NEUROTIC DISORDERS IN URBAN PRACTICE: A THREE-YEAR FOLLOW-UP

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RESEARCH in general practice can provide much badly needed information about all the minor forms of morbidity which, though not for the most part severe enough to warrant hospital or specialist attention, nevertheless represent a heavy burden on the community in terms of distress and loss of working efficiency. Among such disorders the neuroses occupy a position which importance has been attested by the findings of numerous surveys. While the incidence of most infectious diseases has fallen steeply with improved standards of nutrition, hygiene and medical treatment, there is no evidence that the general amelioration of living conditions in modern industrial society has brought about any corresponding decrease in neurotic illness: indeed many observers hold the reverse to be true. Evidently, therefore, the neuroses must be placed among those categories of morbidity which are gaining prominence as public health concerns of our society.

Study of the literature reveals how little is known about the natural history of the minor psychiatric disorders subsumed under the term 'neurosis'. Such knowledge is an essential prerequisite for the evaluation of any form of therapy, as well as for the prediction of outcome in individual cases. Most of the prognostic studies reported to date must be deemed unsatisfactory from both these standpoints. Of those undertaken to determine the efficacy of particular methods of treatment, few have been adequately controlled. Moreover, almost all have been based on the observation of former hospital patients, who in this context cannot be accepted as representative. Greer (1961), discussing the findings of his own exceptionally thorough and methodical investigation of such patients, commented that "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".

This paper describes some aspects of such an investigation undertaken in the field of general practice.

During 1961-2 a large-scale prevalence survey was carried out in 46 metropolitan practices. The results, which have been presented elsewhere (Shepherd *et al.* 1964; Cooper 1965; Shepherd *et al.* 1966), showed that of a total of 15,000 persons at risk approximately 2,000 had consulted at some time during the survey year with a medical condition regarded by their own doctors as largely or entirely of a psychiatric nature. Most of these were described as relatively mild neurotic disturbances, but there was some evidence that a large proportion were of long duration, just over half having been present for at least one year prior to the index consultation. This finding suggested that the forms of ill-health represented were largely chronic in nature, and that long-term studies would be necessary to chart their course and outcome. Moreover, since the great majority of the patients concerned had not received any specialist attention for their neurotic disorders, it was clear that the latter formed part of the spectrum of psychiatric morbidity not adequately represented in studies of hospital case-material. A follow-up study was therefore planned to trace the subsequent history of the identified cases and the patterns of treatment and management employed by the survey practitioners.

Method

The current follow-up investigation is being carried out in all but two of the original survey practices, in every case as nearly as possible three years from the date of the index consultation. This time interval was thought appropriate, first because it should be sufficient to give some indication of the natural history of the conditions under scrutiny; secondly, because the rate of patient turn-over in modern urban practice would make it difficult to follow-up a high proportion of any sample of patients over a longer period.

Information is being collected by the following means:

1. Study of the patients' N.H.S. medical records, with particular reference to the patterns of medical consultation and to any hospital or other specialist referral during the follow-up period.
2. Interview with the practitioner (or practitioners) most in touch with each case, to ascertain his view of the patient's progress and current state of physical and mental health, as well as any relevant information about the family and social background and the methods of treatment employed.
3. Returns from a postal questionnaire sent to each patient with a covering letter from his or her doctor. The questionnaire, which has been designed specially for this enquiry, covers matters pertaining to general health, but is also intended to yield evidence of any current psychiatric disturbance.
4. In addition to these methods, which are being utilized for all the patients included in the follow-up study, domiciliary interviewing by trained psychiatrists is being undertaken on sub-samples comprising a total of

about 200 patients. It is hoped that these interviews will provide a means of evaluating the data obtained from other sources, as well as giving a more detailed and comprehensive picture of the clinical and social characteristics of the sample.

The present report outlines the findings of a preliminary analysis of the data for all those patients in a group of 13 practices identified as psychiatric cases during the first quarter of the survey year (Oct.–Dec. 1961) and followed up at the end of 1964.

No details need be given here of the demographic and social features of the follow-up sample: in respect of age and sex distribution, marital status, social class, occupation and length of time registered in the survey practices these patients resembled the larger group of psychiatric cases from which they were drawn, and which has been fully described in previous reports. One source of bias, however, should be noted: no less than 73 per cent of the present sample had been classified as 'chronic' cases in the original survey, as against 55 per cent of the whole psychiatric group. The excess of chronic cases may be ascribed to the method of selecting the present sample, which was drawn from cases reported in the first quarter of the survey year. Since chronic psychiatric patients have consultation rates well above average, they will tend to figure disproportionately among the earlier attenders in any general practice survey. This expectation was confirmed by the main survey analysis, which showed that the proportion of chronic psychiatric cases among patients consulting in the first quarter was significantly higher than in subsequent quarters. The resultant bias affecting the present follow-up sample should be borne in mind when the findings relating to outcome are considered.

Results

Rate of successful follow-up

Of the 356 patients comprising the sample, 277 (77·8 per cent) were still registered in the survey practices at the end of 1964. The remainder were accounted for as follows:

Died	14
Removed	41
Transferred	6
Emigrated	2
No record	16
Total	79

In view of the administrative difficulties, no attempt was made to trace those patients who had removed, emigrated or transferred to other doctors. Information was obtained about all the patients still registered, both by perusal of their medical records and by questioning the doctors concerned. In addition, 229 of these

patients completed and returned the health questionnaire sent to them. Of the rest, two were severely ill at the time of the follow-up and died soon afterwards, while a further three who had deteriorated mentally were known to be under long-term institutional care. Apart from these, 27 patients who did not return the health questionnaire had consulted their doctors within three months of the follow-up enquiry, so that the latter were in a position to give fairly up-to-date information on their physical and mental health. Sixteen patients remained unaccounted for, and it was decided that no reliable assessment could be made of their current state of health. Thus, including those known to have died, it proved possible to determine outcome after three years for 275 patients, or 77·2 per cent of the total; while information was obtained from the patients themselves in 64·3 per cent of cases.

Diagnostic classification

For the purposes of the original prevalence survey, the participating doctors had been supplied with a simple diagnostic schema designed to cover any case seen where psychiatric factors were considered to be important. In the event the major psychiatric syndromes accounted for only a small fraction of all the cases reported, and since on present evidence the natural history of these conditions differs widely from that of the minor disorders it was decided to exclude them from the follow-up analysis. Seventeen patients diagnosed as organic or functional psychosis, mental subnormality or dementia have therefore been omitted from the tabulations which follow. The diagnostic distribution of the remaining patients in the follow-up sample is shown in table 1.

TABLE I

PSYCHIATRIC DIAGNOSIS AT INDEX CONSULTATION EXPRESSED AS A PERCENTAGE OF THE WHOLE

Diagnostic group	*Male*	*Female*
	Percentage	*Percentage*
Anxiety states	*24·3*	*27·8*
Depressive reactions	*8·6*	*19·5*
Phobic and obsessional states	*2·8*	*3·0*
Neuroses, other or unspecified	*20·0*	*23·1*
Personality disorders	*7·1*	*2·4*
Psychiatric-associated conditions	*31·4*	*17·1*
Psychosocial problems	*5·7*	*7·1*
Total	*99·9*	*100·0*
No of patients	70	169

A further five cases have been excluded from table 1 because at the

follow-up interview on each the general practitioner, in the light of subsequent events, retracted the psychiatric diagnosis. In each of the 239 cases included in the table the practitioner confirmed his original assessment of the index illness as largely or entirely neurotic. Furthermore, for most of the 16 patients who died during or shortly after the three-year follow-up period the cause of death could be ascribed to chronic degenerative disease already diagnosed at the time of the original survey. The findings therefore do not lend any support to the view that serious physical illness in its early stages is commonly misdiagnosed as neurosis by general practitioners.

The group of disorders labelled ' psychiatric-associated conditions ' comprised all physical ailments considered by the survey doctors to have an important psychological component, whether in aetiology or in the mode of manifestation. It thus included some cases of peptic ulcer, asthma, hypertension and other disorders commonly classed as ' psychosomatic '. In the majority of instances, however, the practitioners employed this category for vague functional complaints or symptoms where no organic aetiology was demonstrable. The relationship of such disturbances to the affective neuroses appeared very close, the two sub groups merging into one another so that many cases might with equal logic have been placed in either. The same considerations applied to the category of ' psychosocial problems ', which was intended to cover any exaggerated or inappropriate responses to environmental stress not amounting to fully developed psychiatric illness. In view of the present unsatisfactory state of psychiatric nosology, all these subgroups may best be considered together under the broad definition of ' neuroses and allied conditions '.

The above conclusion was strengthened by the interviews carried out at follow-up with the survey doctors. At these interviews minor changes of diagnosis were not infrequent, but for the most part appeared to be of little significance. Three patients originally thought to be neurotic were now clearly suffering from psychotic disorders, while in a further nine cases where no improvement had occurred the original diagnosis of neurotic illness was amended to one of personality disorder. For the rest no general trends could be distinguished, and the changes made were largely related to semantic difficulties. It seems probable that in the present state of knowledge the general practitioner's identification of any given case as ' neurotic ' in the broad sense is more reliable than any precise diagnostic label he applies.

Treatment and management

The method of enquiry did not permit any detailed analysis of treatment methods employed by the survey practitioners. Informa-

tion derived from the medical records was not always adequate to determine the nature of the drugs prescribed, let alone their dosage and the length of time for which they had been administered. Data of this kind cannot be expected to accrue from large-scale retrospective surveys. In general, the findings were in conformity with those of more intensive studies such as that by Scott and his colleagues in Edinburgh (Scott *et al.* 1960), which showed that the general practitioner's commonest mode of action consists of brief discussion, explanation and advice, with the prescription of drugs a close second. For the present sample, the barbiturates had been the commonest medication prescribed for overtly psychological or emotional disturbances, though small doses of the phenothiazines and other tranquillizers had also been widely used. Since, however, neurotic patients usually present with complaints of bodily dysfunction, it is not surprising to note that in the follow-up sample symptomatic remedies of one kind and another had been prescribed more often than any specifically psychotropic drugs.

Perhaps the most striking feature of the treatment of this class of patient in general practice is its discontinuous nature. Although, as will be seen, a large proportion of the sample were considered to have been suffering from neurotic disorders throughout the follow-up period, the patterns of consultation and recorded prescriptions indicated that as a rule their complaints had been dealt with symptomatically as they were presented. For many such patients there had been long spells apparently without medical treatment.

The findings also confirmed that only a small fraction of the neurotic patients had been referred to psychiatrists. Three men and 15 women had been under psychiatric specialist care at some time during the follow-up period. Of the remainder, a small number had had psychiatric treatment at some point before the survey year, but not subsequently. In about a dozen cases, the general practitioner at interview said that he would have liked to send the patient to a psychiatrist, but either the patient had rejected the suggestion or, in a few instances, it had not been made because refusal had been judged a foregone conclusion. This left some 85 per cent of the sample for whom, so far as could be elicited, psychiatric referral had never been seriously considered. It is perhaps significant that most of the patients thought to have benefitted from psychiatric specialist treatment had either had electroplexy or had been admitted to inpatient units, or both. Most of the evidence, indeed, suggested that psychiatric referral had been used for this group of patients almost exclusively in dealing with acute exacerbations or situational crises occurring against a background of chronic neurotic disorder.

The general practitioners' assessments of outcome

For convenience of presentation, the general practitioners' assess-

ment of the patient's condition at follow-up has been taken as the primary index of outcome; the evidence of the medical records and the postal questionnaire responses will be considered later in attempting to evaluate these assessments.

In classifying the outcome of neurotic illness, most workers have made use of the broad categories ' recovered or much improved ', ' improved ' and ' not improved or worse '. This simple division was regarded as the most suitable for the present study; indeed it was thought that under the circumstances any attempt at a more elaborate rating system would have been unrealistic. The categories ' recovered ' and ' not improved ' were not difficult to define, but the intermediate category of ' improved ' cases proved more troublesome. In the event, three sub groups could be distinguished:

1. Patients with chronic disorders which had undergone partial remission.
2. Patients who had apparently recovered from the index illness but who subsequently had had one or more further spells of neurotic illness, and who were regarded by the general practitioner as prone to such episodes.
3. Patients who had apparently recovered from the index illness but who in the general practitioners' estimation continued to manifest some character abnormality or residual deficit.

There are obvious difficulties in attempting to distinguish sharply between the more chronic forms of neurotic disorder and the underlying personality structure which renders the individual vulnerable. In practice the three sub groups shaded into one another, and for the purpose of the present analysis they have been taken together simply as ' improved '.

In ten cases no rating could be made on the strength of the general practitioner's knowledge of the case, mostly because the patient had not consulted for a long time. Of the remaining 229 cases, 65 (28·4 per cent) were classed as recovered, 55 (24·0 per cent) as improved and 109 (47·6 per cent) as unimproved or worse. Thus in only half the total number of cases were the doctors able to confirm definite improvement. That this rather surprising result was due in some measure to the preponderance of chronic disorders among the patients selected for the sample is shown by table II, from which it can be seen that the chronic cases had fared worse than the rest.

Since the prevalence of chronic psychiatric disorder is known to be related to age, the finding of a relatively poor outcome for the chronic cases might have been due to an excess among the latter of patients from the higher age-groups. When this possibility was tested by splitting the patient sample about the fifty-year axis to form two age-groups of approximately equal numbers, the association between chronicity and outcome was found to hold good within each age-group, as can be seen from table III below.

TABLE II

COMPARISON OF OUTCOME AT THREE YEARS FOR CHRONIC AND NON-CHRONIC CASES OF NEUROTIC DISORDER BY PERCENTAGE

General practitioner's follow-up assessment	*Original survey classification*	
	Chronic cases	*New or recent cases*
	Percentage	*Percentage*
Recovered or much improved	*18·7*	*60·4*
Improved	*26·8*	*15·1*
Not improved or worse	*54·5*	*24·5*
Total	*100·0*	*100·0*
Outcome unknown	2	8
Number of patients	178	61
($\chi^2 = 34{\cdot}87$; n = 2; P < 0·01)		

TABLE III

OUTCOME FOR CHRONIC AND NON-CHRONIC CASES, BY AGE-GROUP (EXPRESSED AS A PERCENTAGE)

Age-group	*Follow-up assessment*	*Original survey classification*	
		Chronic cases	*New or recent cases*
Patients under fifty	Recovered	*24·4*	*62·1*
	Improved	*23·2*	*13·8*
	Not improved	*52·4*	*24·1*
		100·0	*100·0*
	Number of patients	82	29
	($\chi^2 = 13{\cdot}59$; n = 2; P < 0·01)		
Patients of fifty and over	Recovered	*13·8*	*58·3*
	Improved	*29·8*	*16·7*
	Not improved	*56·4*	*25·0*
		100·0	*100·0*
	Number of patients	94	24
	($\chi^2 = 21{\cdot}54$; n = 2; P < 0·01)		

Thus it appears that the original survey classification of cases as chronic or non-chronic was of some prognostic importance, irrespective of age.

Considerable variation in outcome was found between the main diagnostic groups, the respective proportions of patients assessed at follow-up as recovered or much improved being as follows:

Psychiatric-associated conditions	40·0 per cent
Depressive reactions	36·8 per cent
Other neuroses (including phobic and obsessional states)	28·6 per cent
Psychosocial problems	25·0 per cent
Anxiety states	18·3 per cent
Personality disorders	0·0 per cent

In view of what has been said already as to the doubtful reliability of much psychiatric diagnosis in general practice, it would be wrong to place too much weight on these figures. They do, however, show one or two interesting parallels to the reported findings of other follow-up studies, and taken in conjunction with the latter provide some useful pointers for further enquiry.

Other defined variables were found to bear little or no relation to outcome at follow-up. No sex differential was apparent; nor did marital status seem to have any bearing on the matter. There was a discernible tendency towards a less favourable result for the lower social class groups, but with the numbers available this was not statistically significant ($\chi^2 = 7{\cdot}88$; $n = 4$; $P > 0{\cdot}05$), while testing for trend showed no evidence of any linear relationship between social class and outcome (χ^2 for trend $= 0{\cdot}719$; $n = 1$; $P > 0{\cdot}05$).

Correlation of reported outcome with the health questionnaire returns

The reliability of the general practitioners' assessments of outcome was open to question, on a number of grounds. Some patients had attended only infrequently and had not been seen for long periods preceding the follow-up enquiry; others had been under treatment for serious physical ailments, and it seemed possible that in consequence their neurotic disorders had been lost from view by their doctors, or at any rate disregarded as of minor importance. Furthermore, it has been established that the frequency with which neurotic disorder is diagnosed varies considerably between practices, and is in part determined by the attitudes to psychiatry of individual practitioners (Shepherd *et al.* 1964). To provide some check on the clinical assessments, therefore, they were compared with the patients' own witness, as represented by their answers to the health questionnaire.

For the purposes of this analysis, each patient was allocated to one of two groups, designated respectively ' ill ' and ' well ', on the basis of his or her replies to two sections of the questionnaire. The psychiatrically ' ill ' group was taken to include all those respondents who had specified any overtly psychiatric symptoms in answering the question " . . . what are the main things that worry you about your

health?", or who in completing a check-list of possible current complaints had indicated one or more of the following: Sleeplessness; excessive worry; depression; irritability. Conversely the psychiatrically 'well' group comprised all those who had neither specified any overtly psychiatric symptoms nor indicated on the check-list any of the four complaints listed above. Responses such as "bad nerves" and "nervous trouble" were accepted as *prima facie* evidence of psychiatric disturbance, but vague or non-specific complaints of fatigue, lack of energy, etc., were not considered sufficient qualification; nor was a multiplicity of complaints taken to be in itself evidence of neurotic disorder.

By these criteria, 85 respondents were adjudged 'well' and 115 'ill' at follow-up. The distribution of these two categories according to the general practitioners' clinical assessments is shown in table IV.

TABLE IV

CLINICAL ASSESSMENT RATINGS AT FOLLOW-UP BY HEALTH QUESTIONNAIRE RESPONSES (EXPRESSED AS A PERCENTAGE)

General practitioners' clinical assessments	*Questionnaire responses*	
	Ill	*Well*
Recovered	*18·3*	*48·3*
Improved	*24·3*	*23·5*
Not improved	*57·4*	*28·2*
	100·0	*100·0*
Number of patients	115	85

($\chi^2 = 23{\cdot}40$; n = 2; P < 0·01)

While table IV shows a definite association between the practitioner's assessment and that based on the questionnaire return, the agreement is far from perfect. It is noteworthy that 18 per cent of patients whose questionnaire responses suggested current psychiatric disturbance had been considered normal by their general practitioners at the time of follow-up. It may be that in some of these cases the psychiatric disturbance was so mild as to be disregarded, but it seems likely that in most instances the practitioners were, for one reason or another, unaware of the reported symptoms. The other clearly discrepant group, that of patients reporting no complaints though still regarded by their doctors as unimproved, could be explained by the limited coverage of the questionnaire. It may be, however, that there is often a considerable time-lag in the general practitioner's recognition of a patient's recovery from psychiatric disorder. This possibly was borne out by the observation that on the whole those patients whose follow-up findings were discrepant had not been

attending regularly at the time of the follow-up enquiry. Clinical assessments based on the recollection of old consultations might be expected to provide less reliable guidance than those made on the basis of recent or current spells of sickness.

Relation of outcome at follow-up to consultation patterns

Some further evidence bearing on both these indices of outcome was provided by the patients' recorded consultation patterns during the three years of the follow-up period. While general practitioners' standards of medical record-keeping undoubtedly vary a great deal, those whose patients had been included in the present investigation were all known to be above average in this respect. The possibility of serious bias arising from recording deficiencies therefore seems unlikely, though it cannot be dismissed. The mean consultation rates for this sample of patients, divided according to outcome at follow-up, are set out in table V.

TABLE V

MEAN CONSULTATION RATES BY OUTCOME AT FOLLOW-UP

	Number of patients	*Mean consultation rates (three years)*
General practitioners' clinical rating		
Recovered	65	20·5
Improved	55	26·6
Not improved	109	28·2
Questionnaire ratings		
Psychiatrically 'well'	85	20·2
Psychiatrically 'ill'	115	29·3

The statistical tests employed* confirm a significant association between mean consultation rate and psychiatric condition at the time of follow-up, as assessed either clinically or from the questionnaire responses. On closer examination this finding appeared to be related to a diminished frequency of consultation after the first year of the follow-up period for those patients subsequently assessed as recovered. Because of the relatively small numbers involved, no further statistical analysis of these preliminary data was undertaken.

*The association between clinical rating at outcome and number of consultations, as measured by Kendall's rank correlation coefficient, is $Tb = +0{\cdot}12$. This correlation is significantly different from zero ($t = 2.20$; $P > 0{\cdot}05$) indicating a significant trend towards fewer consultations from not improved, through improved to recovered.

The association between questionnaire ratings and number of consultations can be examined more simply, by testing the significance of the difference between means. Here $t = 3{\cdot}31$, which is highly significant.

So far as they go, the findings with regard to consultation patterns are in conformity with the assessments of outcome supplied both by the general practitioners and by the health questionnaire returns.

Discussion

The most striking feature of the findings presented above is the relatively low proportion of recovered cases, which comprised only 28 per cent of the total. Direct comparison with the results of other published studies is difficult because of the lack of uniformity both in the ratings of outcome employed and in the length of the follow-up period. Greer (1961) found a recovery rate of 30 per cent for his series of former inpatients of the Maudsley Hospital, while Giel *et al.* (1964) reported recovery in 27 per cent of a series of former psychiatric outpatient attenders. These two studies have been selected for comparison simply because they provide follow-up data on series of N.H.S. hospital inpatients and outpatients respectively. At first glance the figures seem to indicate similar rates of recovery for neurotic disorders reported in inpatient, outpatient and general practice series. Since, however, both Greer and Giel *et al.* took a five-year follow-up period, and since both employed five-point rating scales in which ' much improved ' cases were differentiated from ' recovered ' on the one hand and ' improved ' on the other, it seems probable that this apparent agreement serves merely to cloak underlying differences. All that can be said with confidence is that the findings of the present investigation do not suggest a more favourable outcome for neurotic disorders identified in general practice than for those encountered in psychiatric specialist practice.

This conclusion in itself is rather surprising, inasmuch as one would expect to find among hospital series a significant proportion of cases referred for specialist opinion precisely because of their failure to respond to simple therapeutic measures. While several factors may have been involved, the chief explanation probably resides in the chronic nature of most of the cases included in the present sample. The average duration of symptoms at the index consultation seems to have been longer for these general practice patients than for either of the two series of hospital cases cited. A number of follow-up studies have reported a strong association between the duration of illness at initial contact and the subsequent outcome; as has been seen, the findings of the present enquiry tend to confirm this relationship. Nonetheless, the excess of chronic cases in this patient sample does not altogether invalidate the conclusion that the majority of neurotic disorders identified in general practice do not carry a good prognosis. By correcting for bias in the sample it was possible to make a rough estimate of the proportion of recovered cases to be expected for the follow-up

enquiry as a whole, and a figure higher than 40 per cent seems unlikely. The findings therefore suggest the presence in general practice populations of large numbers of neurotic disorders of prolonged duration.

To some extent this disparity between hospital and general practice findings may be explained in terms of the different clinical viewpoints represented. There is a natural tendency for hospital clinicians to equate illness with spells of hospital care and to assume that the intervals between these spells correspond to periods of normal health. Most hospital follow-up enquiries have centred around a single interview, or the completion of a questionnaire, some months or years after the key illness-episode, with a resultant tendency to miss any lesser fluctuations of health occurring in the interim. In contrast, general practitioners as a rule encounter their neurotic patients at fairly frequent intervals over the years; hence their clinical assessments may be influenced not only by observation of major illness-episodes, but also by minor disturbances, by awareness of family interaction and by the over-all patterns of complaints and attitudes to health expressed by patients over long periods of time. In short, whereas hospital enquiries may fairly be described as macroscopic, general practice surveys, if not exactly microscopic, at any rate provide a magnifying glass for the study of psychiatric morbidity.

As a corollary to the above, it can be argued that general practice studies of psychiatric disorder turn much more on the relationship between illness and personality than do corresponding hospital investigations. The model of psychiatric disorder as a clear-cut, circumscribed disease process arising *de novo* in a previously normal individual conforms only partially with clinical experience of the neuroses, even in hospital practice. To the general practitioner, the bulk of such disorders represent phases in the ongoing medical histories of individuals who, from whatever cause, are characterized by an increased vulnerability to environmental stress. In current medical usage many such cases are categorized as chronic anxiety states, a diagnosis which in consequence may come to be associated with an unfavourable outcome. Those patients in the present sample diagnosed as cases of anxiety state showed a low rate of recovery, the sub group as a whole faring worse than any other except that of personality disorders, into which indeed it showed some gradation. By way of contrast, the depressive reactions and psychophysiological conditions, which appeared to be less closely related to personality and hence to correspond more nearly to the traditional medical model of sickness, showed a relatively favourable outcome.

Where medical symptomatology and personality structure are closely interrelated, the dangers of confusion in survey recording are

obvious. Thus, in the present enquiry it was not uncommon for a general practitioner to remark of a patient that he or she was ' basically unchanged ', even though the episode recorded in the original survey had long since terminated. Such cases require careful interpretation if reliable follow-up assessments are to be achieved.

A rather different interpretation of the relationship between illness and personality factors has been arrived at by sociologists who have studied the problem. Mechanic and Volkart (1961), for example, have pointed out that most medical investigators fail to distinguish clearly between disease processes on the one hand and the use of medical services on the other. It can be postulated that some at least of those patients with consistently high surgery attendance records and a history of multiple complaints are characterized not so much by a truly high experience of morbidity as by a low threshold for seeking medical consultation. These workers maintain that the illness-behaviour of individual patients is influenced both by stress factors and by the patient's propensity for adopting the ' sick role ', and that the two can be distinguished as largely independent variables. The hypothesis offers some hope for a lessening of the confusion which now reigns in this field, but clearly it will be difficult to test in relation to neurotic disorders, where case-identification and clinical assessment are so heavily dependent on patients' subjective accounts of their symptoms.

The findings of this preliminary analysis do not point to any major social determinants of outcome in the neuroses, nor do they yield any evidence relating to the merits of different modes of medical treatment. It is clear that the majority of cases are not referred for psychiatric consultant opinion, and also that the therapeutic measures instituted by the practitioners themselves are for the most part palliative, each patient's presenting symptoms being treated as they arise. It may be that under the prevailing conditions of general practice this emphasis on contingency doctoring is unavoidable. Nevertheless, at a time when attitudes and beliefs pertaining to the functions of the general practitioner are in a state of ferment, there is a strong case for further definition of his role in the treatment and management of neurotic disorders. In particular, there is a need for field experiments designed to evaluate different therapeutic methods employed in the setting of general practice.

The techniques outlined above for ascertaining and rating the outcome of neurotic disorders await validation by means of full psychiatric examination of patient samples. Home-interviewing of selected patients by trained psychiatrists is now being carried out in some of the survey practices, and it is hoped that the findings of

this more intensive study will go some way towards completing the picture provided by the survey data, and explaining any major discrepancies. Meanwhile, it has been established that ratings of outcome based on the methods of enquiry already described show a fair degree of congruence. The amount of agreement found between the evidence of the medical records, the practitioners' clinical ratings and the health questionnaire responses suggests that it will be possible by means of this type of investigation at least to sketch crude profiles of the changing patterns of psychiatric morbidity in general-practice populations, and to go some way towards defining the natural history of this group of conditions.

Summary

Most prognostic studies of the neuroses hitherto have been based on the study of former hospital patients; hence the milder forms of neurotic disorder to be found in the general community have been largely unrepresented. The present paper outlines the method of enquiry being employed in a current three-year follow-up study of neurotic illness identified in general practice. Some findings are given of a preliminary analysis of the data obtained from a group of 13 London practices. Only 28 per cent of the patients were rated as recovered by their own doctors, while 48 per cent were considered to be unimproved. Of those patients who completed and returned a health questionnaire, some 57 per cent reported current psychiatric symptoms. Although no direct comparisons can be drawn with the findings of hospital enquiries, it seems improbable that these figures represent a generally more favourable outcome for neurotic disorders identified in general practice than for those included in hospital series.

No obvious clinical or social determinants of outcome were revealed by the preliminary analysis. From this point of view the most striking finding was the clear difference in outcome between those cases orginally classed as chronic and those thought to be of recent onset. It would appear that for this patient sample the most important prognostic factor was the duration of symptoms at the beginning of the follow-up period. This suggests that it may prove possible to differentiate between two broad groups of neurotic disorder encountered in general practice: a group of chronic conditions occurring among a relatively unchanging section of the population, and another of short-term reactions with a continually changing personnel. Furthermore there appears to be a trend for cases diagnosed as anxiety states and personality disorders to fall into the former group, and for those diagnosed as depressive reactions and psychophysiological disorders to fall among the latter.

While more intensive studies are being undertaken to substantiate

these findings, the level of agreement found between the different sources of information employed thus far indicates a degree of reliability which is encouraging for research in this field.

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AN OUTBREAK OF TUBERCULOSIS IN A BOYS SCHOOL

In his annual report for 1965 the County Medical Officer of Health for Buckinghamshire mentions an epidemic of respiratory tuberculosis in a public school. At the beginning of the year a boy of 18 was taken ill and found to be suffering from pulmonary tuberculosis with a positive sputum. As a result the whole school and staff were x-rayed and two more cases of tuberculosis were found among the boys. All the boys were then tuberculin tested and the 529 negative reactions were given BCG injections. A repeat x-ray examination of the 77 positive reactors brought to light two more cases and two further cases were reported amongst boys who had by then left the school, making a total of seven infected boys including the source case. Two of these required hospital treatment, the remainder, who had only minimal lesions, were treated by drugs. It was noted that among 39 boys who had been in close contact with the source case, 22 were found to be tuberculin positive although they were clear on x-ray. Later, retesting of the remaining 17 of this group revealed that four had converted to positive in the interval. Amongst the close contacts of the infectious boy there was a 66 per cent positive rate whilst in the school itself the rate was nine per cent.