures - up to 1/3 of all exams.	B	B
C. Fails frequently, i.e. in more than one exam in three	C	C
D. Unknown	D	D

C. STUDENTS (Cont'd)

	Before illness (where pos. 5 years)	Since onset of illness
<u>Attitude to Work:</u>		
A - <u>Satisfied</u> - finds work interesting	A	A
B - <u>Indifferent</u> - little or no interest	B	B
C - <u>Dissatisfied</u> - no interest whatever, dislikes work	C	C
D - <u>Unknown</u>	D	D

WORK ADJUSTMENT RATING SCALE 24

Code 25

<u>Satisfactory:</u> i.e. passes exams usually or always, satisfied with work	1	1
<u>Mediocre:</u> i.e. some failure OR passes exams usually or always but dissatisfied with work.	2	2
<u>Unsatisfactory:</u> i.e. fails frequently and possibly indifferent to or dissatisfied with work	3	3
<u>Disagreement between Investigators' Ratings:</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre:</u>	5	5
<u>Unsatisfactory:</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

	Before illness (where poss. 5 years)	Since onset of ill- ness
2. <u>INTERPERSONAL RELATIONS</u>		
A. <u>FRIENDS:</u>		
(1) <u>Superficial</u> : i.e. acquaintances whom patient likes and with whom (s)he is consistently on good terms (e.g. "gets on well" is "friendly with" etc.)	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(2) <u>Close</u> : i.e. one or more friends with whom patient shares complete trust and mutual affection, these friendships (circumstances permitting) being of a lasting nature	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
B. <u>ADAPTION TO SOCIAL SITUATIONS:</u> (i.e. social gatherings of all kinds) <u>Evidence of Disturbance:</u> Conspicuous (a) shyness or lack of confidence (b) aggressiveness (c) suspiciousness (d) other disturbed behaviour Specify: Tries to avoid social gatherings whenever possible Insufficient information	(a) Yes/No (b) Yes/No (c) Yes/No (d) Yes/No Yes No Unknown	(a) Yes/No (b) Yes/No (c) Yes/No (d) Yes/No Yes No Unknown

	Before illness (where poss. 5 years)	Since onset of illness
C. <u>RELATIONS WITH IMMEDIATE FAMILY:</u> (i.e. parents, siblings, children only. Spouse <u>excluded</u>). Specify reasons:	Not applicable	Not applicable
<u>Evidence of disturbance:</u> (1) <u>Major recurring conflicts:</u> i.e. recurrent bitter quarrels or serious disagreements, followed by temporary estrangement if YES - specify:	Yes No	Yes No
(2) <u>Constant or frequent friction:</u> i.e. constant or frequent occurrence of "nagging", continuous criticism or irritation expressed with one or more relatives if YES - specify:	Yes No	Yes No
(3) <u>Disturbance in absence of overt signs:</u> i.e. despite absence of major recurring conflicts, and constant or frequent friction, informant expresses dissatisfaction with family relations or there is evidence of unsatisfactory relationships, e.g. gross sibling rivalry, over-dependence on mother, etc. if YES, - specify:	Yes No	Yes No
Information insufficient	Unknown	Unknown
D. <u>DISTURBANCE OF OTHER INTERPERSONAL RELATIONS:</u> History of disturbed relations with specific people, e.g. persons in authority, members of opposite sex, etc. if YES - specify:	(a) Yes (b) No (c) Unknown	(a) Yes (b) No (c) Unknown

RATING SCALE FOR INTERPERSONAL RELATIONS

	Before illness (where poss. 5 years)	Code	Since onset of illness
	28		29
<u>Satisfactory:</u>			
i.e. able to form both close and superficial friendships; no other disturbances of interpersonal relations, or disturbance in one area only (B, C, or D).	1		1
<u>Mediocre:</u>			
i.e. able to form either close friendships only or superficial friendships only; interpersonal relations disturbed in one or two other areas	2		2
<u>Unsatisfactory:</u>			
i.e. unable to form close or superficial friendships; interpersonal relations disturbed in two or more other areas	3		3
<u>Disagreement between Investigators' ratings:</u>			
<u>Satisfactory:</u>	4		4
<u>Mediocre:</u>	5		5
<u>Unsatisfactory:</u>	6		6
Specify with reasons:			
Information insufficient for rating	7		7
Not applicable	8		8

3. MARITAL ADJUSTMENT

	Before illness (where poss. 5 years)	Since onset of illness
<u>Evidence of Disturbance:</u> (1) <u>History of major recurring conflicts:</u> i.e. recurring bitter quarrels or serious disagreements followed by temporary estrangements: if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(2) <u>History of constant frequent friction:</u> i.e. constant or frequent occurrence of "nagging", continuous criticism irritation expressed with spouse, minor rows, 'bickering'. if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(3) <u>Disturbance in absence of overt signs:</u> i.e. despite absence of major recurring conflicts and constant or frequent friction, informant expressed dissatisfaction with any aspect of marriage: if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(4) <u>Previous separation(s) by choice</u> if YES - add number of separations.	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(5) <u>Separations:</u> A. Never considered seriously B. Desired but not practicable, e.g. because of children, religion or financial reasons C. Intended or actual D. No information	A B C D	A B C D

	Before illness (where poss. 5 years)	Since onset of illness
<u>USUAL FEELINGS TOWARDS SPOUSE</u>		
A. <u>Positive</u> : i.e. "love", "affection", "fondness" etc.	A	A
B. <u>Mixed feelings</u> : i.e. ambivalent or uncertain	B	B
C. <u>Indifferent</u> : i.e. "couldn't care less", "no feelings"	C	C
D. <u>Negative</u> : i.e. active dislike	D	D
E. <u>Unknown</u>	E	E

<u>MARITAL ADJUSTMENT RATING SCALE</u>		
	30	Code 31
<u>Satisfactory</u> : i.e. usual feelings positive, no evidence of disturbance	1	1
<u>Mediocre</u> : i.e. usual feelings positive or mixed, evidence of disturbance, no previous separations, separation never considered seriously	2	2
<u>Unsatisfactory</u> : i.e. usual feelings indifferent or negative, evidence of disturbance, previous separation(s) and/or separation considered seriously, desired or intended	3	3
<u>Disagreement between Investigators'</u> <u>Ratings:</u>		
<u>Satisfactory</u> :	4	4
<u>Mediocre</u> :	5	5
<u>Unsatisfactory</u> :	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

4. SEXUAL ADJUSTMENT

Exclude all patients whose sexual activities have ceased or practically ceased as a result of advanced age, and all single patients who deny any sexual activity other than masturbation.

	Before illness (where poss. 5 years)	Since onset of illness
<u>HETEROSEXUAL INTERCOURSE</u>		
<u>Satisfactions: (Females only)</u>		
A - <u>Usually or always</u> : i.e. S.I. pleasurable, commonly experience orgasm	A	A
B - <u>Variable</u> : i.e. S.I. usually pleasurable but orgasm only occasionally	B	B
C - <u>Rarely or never</u> : i.e. S.I. rarely or never pleasurable, orgasm never experienced	C	C
D - <u>Unknown</u>	D	D
<u>Performance: (Males only)</u>		
A - <u>Adequate</u> : i.e. nearly or always potent* premature ejaculation only occasionally	A	A
B - <u>Variable</u> : i.e. impotent on frequent occasions or potent always or nearly always but performance usually impaired by premature ejaculations	B	B
C - <u>Inadequate</u> : i.e. impotent usually or always	C	C
D - <u>Unknown</u>	D	D
* Potent is taken to mean able to achieve erection and effect penetration		
<u>Attitude towards intercourse: (Both sexes)</u>		
A - <u>Positive</u> : i.e. S.I. usually or always anticipated with pleasure	A	A
B - <u>Variable</u> : i.e. S.I. anticipated with pleasure at times but frequently little or no inclination	B	B
C - <u>Indifferent</u> : i.e. S.I. tolerated - rarely or never any inclination	C	C
D - <u>Negative</u> : i.e. S.I. actively disliked, usually or always tries to avoid it	D	D
E - <u>Unknown</u>	E	E

	Before illness (where pos. 5 years)	Since onset of illness
<u>HOMOSEXUAL PRACTICES</u>		
<u>COMMON OR PREDOMINANT SEXUAL ACTIVITY</u> (includes all homosexual practices)	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>SEXUAL DEVIATIONS</u>		
<u>COMMON OR PREDOMINANT SEXUAL ACTIVITY:</u> (includes Voyeurism, Exhibitionism, Trans- vestism, Fetishism, Sadism, Masochism, Frottage, where sole aim is complete sexual gratification by these means to the exclusion of sexual intercourse).	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>OTHER SEXUAL ABERRATIONS:</u> (e.g. nymphomania, habitual masturbation in preference to S.I. etc.) Specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.

SEXUAL ADJUSTMENT RATING SCALE

32 Code 33

<u>Satisfactory:</u> i.e. satisfaction usually or always from S.I. (Females) Adequate performance (Males) Positive attitude towards S.I. No homo- sexual practices, sexual deviations or other aberrations	1	1
<u>Mediocre:</u> i.e. Satisfaction variable (Females) Performance variable (Males) Attitude towards S.I. variable. No homo- sexual practices, sexual deviations or other aberrations	2	2
<u>Unsatisfactory:</u> i.e. Satisfaction rarely or never (Females) Performance inadequate (Males) Attitude towards S.I. indifferent or negative and/or homosexual practices, sexual deviations or other sexual aberrations common or predominant sexual activity	3	3
<u>Disagreement between Investigators' Ratings:</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre:</u>	5	5
<u>Unsatisfactory:</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

TREATMENT OF KEY ILLNESS:Code 34

Nil - i.e. remained in hospital less than two weeks, followed hospital routines but otherwise received no treatment	0
Primarily Supportive - (including counselling, social casework, limited use of sedatives)	1
Primarily Physical - (E.C.T. and/or drug therapy)	2
Systematic Psychotherapy* as main treatment	3
Hypnosis and/or Abreaction as main treatment	4
Systematic Psychotherapy plus physical treatment	5
Systematic Psychotherapy plus physical treatment plus hypnosis and/or abreaction	6
Systematic Psychotherapy plus hypnosis and/or abreaction	7
Physical treatment plus hypnosis and/or abreaction	8
Leucotomy	9

* i.e. psychotherapy of whatever nature or level aiming at relief or removal of symptoms through resolution of the underlying conflicts, where sessions are held at least once a week and the duration of such treatment is not less than 3 months.

OUTCOME * ON KEY DISCHARGECode 35

Recovered	1
Much improved	2
Slightly improved	3
No change	4
Worse	5
Suicide	6

* i.e. outcome as recorded in the casenotes by psychiatrist attending patient during key illness.

PART 2

SOCIAL CIRCUMSTANCES SINCE KEY DISCHARGE

(1) Type of Domicile:

- A. Domestic Group: i.e. patient has lived mostly with spouse, own family or friends A
- B. Solitary: i.e. patient has lived mostly alone, for example in lodgings B
- C. Mental Hospital(s) C
- D. Other D

Specify:

- E. Unknown E
-

(2) Predominant Attitude of Domestic Group towards Patient:

- A. Positive: i.e. consistently accepting and tolerant A
 - B. Mixed: i.e. accepting but afraid of patient, or fluctuating attitude; or positive and negative attitudes by different members of domestic group B
 - C. Negative: i.e. consistently intolerant, hostile and/or afraid of the patient C
 - D. Unknown or doubtful: i.e. where the attitude is unknown or where the evidence is judged to be unreliable or contradictory D
-

(3) Material Circumstances:

i.e. financial position, housing conditions and cognate evidence.

- A. Judged to be adequate A
- B. Judged to be poor: i.e. impoverishment B

Specify:

- C. Unknown C
-

TYPE OF DOMICILE AND ATTITUDE OF DOMESTIC GROUP

Code 36

Domestic Group Attitude positive	0
Domestic Group Attitude mixed	1
Domestic Group Attitude negative	2
Domestic Group Attitude unknown or doubtful	3
Solitary	4
Mental Hospital	5
Other Domicile	6
Type of domicile unknown	7

MATERIAL CIRCUMSTANCES

Code 37

Judged to be adequate	0
Judged to be poor	1
Unknown	2

STRESS SITUATION SINCE KEY DISCHARGE

(1) Occurrence:

- A. History of Stress: i.e. definite evidence of adverse change in the physical state or environment of the patient. A
- B. No history of Stress B
- C. Information unknown or unreliable C

(2) Relationship to deterioration in the Mental State

- A. Apparent connection: i.e. appearance of fresh symptoms or increase in severity and/or frequency of symptoms already present within 6 weeks of stress A
- B. No connection or connection doubtful: i.e. no deterioration of mental state following stress; or connection between any deterioration in mental state and stress judged to be doubtful B

		<u>Code 38</u>				
		No stress 0				
		Unknown	1			
			Stress			
		Physical*	Occupational*	Bereavement*	Other*	Combination of 2 or more preceding categories*
<u>Relationship to deterioration in mental state</u>	Apparent connection	2	3	4	5	6
	No connection	7	8	9	X	Y

* subdivisions as for 'Precipitating Factors' p.5.

1. WORK

OCCUPATION

(Husband's occupation if patient is housewife)

	During interim	At follow-up (last 6 months)
A. PATIENTS IN FULL-TIME EMPLOYMENT OR SELF-EMPLOYED (1) Employment ratio (E.R.) i.e. fraction of time employed in periods specified (e.g. E.R. 5/6 = working 50 months in 5 years) <u>Exclude</u> inability to work due to: (a) physical illness (b) unemployment resulting from local conditions (c) other external circumstances		
(2) History of Dismissal(s) i.e. for reasons other than redundancy if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(3) History of Complete Dissatisfaction with and/or Constant Friction at Work: if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
(4) Number of Jobs If frequent job changes, i.e. one or more job changes per year, give reasons: A. <u>Adequate external reasons:</u> e.g. chance of advancement, type of work where frequent job changes are the rule, redundancy, etc. B. <u>No adequate external reasons:</u> e.g. where in the absence of adequate external reasons, frequent job changes appear to be due to patient's personal difficulties: Specify: Unknown A B Unknown A B
(5) Occupational Level: Record whether rising, stationary or falling as classified in Hall-Jones scale:	(a) Rising (b) Staty. (c) Falling	(a) Rising (b) Staty. (c) Falling

WORK ADJUSTMENT RATING SCALE

39 Code 40

<u>Satisfactory: i.e. E.R.1 - Occupational level stationary or rising. No evidence, as above, of disturbed adjustment</u>	1	1
<u>Mediocre: i.e. E.R.1 - occupational level falling, or if stationary, other evidence as above of disturbed adjustment OR employment ratio 9/10 to 5/6</u>	2	2
<u>Unsatisfactory: i.e. E.R.5/6 or less with other evidence as above of disturbed adjustment</u>	3	3
<u>Disagreement between Investigators' Ratings:</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre</u>	5	5
<u>Unsatisfactory</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

B. HOUSEWIVES

WORK ADJUSTMENT RATING SCALE

41 Code 42

<u>Satisfactory: i.e. consistently efficient at performing all household tasks with no more than minor difficulties</u>	1	1
<u>Mediocre: i.e. able to manage household but only with considerable difficulty; OR generally efficient but some periods when completely incapable</u>	2	2
<u>Unsatisfactory: i.e. frequently or always incapable of managing household</u>	3	3
<u>Disagreement between Investigators' Ratings:</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre:</u>	5	5
<u>Unsatisfactory:</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

C. STUDENTS

During
interim

At follow-
up (last 6
months)

Examination Results:

A - Passes exams usually or always, fails rarely or never

A

A

B - Some failures - up to 1/3 of all exams

B

B

C - Fails frequently, i.e. in more than one exam in three.

C

C

D - Unknown

D

D

Attitude to Work

A - Satisfied - finds work interesting

A

A

B - Indifferent - little or no interest

B

B

C - Dissatisfied - no interest whatever, dislikes work

C

C

D - Unknown

D

D

WORK ADJUSTMENT RATING SCALE

39 Code 40

Satisfactory: i.e. passes exams usually or always, satisfied with work

1

1

Mediocre: i.e. some failure OR passes exams usually or always but dissatisfied with work

2

2

Unsatisfactory: i.e. fails frequently and possibly indifferent to or dissatisfied with work

3

3

Disagreement between Investigators' Ratings

Satisfactory:

4

4

Mediocre:

5

5

Unsatisfactory:

6

6

Specify with reasons:

Information insufficient for rating

7

7

Not applicable

8

8

2. INTERPERSONAL
RELATIONS

A. FRIENDS:

- (1) Superficial: i.e. acquaintances whom patient likes and with whom (s)he is consistently on good terms (e.g. "gets on well", "is friendly with" etc.)
- (2) Close: i.e. one or more friends with whom patient shares complete trust and mutual affection, these friendships (circumstances permitting) being of a lasting nature

During
interim

At follow-up
(last 6 months)

- (a) Yes
(b) No
(c) Unk.

- (a) Yes
(b) No
(c) Unk.

- (a) Yes
(b) No
(c) Unk.

- (a) Yes
(b) No
(c) Unk.

B. ADAPTION TO SOCIAL SITUATIONS

(i.e. social gatherings of all kinds)

Evidence of Disturbance:

Conspicuous (a) shyness or lack of confidence

(b) aggressiveness

(c) suspiciousness

(d) other disturbed behaviour

(a) Yes/No

(b) Yes/No

(c) Yes/No

(d) Yes/No

(a) Yes/No

(b) Yes/No

(c) Yes/No

(d) Yes/No

Specify:

Tries to avoid social gatherings whenever possible

Yes No

Yes No

Insufficient information

Unknown

Unknown

C. RELATIONS WITH IMMEDIATE FAMILY:

(i.e. parents, siblings, children only) (Spouse excluded).

Not applicable

Not applicable

Specify reasons:

	During interim	At follow-up (last 6 months)
Evidence of disturbance:		
(1) <u>Major recurring conflicts</u> i.e. recurrent bitter quarrels or serious disagreements, followed by temporary estrangement if YES - specify:	Yes No	Yes No
(2) <u>Constant or frequent friction:</u> i.e. constant or frequent occurrence of "nagging", continuous criticism or irritation expressed with one or more relatives if YES - specify:	Yes No	Yes No
(3) <u>Disturbance in absence of overt signs:</u> i.e. despite absence of major recurring conflicts and constant or frequent friction, informant expresses dissatisfaction with family relations or there is evidence of unsatisfactory relationships, e.g. gross sibling rivalry, over-dependence on mother, etc. if YES - specify:	Yes No	Yes No
Insufficient information	Unknown	Unknown
D. <u>DISTURBANCE OF OTHER INTERPERSONAL RELATIONS:</u>		
History of disturbed relations with specific people, e.g. persons in authority, members of opposite sex etc.	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
if YES - specify		

RATING SCALE FOR INTERPERSONAL RELATIONS

	During interim	At follow-up (last 6 months)
	43	Code 44
<u>Satisfactory:</u>		
i.e. able to form both close and superficial friendships; no other disturbance of interpersonal relations or disturbance in one area only (B, C, or D)	1	1
<u>Mediocre:</u>		
i.e. able to form either close friendships only or superficial friendships only; interpersonal relations disturbed in one or two other areas	2	2
<u>Unsatisfactory:</u>		
i.e. unable to form close or superficial friendships, interpersonal relations disturbed in two or more other areas	3	3
<u>Disagreement between Investigators'</u>		
<u> Ratings:</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre:</u>	5	5
<u>Unsatisfactory:</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

3. MARITAL ADJUSTMENT

Code 45

<u>PRESENT STATUS:</u>	Married	0
Any change since key discharge:	Widowed	1
	Separated	2
	Divorced	3
	No change	4

<u>Evidence of Disturbance:</u>	<u>During interim</u>	<u>At follow-up (last 6 months)</u>
<u>(1) History of major recurring conflicts:</u> i.e. recurrent bitter quarrels or serious disagreements followed by temporary estrangements: if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>(2) History of constant frequent friction:</u> i.e. constant or frequent occurrence of "nagging", continuous criticism, irritation expressed with spouse, minor rows, 'bickering': if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>(3) Disturbance in absence of overt signs:</u> i.e. despite absence of major recurring conflicts and constant or frequent friction, informant expressed dissatisfaction with any aspect of marriage: if YES - specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>(4) Previous separation(s) by choice:</u> if YES - add number of separations:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.

	During interim	At follow-up (last 6 months)
(5) <u>Separations:</u>		
A. Never considered seriously	A	A
B. Desired but not practicable, e.g. because of children, religion or financial reasons	B	B
C. Intended	C	C
D. No information	D	D
<u>USUAL FEELINGS TOWARDS SPOUSE</u>		
A. <u>Positives</u> i.e. 'love', 'affection', 'fondness' etc.	A	A
B. <u>Mixed feelings</u> i.e. ambivalent or uncertain	B	B
C. <u>Indifferents</u> i.e. 'couldn't care less', 'no feelings'.	C	C
D. <u>Negatives</u> i.e. active dislike	D	D
E. <u>Unknown</u>	E	E

MARITAL ADJUSTMENT RATING SCALE

46 Code 47

<u>Satisfactory:</u> i.e. usual feelings positive, no evidence of disturbance	1	1
<u>Mediocre:</u> i.e. usual feelings positive or mixed, evidence of disturbance, no previous separations, separation never considered seriously	2	2
<u>Unsatisfactory:</u> i.e. usual feelings indifferent or negative, evidence of disturbance, previous separation(s) and/or separation considered seriously, desired or intended	3	3
<u>Disagreement between Investigators' Ratings</u>		
<u>Satisfactory:</u>	4	4
<u>Mediocre:</u>	5	5
<u>Unsatisfactory:</u>	6	6
Specify with reasons:		
Information insufficient for rating	7	7
Not applicable	8	8

4. SEXUAL ADJUSTMENT

Exclude all patients whose sexual activities have ceased or practically ceased as a result of advanced age, and all single patients who deny any sexual activity other than masturbation.

HETEROSEXUAL INTERCOURSE

Satisfaction: (Females only)

- A - Usually or always: i.e. S.I. pleasurable commonly experience orgasm
- B - Variable: i.e. S.I. usually pleasurable but orgasm only occasionally
- C - Rarely or never: i.e. S.I. rarely or never pleasurable, orgasm never experienced
- D - Unknown

During
interim

At follow-up
(last 6 months)

A

A

B

B

C

C

D

D

Performance: (Males only)

- A - Adequate: i.e. nearly or always potent† premature ejaculation only occasionally
- B - Variable: i.e. impotent on frequent occasions or potent always or nearly always but performance usually impaired by premature ejaculations
- C - Inadequate: i.e. impotent usually or always
- D - Unknown

A

A

B

B

C

C

D

D

* Potent is taken to mean able to achieve erection and effect penetration

Attitude towards intercourse: (Both sexes)

- A - Positive: i.e. S.I. usually or always anticipated with pleasure
- B - Variable: i.e. S.I. anticipated with pleasure at times but frequently little or no inclination
- C - Indifferent: i.e. S.I. tolerated - rarely or never any inclination
- D - Negative: i.e. S.I. actively disliked usually or always tries to avoid
- E - Unknown

A

A

B

B

C

C

D

D

E

E

<u>HOMOSEXUAL PRACTICES</u>	<u>During interim</u>	<u>At follow-up (last 6 months)</u>
<u>COMMON OR PREDOMINANT SEXUAL ACTIVITY</u> (includes all homosexual practices)	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>SEXUAL DEVIATIONS</u> <u>COMMON OR PREDOMINANT SEXUAL ACTIVITY:</u> (includes Voyeurism, Exhibitionism, Transvestism, Fetishism, Sadism, Masochism, Frottage, where sole aim is complete sexual gratification by these means to the exclusion of sexual intercourse).	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.
<u>OTHER SEXUAL ABERRATIONS:</u> (e.g. nymphomania, habitual masturbation in preference to S.I. etc.) Specify:	(a) Yes (b) No (c) Unk.	(a) Yes (b) No (c) Unk.

<u>SEXUAL ADJUSTMENT RATING SCALE</u>	48	Code	49
<u>Satisfactory: i.e. satisfaction usually or always from S.I. (Females)</u> Adequate performance (Males) Positive attitude towards S.I. No homosexual practices, sexual deviations or other aberrations	1		1
<u>Mediocre: i.e. Satisfaction variable (Females)</u> Performance variable (Males) Attitude towards S.I. variable. No homosexual practices, sexual deviations or other aberrations	2		2
<u>Unsatisfactory: i.e. Satisfaction rarely or never (Females)</u> Performance inadequate (Males) Attitude towards S.I. indifferent or negative and/or homosexual practices, sexual deviations or other sexual aberrations common or predominant sexual activity.	3		3
<u>Disagreement between Investigators' Ratings</u>			
<u>Satisfactory:</u>	4		4
<u>Mediocre:</u>	5		5
<u>Unsatisfactory</u>	6		6
Specify with reasons:			
Information insufficient for rating	7		7
Not applicable	8		8

SYMPTOMS AND SIGNS DURING INTERIM

1. Somatic Symptoms:

List of main symptoms during key illness:-

Code 50

<p>(A) <u>Absent during key illness:</u></p> <p>(1) absent during interim</p> <p>(2) present during interim</p> <p>Specify:</p>	<p>0</p> <p>1</p>
<p>(B) <u>Present during key illness:</u></p> <p>(1) absent during interim</p> <p>(2) present during interim:</p> <p>(a) less frequent and/or severe</p> <p>(b) approx. equal frequency and/or severity</p> <p>(c) more frequent and/or severe</p> <p>(d) different pattern of symptoms</p> <p>Specify:</p>	<p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>

2. Disorders of Affect:

List of main symptoms during key illness:-

Code 51

<p>(A) <u>Absent during key illness:</u></p> <p>(1) absent during interim</p> <p>(2) present during interim</p> <p>Specify:</p>	<p>0</p> <p>1</p>
<p>(B) <u>Present during key illness:</u></p> <p>(1) absent during interim</p> <p>(2) present during interim:-</p> <p>(a) less frequent and/or severe</p> <p>(b) approx. equal frequency and/or severity</p> <p>(c) more frequent and/or severe</p> <p>(d) different pattern of symptoms</p> <p>Specify:</p>	<p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p>

3. Disorders of Thought Content:

List of main symptoms during key illness:-

Code 52

(A) <u>Absent during key illness:</u>	
(1) absent during interim	0
(2) present during interim	1
Specify:	
(B) <u>Present during key illness:</u>	
(1) absent during interim	2
(2) present during interim:-	
(a) less frequent and/or severe	3
(b) approx. equal frequency and/or severity	4
(c) more frequent and/or severe	5
(d) different pattern of symptoms	6
Specify:	

4. Disorders of Perception:

List of main symptoms during key illness:-

Code 53

(A) <u>Absent during key illness</u>	
(1) absent during interim	0
(2) present during interim	1
Specify:	
(B) <u>Present during key illness:</u>	
(1) absent during interim	2
(2) present during interim:	
(a) less frequent and/or severe	3
(b) approx. equal frequency and/or severity	4
(c) more frequent and/or severe	5
(d) different pattern of symptoms	6
Specify:	

5. Disorders of Consciousness, Memory and Associative Behaviour:

List of main symptoms during key illness:-

Code 54

(A) <u>Absent during key illness:</u>	
(1) absent during interim	0
(2) present during interim	1
Specify:	
(B) <u>Present during key illness:</u>	
(1) absent during interim	2
(2) present during interim:-	
(a) less frequent and/or severe	3
(b) approx. equal frequency and/or severity	4
(c) more frequent and/or severe	5
(d) different pattern of symptoms	6
Specify:	

6. Disorders of Motor Aspects of Behaviour:

List of main symptoms during key illness:-

Code 55

(A) <u>Absent during key illness:</u>	
(1) absent during interim	0
(2) present during interim	1
Specify:	
(B) <u>Present during key illness:</u>	
(1) absent during interim	2
(2) present during interim:-	
(a) less frequent and/or severe	3
(b) approx. equal frequency and/or severity	4
(c) more frequent and/or severe	5
(d) different pattern of symptoms	6
Specify:	

7. Overall Rating*

Code 56

Recovered	1
Much improved	2
Slightly improved	3
No change	4
Worse	5
Suicide	6

* As judged by investigator from above information

TREATMENT DURING INTERIM

Code 57

Nil - i.e. remained in hospital less than two weeks, followed hospital routines but otherwise received no treatment.	0
Primarily Supportive - (including counselling, social casework, limited use of sedatives)	1
Primarily Physical - (E.C.T. and/or drug therapy)	2
Systematic Psychotherapy* as main treatment	3
Hypnosis and/or Abreaction as main treatment	4
Systematic Psychotherapy plus physical treatment	5
Systematic Psychotherapy plus physical treatment plus hypnosis and/or abreaction	6
Systematic psychotherapy plus hypnosis and/or abreaction	7
Physical treatment plus hypnosis and/or abreaction	8
Leucotomy	9

* i.e. psychotherapy of whatever nature or level aiming at relief or removal of symptoms through resolution of the underlying conflicts, where sessions are held at least once a week and the duration of such treatment is not less than 3 months.

AGENCY AND DURATION OF TREATMENT

Code 58

No treatment	0
Other medical treatment only	1
<u>Psychiatric Treatment:</u>	
(a) as out-patient only	2
(b) as in-patient	
(i) less than six months	3
(ii) six to eighteen months	4
(iii) more than eighteen months	5

SYMPTOMATOLOGY AND CLINICAL FINDINGS ON EXAMINATION AT FOLLOW-UP

1. SOMATIC SYMPTOMS

Code 59

A. Associated with organic disease*

- (i) Judged to be completely attributable to organic disease
- (ii) Judged to be partially attributable to organic disease
- Specify:
- (iii) None

0

1

2

B. Not associated with organic disease

Code 60

- (i) Symptoms relating to particular functions or organs innervated by the sensorimotor nervous system only (i.e. 'conversion' symptoms)
- Specify:
- (ii) Symptoms relating to particular functions or organs innervated by the autonomic nervous system only
- Specify:
- (iii) (i) and (ii) in conjunction
- Specify:
- (iv) Diffuse or ill-defined somatic symptoms with undue fatigue, lassitude or weakness as leading complaint
- Specify:
- (v) Symptoms not classifiable as above
- Specify:
- (vi) None

0

1

2

3

4

5

* Include psychosomatic disorders where there is evidence of organic pathology.

Changes in frequency and/or severity of symptoms and Clinical findings present during key illness and persisting at the present time.

Somatic Symptoms

Code 61

- Less frequent and/or severe
- Approx. equal frequency and/or severity
- More frequent and/or severe
- Not applicable

0

1

2

3

2. DISORDERS OF AFFECT:

Code 62

- (A) Depression with anxiety, subjective tension, irritability, lack of confidence, inability to concentrate and cognate symptoms with or without concomitant disturbance of sleep and/or food intake

Specify:

- (B) Any affective symptoms as above without depression

Specify:

- (C) Acute anxiety attacks only

Specify:

- (D) Acute anxiety attacks associated with specific non-compulsive phobias*

Specify:

- (E) (C) or (D) with any other affective symptoms as above

Specify:

- (F) Depersonalisation and/or derealisation only

Specify:

- (G) Depersonalisation and/or derealisation with any other affective symptoms

Specify:

- (H) Other disorders of affect

Specify:

- (J) None

0

1

2

3

4

5

6

7

8

* Phobias which lack the compulsive quality and subjective feeling of internal resistance characteristic of obsessional phobias.

Changes in frequency and/or severity of symptoms and clinical findings present during key illness and persisting at present time.

Disorders of Affect:

Code 63

Less frequent and/or severe

0

Approx. equal frequency and/or severity

1

More frequent and/or severe

2

Not applicable

3

3. DISORDERS OF THOUGHT CONTENT

	Code 64
(A) Obsessional ideas, ruminations, impulses or phobias only Specify:	0
(B) Obsessional ideas, ruminations, impulses or phobias accompanied by compulsive rituals Specify:	1
(C) Hypochondriacal ideas only Specify:	2
(D) Hypochondriacal ideas with obsessional symptoms as above Specify:	3
(E) Other manifestations of disorder of thought content Specify:	4
(F) None	5

Changes in frequency and/or severity of symptoms and clinical findings present during key illness and persisting at present time

Disorders of Thought Content

Code 65

Less frequent and/or severe	0
Approx. equal frequency and/or severity	1
More frequent and/or severe	2
Not applicable	3

4. DISORDERS OF PERCEPTION

Code 66

(A) Hallucinations

Specify:

(B) Other disorders of perception

Specify:

(C) None

0

1

2

Changes in frequency and/or severity of symptoms and
Clinical findings present during key illness and
persisting at present time

Disorders of Perceptions:

Code 67

Less frequent and/or severe

Approx. equal frequency and/or severity

More frequent and/or severe

Not applicable

0

1

2

3

5. DISORDERS OF CONSCIOUSNESS, MEMORY AND ASSOCIATIVE BEHAVIOUR

Code 68

(A) Amnesia only

Specify:

(B) Fugues, twilight states

Specify:

(C) Pseudodementia

Specify:

(D) Multiple personality

Specify:

(E) Other manifestations of disorders of consciousness,
memory and associative behaviour

Specify:

(F) None

0

1

2

3

4

5

Changes in frequency and/or severity of symptoms and
Clinical findings present during key illness and
persisting at present time

Disorders of Consciousness, Memory and Associative Behaviour.

Code 69

Less frequent and/or severe

Approx. equal frequency and/or severity

More frequent and/or severe

Not applicable

0

1

2

3

6. DISORDERS OF MOTOR ASPECTS OF BEHAVIOUR AND OF HABIT

- (A) Quantitative abnormality only - e.g. retardation of speech and activity, overactivity, restlessness, agitation

Specify:

- (B) Qualitative abnormality only - e.g. aggression, destructive behaviour, self-injury

Specify:

- (C) (A) and (B) in conjunction

Specify:

- (D) Addiction to Alcohol and/or Drugs

Specify:

- (E) (B) and (D) in conjunction

Specify:

- (F) None

Code 70

0

1

2

3

4

5

Changes in frequency and/or severity of symptoms and Clinical findings present during key illness and persisting at present time.

Disorders of Motor Aspects of Behaviour and of Habit

Code 71

Less frequent and/or severe	0
Approx. equal frequency and/or severity	1
More frequent and/or severe	2
Not applicable	3

SYMPTOMATIC OUTCOME

	<u>Code 72</u>	<u>Equivalent</u> <u>3-point scale</u>
Recovered	1	}.....1
Much improved	2	
Slightly improved	32
No change	4	}.....3
Worse	5	
Suicide	6	

DIAGNOSIS

	<u>Code 73</u>
(A) <u>Unchanged</u>	0
(B) <u>Changed:</u>	
(i) Endogenous Depressive Illness	1
(ii) Schizophrenia	2
(iii) Organic Psychosis	3
(iv) Other	4

Specify:

PART 3

COMPOSITE INDEX OF SOCIAL ADJUSTMENT

Ratings of Social Adjustment with respect to 4 areas:-

- (i) Work
- (ii) Interpersonal Relations
- (iii) Marital Relations and
- (iv) Sexual Activity

have been separately recorded on 3-point scales in Parts I and II for each of the following periods of the patient's life, viz:-

- (a) the 5 years before onset of the key illness
- (b) during the key illness
- (c) The interim period between key discharge and follow-up (5-6 years)
- (d) at follow-up (last 6 months)

To derive the Composite Index of Social Adjustment for any one of these periods, the ratings for all areas of social adjustment which are applicable are added and transformed into a 3-point scale as shown in the following tables:-

	Sum of Ratings		
4 areas applicable	4,5,6,	7,8,9,	10, 11, 12
3 areas only applicable	3,4	5,6,7	8,9
2 areas only applicable	2,3	4	5,6
<u>Composite Index of Social Adjustment</u>	1	2	3

Composite Index of Social Adjustment

A. 5 years before key illness

Number of areas applicable.....

Code 74

Sum of ratings

1	2	3
---	---	---

B. During key illness

Number of areas applicable

Code 75

Sum of ratings

1	2	3
---	---	---

C. Interim period

Number of areas applicable

Code 76

Sum of ratings

1	2	3
---	---	---

D. At follow-up

Number of areas applicable

Code 77

Sum of ratings

1	2	3
---	---	---

OVERALL OUTCOME (at Follow-up)

To obtain the Overall Outcome, the ratings previously recorded on a 5-point scale for Symptomatic Outcome at follow-up are added to the Composite Index of Social Adjustment at follow-up and coded as shown in the following tables:-

Code 78

		Overall outcome
	2	1
Sum of Symptomatic	3	2
Outcome Ratings and	4	3
Composite Index of	5	4
Social Adjustment	6	5
	Suicide	6

INFORMATION OBTAINED SINCE KEY DISCHARGE.

Code 79

A. Complete - Patient alive:

i.e. patient and, where possible, a close relative or friend interviewed and all relevant details obtained

B. Incomplete - Patient alive:

i.e. information obtained by questionnaire only; or patient interviewed but details incomplete and no other source of information available

C. Complete - Patient dead:

i.e. all relevant information complete up to time of death

D. Incomplete - Patient dead:

i.e. some but not all relevant details obtained up to time of death

E. No information

0
1
2
3
4

APPENDIX II

QUESTIONNAIRE

Please encircle the appropriate answer and add any comments you wish. Do not hesitate to encircle 'doubtful' where you feel uncertain, and encircle 'not applicable' wherever the question does not apply to you.

PLEASE MARK ONLY ONE ANSWER TO EVERY QUESTION

<p>1. In what circumstances have you been living <u>most of the time</u> since 1953 ?</p>	<p>(a) ALONE - e.g. in lodgings (b) WITH SPOUSE, OWN FAMILY OR FRIENDS (c) IN PSYCHIATRIC HOSPITAL(S) (d) OTHER - please specify:-</p>
<p>2. What has been the attitude towards you of the people with whom you have been living ?</p>	<p>(a) POSITIVE i.e. consistently helpful, understanding and kind. (b) NEGATIVE i.e. completely lacking in understanding, intolerant. (c) MIXED i.e. at times helpful and understanding but at other times intolerant and unsympathetic; or varying attitude by different members of your household. (d) DOUBTFUL i.e. you are uncertain of their attitude NOT APPLICABLE i.e. living alone or in hospital.</p>
<p>3. How would you describe your financial circumstances since 1953 ?</p>	<p>(a) ADEQUATE i.e. able to manage reasonably well (b) POOR i.e. unable to make ends meet, great financial difficulties. DOUBTFUL - please specify:-</p>

<p>4. Has any major crisis or disaster occurred in your life since 1953 ?</p> <p>(e.g. the death of a close friend or relative, a broken love affair, a serious physical illness or accident, etc.)</p>	<p>(a) YES - please specify:-</p> <p>(b) NO</p> <p>DOUBTFUL - please specify:-</p>
<p>5. If a major crisis occurred, did you notice an <u>immediate</u> appearance or worsening of nervous symptoms</p>	<p>(a) YES - please specify:-</p> <p>(b) NO</p> <p>DOUBTFUL - please specify:-</p> <p>NOT APPLICABLE - i.e. no major crisis has occurred</p>
<p>6. What is your present job ?</p>	<p>.....</p> <p>NOT APPLICABLE - e.g. housewife, student, unemployed.</p> <p>please specify:-</p>
<p>7. How many jobs have you had since 1953 ?</p>	<p>.....jobs</p> <p>NOT APPLICABLE</p>
<p>8. How much time (if any) have you taken off work since 1953 <u>because of illness or incapacity</u> ?</p>	<p>(a) NO TIME OFF</p> <p>(b) LESS THAN 6 MONTHS</p> <p>(c) BETWEEN 6 MONTHS AND 2 YEARS OFF</p> <p>(d) MORE THAN 2 YEARS OFF</p> <p>Please specify reasons for time off work, e.g. nervous symptoms, physical illness, etc.</p> <p>NOT APPLICABLE</p>

<p>9. In the last 6 months have you taken any time off work due to illness or incapacity ?</p>	<p>(a) YES - specify how long and the reason:-</p> <p>(b) NO</p> <p>NOT APPLICABLE</p>
<p>10. How would you describe the management of your housework ?</p>	<p>(a) SATISFACTORY i.e. able to manage without serious difficulty.</p> <p>(b) POOR i.e. unable to manage at all.</p> <p>(c) MEDIOCRE i.e. able to manage but only with considerable difficulty, or competent at times but unable to manage at other times.</p> <p>DOUBTFUL</p> <p>NOT APPLICABLE</p>
<p>11. Have you any <u>close</u> friends ? (i.e. friends with whom you share complete trust and mutual affection, these friendships, circumstances permitting, being of a lasting nature)</p>	<p>(a) YES</p> <p>(b) NO</p> <p>DOUBTFUL</p>
<p>12. Have you any <u>superficial</u> friends ? (i.e. acquaintances whom you like and with whom you are on good terms)</p>	<p>(a) YES</p> <p>(b) NO</p> <p>DOUBTFUL</p>

<p>13. Do you have any difficulty in mixing with people ?</p>	<p>(a) YES - please specify:- (b) NO DOUBTFUL</p>
<p>14. Do you have any difficulty in getting on with any members of your own family ?</p>	<p>(a) YES - please specify:- (b) NO DOUBTFUL</p>
<p>15. Do you often meet people with whom you feel ill at ease or cannot get on ?</p>	<p>(a) YES - please specify:- (b) NO DOUBTFUL</p>
<p>16. Is your sexual life completely satisfactory ?</p>	<p>(a) YES (b) NO - please specify:- DOUBTFUL - please specify: NOT APPLICABLE</p>
<p>17. What is your present civil status ?</p>	<p>(a) SINGLE (b) MARRIED (c) WIDOWED (d) SEPARATED (e) DIVORCED</p>

18. Is your marriage marred by constant bickering, major recurring rows, or any other unsatisfactory features ?

(a) YES - please specify:-

(b) NO

NOT APPLICABLE

19. Have you at any time since 1953 been separated by choice ?

(a) YES - please specify for how long and the reasons

(b) NO

NOT APPLICABLE

20. Have you the desire or intention to separate ?

(a) YES

(b) NO

DOUBTFUL - please specify:

NOT APPLICABLE

21. What are your usual feelings towards your spouse ?

(a) POSITIVE i.e. love, affection, fondness.

(b) NEGATIVE i.e. active dislike.

(c) INDIFFERENT i.e. 'no feelings' 'couldn't care less'.

(d) MIXED i.e. uncertain of your feelings, or your feelings vary considerably.

NOT APPLICABLE

22. Please indicate how the complaints listed opposite have been over the last 5 years compared with how they were during your illness in 1953 ?

1. (a) ABSENT
(b) BETTER
(c) UNCHANGED
(d) WORSE

DOUBTFUL

please specify:-

2. (a) ABSENT
(b) BETTER
(c) UNCHANGED
(d) WORSE

DOUBTFUL

please specify:-

3. (a) ABSENT
(b) BETTER
(c) UNCHANGED
(d) WORSE

DOUBTFUL

please specify:-

4. (a) ABSENT
(b) BETTER
(c) UNCHANGED
(d) WORSE

DOUBTFUL

please specify:-

COMMENTS:

23. Please indicate how these complaints have been in the last six months compared with how they were during your illness in 1953.

1. (a) ABSENT

(b) BETTER

(c) UNCHANGED

(d) WORSE

DOUBTFUL

please specify:-

2. (a) ABSENT

(b) BETTER

(c) UNCHANGED

(d) WORSE

DOUBTFUL

please specify:-

3. (a) ABSENT

(b) BETTER

(c) UNCHANGED

(d) WORSE

DOUBTFUL

please specify:-

4. (a) ABSENT

(b) BETTER

(c) UNCHANGED

(d) WORSE

DOUBTFUL

please specify:-

COMMENTS:

<p>24. Have you, at any time <u>since your discharge from hospital</u> developed any <u>other</u> symptoms ?</p>	<p>(a) YES - please specify:- (b) NO DOUBTFUL - please specify:-</p>
<p>25. Have you <u>in the last 6 months</u> developed any <u>other</u> symptoms ?</p>	<p>(a) YES - please specify:- (b) NO DOUBTFUL - please specify:-</p>
<p>26. Have you been under any medical care for your 'nerves' <u>since 1953</u> ?</p>	<p>(a) YES - please specify name of hospital and/or doctor, approximate dates, and type of treatment:- (b) NO DOUBTFUL - please specify:-</p>
<p>27. Are you <u>at present</u> under any medical care for your 'nerves' ?</p>	<p>(a) YES - please specify name of hospital and/or doctor and type of treatment:- (b) NO DOUBTFUL - please specify:-</p>

28. Have you been an in-patient
in any hospital since
for treatment of your
'nerves' ?

- (a) YES - for less than 6 months
- (b) YES - between 6 and 18 months
- (c) YES - for more than 18 months

Please specify name of hospital,
approximate dates and type of
treatment:-

- (d) NO

29. Considering your nervous
condition over the last 6
months, how would you
describe yourself ?

- (a) RECOVERED
- (b) MUCH IMPROVED
- (c) SLIGHTLY IMPROVED
- (d) NOT IMPROVED - UNCHANGED
- (e) WORSE

COMMENTS:-

30. Considering your nervous
condition over the last 5
years how would you
describe yourself ?

- (a) RECOVERED
- (b) MUCH IMPROVED
- (c) SLIGHTLY IMPROVED
- (d) NOT IMPROVED - UNCHANGED
- (e) WORSE

COMMENTS:

APPENDIX III

CHANGES IN DIAGNOSIS AT FOLLOW-UP

In 6 patients the diagnosis was changed as follows:-

Case I. a married woman aged 30, was admitted with an 8 year history of episodes of irritability, depression and feeling of unreality. She had received a course of E.C.T. at another hospital shortly before key admission.

On the Professorial Unit she was noted to have slight weakness of the left ankle and an equivocal left Plantar Response. Various investigations were commenced but the patient discharged herself, after 18 days, before the investigations could be completed. The diagnosis recorded at key discharge was Depersonalisation Syndrome ? Depression ? Organic (Code 318).

She was readmitted on 2 subsequent occasions when investigations revealed evidence of Cerebral Atrophy. The diagnosis recorded was Organic Deterioration (Code 309) but the cause could not be definitely established. Follow-up enquiries revealed that her mental and physical condition gradually deteriorated; she died five years after key discharge and at autopsy unequivocal evidence of Disseminated Sclerosis was found.

In retrospect it was considered that her mental symptoms were attributable to Disseminated Sclerosis.

Case II. a married woman aged 64, was admitted with depression, weight loss, back pain, and a preoccupation with bowel functions; these symptoms had been present for 3-4 years.

Six years before admission she had been treated with Radium for Carcinoma of the Cervix and the patient was aware of the diagnosis. During key admission spinal metastases were discovered and she was transferred to a general hospital forthwith. The diagnosis recorded was Reactive depression (Code 314) and Spinal metastases from Carcinoma of Cervix.

At follow-up, 5 years later, the patient was subject to grand mal attacks and showed gross memory impairment, disorientation for time, and motor aphasia; these changes were considered indicative of organic cerebral pathology associated with Carcinomatosis.

The original diagnosis of Reactive Depression was considered unjustified as her symptoms were clearly attributable to her physical illness and not part of a neurotic syndrome.

Case III, was a single woman of 42 who complained of depression and loss of energy for two months and was admitted after she had taken an overdose of barbiturates. She had always been an anxious worrying person who was extremely self-conscious and felt "inferior". Several years previously she had suffered from a depressive illness from which she had recovered spontaneously within 2 months. During key admission she was treated by supportive measures and her depression cleared up within 3 weeks. She was discharged with a diagnosis of Reactive Depression (Code 314).

She was readmitted on two subsequent occasions during the following 5 years. On these occasions, she exhibited for the first time, retardation of speech and behaviour, paranoid ideas, and ideas of guilt, in association with depression. She was treated with E.C.T. on both subsequent admissions and the diagnosis made on discharge by the Consultant in Charge was Depressive Illness (Code 301.1), i.e. a so-called endogenous or psychotic depression.

At follow-up this patient was still depressed and expressed definite and unfounded ideas of guilt. Although during key admission there was no evidence of any psychotic features in her mental state, subsequently these came to light and therefore this patient was regarded as suffering from an "Endogenous" Depressive Illness.

Case IV, a married woman aged 63, with a normal premorbid personality and no previous history of mental illness was admitted with depression of 3 months' duration. During key admission she was reported to be extremely retarded and to have expressed nihilistic delusions (for example "my stomach and bowels have gone - my inside is empty"), and was convinced that she had committed some crime. She recovered with E.C.T. and was diagnosed at discharge as Depressive Reaction (Code 314). She was readmitted two years later to the Professorial Unit with a similar mental picture and the diagnosis on this occasion was Recurrent Depressive Illness (Code 301.1). This diagnosis of "Endogenous" Depression was also made when she was admitted one year later to a mental hospital.

At follow-up interview 6 years after key discharge she was symptom-free. It was considered that in view of her nihilistic delusions and delusions of guilt during key illness, she was suffering from an "Endogenous" Depressive Illness at that time.

Case V, was a married woman aged 40 admitted with a history of recurrent episodes of depression and anxiety for 10 years. She was described as an immature personality with frequent histrionic behaviour, and a history of promiscuity associated with sexual frigidity.

During key admission she complained of depression and weakness, and had attacks of palpitations, breathlessness and sweating. She improved considerably after a course of modified Insulin and supportive interviews, and was discharged with the diagnosis Neurotic Depressive Reaction in an immature Personality.

18 months later she was readmitted and on this occasion presented an entirely different clinical picture. She had several months previously seen a redhaired girl in the street and had immediately developed the idea that this girl, who resembled another woman who was attracted to her husband, was the centre of a plot against her. Over the next few months she began to express various ideas of reference and when finally admitted she was convinced that neighbours were photographing her, that her name had been mentioned on the radio and in the press and that these happenings were all part of a conspiracy against her. She was diagnosed as Paranoid Schizophrenia.

At follow-up she was in a mental hospital and her clinical picture was identical to the one described above. It is arguable that this patient had a neurotic illness and later developed Paranoid Schizophrenia, or, on the other hand, that her neurotic symptoms were really the prodromata of the schizophrenic illness. The former explanation seems more likely as there was no evidence whatever of any of the primary symptoms of Schizophrenia during the key illness; but as retrospective judgment in these issues is unreliable, it was judged wise to exclude this patient from the series.

Case VI, a single man aged 31, was admitted with a 12 months' history of depression, feelings of inadequacy, inability in making any decision and suicidal ideas. He had received E.C.T. and Ether abreactations elsewhere before admission without benefit. He was described as having an abnormal premorbid personality, shy, self-conscious, always daydreaming and ill at ease with people.

He was treated by supportive measures and discharged with the diagnosis Neurotic Depressive Reaction in an inadequate Personality.

At follow-up this patient presented a bizarre appearance - he was dirty, unkempt, and wore strange clothes. He expressed various ideas of reference, for example that strangers laughed at him and made gestures which were highly significant, and he felt that the author was involved in some plot with these strange people. It was apparent that he was suffering from Paranoid Schizophrenia and this diagnosis was confirmed from 2 mental hospitals to which he had been admitted in the interim period. For similar reasons to those obtaining in Case V, he was excluded from the series.

APPENDIX IV

COMPARISON BETWEEN TRACED AND UNTRACED PATIENTS

21 patients (12%) of the original sample were either untraced or refused interview.

A comparison between this group of patients and the rest of the sample with respect to salient features of previous history is set out below.

1. AGE (Table 1)

Differences in age distribution are small and non-significant.

2. SEX (Table 2)

The sex ratios for traced and untraced patients are almost identical.

3. MARITAL STATE (Table 3)

Differences with respect to single and married patients are not significant. However a higher proportion of separated and divorced patients were found in the untraced group (24%) than the traced group (7%); this difference is statistically significant (C.R. = 2.54, $P < .025$).

4. SOCIAL CLASS (Table 4)

No patient in the untraced group was in Social Class I whereas 5% of the traced group (7 patients) were in that class; this difference is not statistically significant (C.R. = 0.95).

TABLE 1.

AGE DISTRIBUTIONS OF TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Age				
	under 30	30 - 39	40 - 49	50 and over	Total
Traced	46 (29.9%)	46 (29.9%)	42 (27.3%)	20 (13%)	154 (100.1%)
Untraced	8 (38.1%)	5 (23.8%)	5 (23.8%)	3 (14.3%)	21 (100%)
Total	54 (30.9%)	51 (29.1%)	47 (26.9%)	23 (13.1%)	175 (100%)

TABLE 2.

SEX INCIDENCE IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Sex		
	Male	Female	Total
Traced	49 (31.8%)	105 (68.2%)	154 (100%)
Untraced	7 (33.3%)	14 (66.7%)	21 (100%)
Total	56 (32%)	119 (68%)	175 (100%)

MARITAL STATE OF TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Marital State				
	Single	Married	Widowed	Separated and Divorced	Total
Traced	54 (35.1%)	84 (54.5%)	5 (3.2%)	11 (7.1%)	154 (99.9%)
Untraced	6 (23.6%)	10 (47.6%)	- -	5 (23.8%)	21 (100%)
Total	60 (34.3%)	94 (53.7%)	5 (2.9%)	16 (9.1%)	175 (100%)

T A B L E 4

SOCIAL CLASS IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Social Class							
	I	II	III	IV	V	Total	N.K.	Grand Total
Traced	7 (4.8%)	23 (15.7%)	87 (59.6%)	14 (9.6%)	15 (10.3%)	146 (100%)	8	154
Untraced	- -	3 (16.7%)	11 (16.1%)	2 (11.1%)	2 (11.1%)	18 (100%)	3	21
Total	7 (4.3%)	26 (15.8%)	98 (59.8%)	16 (9.8%)	17 (10.4%)	164 (100.1%)	11	175

5. FAMILY HISTORY (Table 5)

A history of mental illness was obtained in 50% of untraced patients and 36% of traced patients; this difference is not statistically significant (C.R. = 1.21).

6. CHILDHOOD ENVIRONMENT (Table 6)

61% of untraced patients were considered to have had an adverse childhood environment, compared with 45% of traced patients; this difference is not statistically significant (C.R. = 1.27).

7. CHILDHOOD NEUROTIC TRAITS (Table 7)

A history of childhood neurotic traits was found in a higher proportion of untraced patients (72%) than of traced patients (49%) but this difference is not statistically significant (C.R. = 1.84).

8. INTELLIGENCE (Table 8)

A higher proportion of patients have an I.Q. over 110 in the untraced group, as compared with the rest of the sample. None of the patients with an I.Q. under 90 were untraced. Numbers are small and these differences are not statistically significant.

9. PREMORBID PERSONALITY (Table 9)

The proportions of patients with normal and abnormal premorbid personalities in the traced and untraced groups are almost identical.

TABLE 5

FAMILY HISTORY IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient sample	Family History				
	Mental Illness	Nil	Total	N.K.	Grand Total
Traced	51 (36.4%)	89 (63.6%)	140 (100%)	14	154
Untraced	10 (50%)	10 (50%)	20 (100%)	1	21
Total	61 (38.1%)	99 (61.9%)	160 (100%)	15	175

TABLE 6

CHILDHOOD ENVIRONMENT IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Childhood Environment				
	Adverse	Satisfactory	Total	N.K.	Grand Total
Traced	59 (45%)	72 (55%)	131 (100%)	23	154
Untraced	11 (61.1%)	7 (38.9%)	18 (100%)	3	21
Total	70 (47%)	79 (53%)	149 (100%)	26	175

TABLE 7

CHILDHOOD NEUROTIC TRAITS IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Childhood Neurotic Traits				
	Present	Absent	Total	N.K.	Grand Total
Traced	60 (48.8%)	63 (51.2%)	123 (100%)	31	154
Untraced	13 (72.2%)	5 (27.8%)	18 (100%)	3	21
Total	73 (51.8%)	68 (48.2%)	141 (100%)	34	175

TABLE 8

ESTIMATES OF INTELLIGENCE IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	I. Q.					
	>110	90 - 110	< 90	Total	N.K.	Grand Total
Traced	39 (29.5%)	79 (59.9%)	14 (10.6%)	132 (100%)	22	154
Untraced	9 (47.4%)	10 (52.6%)	-	19 (100%)	2	21
Total	48 (31.8%)	89 (58.9%)	14 (9.3%)	151 (100%)	24	175

TABLE 9

PREMORBID PERSONALITY IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Premorbid Personality		
	Normal	Abnormal	Total
Traced	68 (44.2%)	86 (55.8%)	154 (100%)
Untraced	9 (42.9%)	12 (57.1%)	21 (100%)
Total	77 (44%)	98 (56%)	175 (100%)

10. PREVIOUS ILLNESSES (Table 10)

No significant differences between traced and untraced patients were found with respect to previous illnesses.

11. PRECIPITATING FACTORS (Table 11)

A history of precipitating factors was reported in 71% of untraced and 53% of traced patients; the difference is not statistically significant (C.R. = 1.55).

12. DURATION OF SYMPTOMS (Table 12)

A greater proportion of untraced patients (52%) had symptoms for less than 6 months before admission as compared with traced patients (27%); this difference is statistically significant (C.R. = 2.83, $P < .005$).

13. DIAGNOSIS (Table 13)

The diagnoses Phobic Reaction and Mixed Neurotic Reaction were not represented in the untraced group whereas these diagnoses applied to 6 patients and 19 patients respectively in the total sample; these differences are not statistically significant. In other diagnostic groups only small differences are found.

These results indicate that untraced patients do not differ significantly from the rest of the sample in respect of most salient features in the previous history. Differences which are statistically significant occur in respect of (a) marital state, a

higher proportion of separated and divorced patients being found in the untraced group than among the rest of the sample; and (b) duration of symptoms before key admission, a higher proportion of untraced patients having symptoms for less than 6 months.

PREVIOUS ILLNESSES IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Previous Illnesses					
	Psychiatric	Organic with persisting handicap	Organic; no persisting handicap	Organic and Psychiatric	Nil	Total
Traced	36 (23.4%)	17 (11%)	13 (8.4%)	12 (7.8%)	76 (49.4%)	154 (100%)
Untraced	5 (23.8%)	3 (14.3%)	3 (14.3%)	-	10 (47.6%)	21 (100%)
Total	41 (23.4%)	20 (11.4%)	16 (9.1%)	12 (6.9%)	86 (49.1%)	175 (99.9%)

T A B L E 11

PRECIPITATING FACTORS IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Precipitating Factors		
	Present	Absent	Total
Traced	81 (52.6%)	73 (47.4%)	154 (100%)
Untraced	15 (71.4%)	6 (28.6%)	21 (100%)
Total	96 (54.9%)	79 (45.1%)	175 (100%)

DURATION OF SYMPTOMS IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Duration of Symptoms					
	under 6 months	6 months - 2 years	2 - 5 years	over 5 years	Life-long	Total
Traced	42 (27.3%)	46 (29.9%)	26 (16.9%)	25 (16.2%)	15 (9.7%)	154 (100%)
Untraced	11 (52.4%)	4 (19%)	2 (9.5%)	3 (14.3%)	1 (4.8%)	21 (100%)
Total	53 (30.3%)	50 (28.6%)	28 (16%)	28 (16%)	16 (9.1%)	175 (100%)

T A B L E 13

DIAGNOSES IN TRACED AND UNTRACED PATIENTS

(Numbers and Percentages of Patients)

Patient Sample	Diagnosis						Total
	Depressive Reaction	Hysterical Reaction	Anxiety Reaction	Obsessive-Compulsive Reaction	Phobic Reaction	Mixed Neurotic Reaction	
Traced	53(34.4%)	15(9.7%)	40(26%)	21(13.6%)	6(3.9%)	19(12.3%)	154(99.9%)
Untraced	9(42.9%)	2(9.5%)	8(38.1%)	2(9.5%)	-	-	21(100%)
Total	62(35.4%)	17(9.7%)	48(27.4%)	23(13.1%)	6(3.4%)	19(10.9%)	175(99.9%)

BIBLIOGRAPHY

- ADAMS, G.F. & MERRETT, J.D.(1961). Brit.med.J. 1:309.
- ALEXANDER, L.(1953(a)). Treatment of Mental Disorders.
pp.483,484. Philadelphia : Saunders.
- ALEXANDER, L.(1953(b)). Ibid., p.42.
- ANDERSON, E.W.(1957). In Medical Annual, p.247
Bristol : Wright
- ASTIN, A.W.(1961). Amer.Psychologist, 16:75
- BAILEY, N.T.J., & WITTS, L.J.(1959). In Medical Surveys
and Clinical Trials edited by WITTS, L.J.
p.18, London : Oxford University Press.
- BENNETT, A.E. & SEMRAD, E.V.(1936). Neb.St.med.J. 21:90.
- BERG, I.A.,(1952). J.clin.Psychol., 8:60.
- BERNARD, Claude,(1865). An Introduction to the Study of
Experimental Medicine transl.
H.C.Green; p.194. New York : Dover
Publications 1957.
- BLAIR, R., GILROY, J.M., & PIKINGTON, F. (1957).
Brit.med.J. 1:318.
- BOARD, F.(1959). A.M.A.Arch.gen.Psychiat. 1:185.
- BOND, E.D. & BRACELAND, F.J.(1937). Amer.J.Psychiat.
94:263.
- BOWMAN, K.M. & ROSE, M.(1951). Amer.J.Psychiat. 108:161
- BRADFORD HILL, A.(1961). Principles of Medical Statistics.
7th ed. London : The Lancet Ltd.
- BRILL, N.Q. & BEERE, G.W.(1955). A Follow-Up Study of War
Neuroses. Washington : Government
Printing Office.
- BROOKE, E.M.(1959). J.ment.Sci. 105:893
- BROWN, F.W. (1942). Proc.R.Soc.Med. 35:785.
- BURNET, M. (1953). Lancet 1:103.

- CANESTRINI, L. & MORENO, M.(1957). Studio catamnestico delle personalita nevrotiche. (Collana di studi sui problemi medico-sociali (XLII). Editore Roma.
- CARSTAIRS, G.M.(1958). J.ment.Sci., 104:63.
- CHAFMAN, A.H.(1963). Amer.J.Psychiat., 119:768.
- COBB, S. (1950). Neurol.Psychiat.Neurol. 120:316.
- COMES, A.W. & SNYGG, D.(1959). Individual Behaviour, p.239, New York : Harper.
- COMROE, B.I. (1936). J.nerv.ment.Dis. 83:679.
- COON, G.P. & RAYMOND, A.(1940). A Review of the Psychoneuroses at Stockbridge. Stockbridge, Mass., : Austen Riggs Foundation Inc. Cited by MILES et al. (1951).
- Council of the College of General Practitioners, Working Party Report (1958). Brit.med.J. 2:585.
- CURRAN, D. (1937). Lancet 2:1005.
- CURRAN, D. (1952). J.ment.Sci., 98:378.
- DENKER, P.G. (1946) N.Y.St.J.Med. 46:2164.
- DIETHELM, O. (1953). In Current Problems in Psychiatric Diagnosis, edited by HOCH P. & ZUBIN J. Chapter III. New York : Grune & Stratton.
- DOLL, R. (1959). In Medical Surveys and Clinical Trials edited by WITTS, L.J., p.78, London : Oxford University Press.
- DÜRSSEN, A. (1957). Z.psychosom.Med. 3:210.
- ETTINGER, L. (1955). Acta psychiat.scand. Suppl. 101.
- ERNST, K. (1959). Die Prognosen der Neurosen. Monogr. Neurol. Psychiat. No.85.
- FENICHEL, O. (1930). In Zehn Jahre Berliner Psychoanalytisches Institut. Wien : Internationaler Psychoanalytischer Verlag.

- HOCH, P.H. (1953). In Current Problems in Psychiatric Diagnosis, edited by HOCH, P.H. & ZUBIN, J., pp.46-50, New York : Grune & Stratton.
- HOLLINGSHEAD, A.B.(1961). In Comparative Epidemiology of the Mental Disorders, edited by HOCH,P.H. & ZUBIN,J., pp. 252-253, New York : Grune & Stratton.
- HOLLINGSHEAD, A.B., & REDLICH, F.C.(1958). Social Class and Mental Illness. A Community Study. New York ; Wiley.
- HOLMBOE, R. & ASTRUP, C.(1957). Acta psychiat.scand., Suppl.115.
- HONEY, G.E. & TRUELOVE, S.C.(1957). Lancet, 1:1155.
- HUNT, W.A. WITTON, C.L. & HUNT, E.B.(1953). In Current Problems in Psychiatric Diagnosis, edited by HOCH, P.H. & ZUBIN, J. Chapter V, New York : Grune & Stratton.
- INGHAM, H. (1949). Amer.J.Psychiat. 106:91.
- JACOBSON, J.R. & WRIGHT, K.W.(1942). Psychiat.Quart. 16:744.
- Joint Report by Medical Research Council and American Heart Association (1960). Brit.med.J. 2:1033.
- KESSEL, N. & SHEPHERD, M.(1962). J.ment.Sci. 108:159.
- KESSEL, L. & HYMAN, H.T.(1933). J.Amer.med.Ass. 101:1612.
- KNIGHT, R.P. (1941). Amer.J.Psychiat. 98:434.
- KOLB, L.C. (1959). In A Textbook of Medicine, edited by CECIL, R.L. & LOEB, R.F., 10th ed. p.1612. Philadelphia : Saunders.
- KREITMAN, N.(1961). J.ment.Sci. 107:876.
- KREITMAN, N., SAINSBURY, P., MORRISSEY, J., TOWERS, J., & SCRIVENER, J. (1961). J.ment.Sci. 107:887.

- LANDIS, C. (1938). In Concepts and Problems of Psychotherapy edited by HINSIE, L.E. Chapter V. London : Heineman.
- LANGEN, D. & VEIT, H. (1954). Zachr.Psychother.med.Psychol. 4:281.
- LANGFELDT, G. (1956). Acta psychiat.scand., Suppl.110.
- Leading Article (1962). Med.J.Aust. 2:349.
- LEEKAU, P.V. (1955). Amer.J.Psychiat. 111:801.
- LEWIS, A.J. (1934). J.ment.Sci. 80:277.
- LEWIS, A.J. (1935). Lancet 2:293.
- LEWIS, A.J. (1936). Proc.R.Soc.Med. 29:325.
- LEWIS, A.J. (1958). Lancet, 1:171.
- LJUNGBERG, L. (1957). Acta psychiat.scand. Suppl. 112.
- LIFF, M.C. & GARROD, M.(1935). Brit.med.J. 2:54.
- LUNDQUIST, G. (1945). Acta psychiat.scand. Suppl. 35.
- MADOW, L. & HARDY, M. (1947). Amer.J.Orthopsychiat. 17:521.
- MAPOTHER, E.(1935). Medical Superintendent's Report: Period from 1st January 1932 to 31st December 1935. The Maudsley Hospital (University of London).
- MASSEMAN, J.H. & CARMICHAEL, H.T.(1938). J.ment.Sci. 84:893.
- MATZ, P.B.(1929). Psychiat.Quart. 3:550.
- MAYER GROSS, W., SLATER, E. & ROTH, M. (1960). Clinical Psychiatry 2nd ed., p.2, London : Cassell.
- MEHL, P.E.(1955). Annu.Rev.Psychol., 6:357.
- MIDDENDORP-MOOR, V.(1957). Psyche (Heidelberg) 10:664.
- MILES, H.H.W., BARRABEE, E.L. & FINESINGER, J.E. (1951). Psychosom.Med. 13:83.

- MÜLLER, C.(1953). Nervenarzt. 24:112.
- NEUSTÄTTER, W.L.(1935) Lancet 1:796.
- NORRIS, V.(1959). Mental Illness in London, Maudsley Monogr. No.6,
London : Chapman & Hall.
- NOYES, A.P. & KOLB, L.C.(1958). Modern Clinical Psychiatry. 5th ed.,
p.494. London : Saunders.
- NUNBERG, H. (1959). In Readings in Psychoanalytic Psychology edited
by LEVITT, M., p.311. London : Staples.
- OBERNDORF, C.P.(1953). In Current Problems in Psychiatric Diagnosis,
edited by HOCH, P.H. & ZUBIN, J., Chapter VII,
New York : Grune & Stratton.
- ORBISON, T.J.(1925). Calif.& West.Med. 23:1132.
- PASAMANICK, B., DINIITZ, S., & LEFTON, L.,(1959) Amer.J.Psychiat. 116:127.
- PASCAL, G., SWENSEN, C., FELDMAN, D., COLE, M., & BAYARD, J.(1953).
J.cons.Psychol. 17:163.
- PAULETT, J.(1956). Lancet 2:36.
- POLLITT, J.(1957). Brit.med.J. 1:194.
- POLLITT, J.D.(1960). J.ment.Sci., 106:93.
- REDLICH, F.C., HOLLINGSHEAD, A.B., ROBERTS, B., ROBINSON, H., FREEDMAN,
L., & MYERS, J. (1953). Amer.J.Psychiat. 109:729.
- RENNIE, T.A.C. (1942). Amer.J.Psychiat. 98:801.
- RENNIE, T.A.C. (1953). In Current Problems in Psychiatric Diagnosis,
edited by HOCH, P., & ZUBIN, J. Chapter VI.
New York : Grune & Stratton.
- ROBERTS, A.H.(1964). Brit.J.Psychiat., 110:191.
- ROSS, T.A.(1936). An Enquiry Into Prognosis in the Neuroses.
Cambridge : The University Press.

- RÜDIN, E. (1953). Arch. Psychiat. Z. Neurol. 191:14.
- RYLE, J. (1936). The Natural History of Disease. London : Oxford University Press.
- SCHILDER, P. (1939). Ment. Hyg. 23:87.
- SCHJELDERUP, H. (1955). Psychiatry. 18:109.
- SCHMIDT, H.O. & FONDA, C.P. (1956). J. abnorm. soc. Psychol. 52:262
- SCHOU, H.I. & VORBECK, H. (1941). Ugeskr. Laeg. 103:1655. cited by EITINGER, L. (1951).
- SEEMAN, J. (1959). Amer. Psychologist. 14:633.
- SHAPIRO, H.D. & FREEMAN, W. (1939). Med. Ann. District of Columbia. 8:65.
- SHEPHERD, M. (1957). Millbank mem. Rd. quart. Bull. 35:88.
- SHOEN, E.J. (1957). Amer. Psychologist. 12:183.
- STENGEL, E. (1960). Proc. R. Soc. Med. 53:123.
- STENDSTEDT, A. (1952) Acta psychiat. scand. Suppl. 79.
- STEVENSON, I. (1959). A.M.A. Arch. gen. Psychiat. 1:99.
- STROMGREN, E. (1961). In Comparative Epidemiology of the Mental Disorders, edited by HOCH, P.H., & ZUBIN, J. Chapter VIII, New York : Grune & Stratton.
- SYDENHAM, Thomas (1681). Epistolary Dissertation. In The Works of Thomas Sydenham, transl. R. LATHAM, Vol. 2., p. 85. London : The Sydenham Society 1850.
- TAYLOR, A.R., MILLIKEN, J.R. & DAVISON, P.P. (1960). Brit. med. J. 2:1356.
- TERHUNE, W.B. (1949). Arch. Neurol. Psychiat., Chicago 62:162.
- THORLEY, A. & CRASKE, N. (1950). Brit. med. J. 1:97.

- THUELOVE, S.C. (1959). In Medical Surveys and Clinical Trials
Chapter V, London : Oxford University Press.
- WALLACE, H. & WHITE, M.(1959). Brit.med.J., 1:144.
- WEINER, J., & STRÖMGREN, E.(1958). Acta psychiat.scand. 33:377.
- WENGER, P.(1934). Wien.med.Wochr. 84:320.
- WHEELER, E.O., WHITE, P.D., REED, E.W., & COHEN, M.E. (1950).
J.Amer.med.Ass. 142:878.
- WILDER, J.(1945). J.clin.Psychopath. 7:311.
- WOODSIDE, N.(1953). Guy's Hosp.Rep., 102:70.
- WORLD HEALTH ORGANISATION (1947). Manual of the International
Statistical Classification of Diseases, Injuries
and Causes of Death. Geneva : W.H.O.
- YASKIN, J.C.(1936). Amer.J.Psychiat. 93:107.
- ZIEGLER, L.H. & HENSEMA, P.H.(1942). Amer.J.Psychiat. 99:813.
- ZIEGLER, D. & PAUL, N.(1954). Dis.nerv.Syst. 15:301.
- ZUBIN, J.(1953). In Current Problems in Psychiatric Diagnosis
Edited by HOCH, P.H. & ZUBIN, J. pp.112-114,
New York : Grune & Stratton.