

Long term outcome of patients with neurotic illness in general practice

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Abstract

Objective—To determine the 11 year outcome of neurotic disorder in general practice.

Design—Cohort study over 11 years.

Setting—Two general practices in Warwickshire England.

Subjects—100 patients selected to be representative of those identified nationally by general practitioners as having neurotic disorders.

Main outcome measures—Mortality, morbidity, and use of health services.

Results—At 11 years 87 subjects were traced. The 11 year standardised mortality ratio was 173 (95% confidence interval 164 to 200). 47 were cases on the general health questionnaire, 32 had a relapsing or chronic psychiatric course, and 49 a relapsing or chronic physical course. Treatment for psychiatric illness was mainly drugs. The mean number of consultations per year was 10.8 (median 8.7). A persistent psychiatric diagnosis at one year follow up was associated with high attendance (>12 visits a year for 11 years) at follow up after age, sex, and physical illness were adjusted for. Severity of psychiatric illness (general health questionnaire score) at outset predicted general health questionnaire score at 11 year follow up, course of psychiatric illness, and high consultation rate.

Conclusion—These data support the view that a neurotic illness can become chronic and is associated with raised mortality from all causes and high use of services. Such patients need effective intervention, particularly those with a more severe illness who do not recover within one year.

Introduction

General practitioners exclusively manage 95% of all patients with psychiatric disorders.¹ Two thirds of these patients have non-psychotic syndromes or “neurotic disorders,” with depressive and anxiety symptoms predominating. Many cases go undetected.^{2 3} In a study of patients with neurotic disorder in general practice a quarter had unremitting psychiatric symptoms at one year follow up.⁴ Poorer outcome was associated with severity of initial psychiatric symptoms, serious physical illness, and fewer social supports. Social, material, and personality factors are also important determinants of outcome.^{3 5}

Apart from the persisting morbidity, neurotic illness has high economic costs.^{6 7} One reason for this is the relation with attendance at general practice. Among women, high attendance is associated with psychiatric morbidity, younger age, lower socioeconomic group, and concomitant physical symptoms.⁸ Older people are less likely to attend unless they also have physical conditions or come from higher socioeconomic groups.⁹ Ethnicity, personality, and somatisation also affect use of health services.^{5 10-12}

Short term outcomes of neurotic disorder have been reported, but little is known about long term outcomes. We report the outcome after 11 years in a group of patients who took part in an earlier one year study.⁴

Subjects and methods

ONE YEAR FOLLOW UP

The original cohort of 72 women and 28 men was recruited from two Warwickshire general practices. The sampling frame was selected to reproduce the range of patients reported in the 1974 national morbidity survey in general practice. The cohort was thus representative for age, sex, and diagnosis. The method of the original study has been described.⁴ Consecutive attenders were screened with the general health questionnaire.¹³ Those who scored 4 or more entered the study if the general practitioner also reported a psychiatric diagnosis under the international classification of diseases (ICD9). Recruitment continued until 100 patients of appropriate age, sex, and diagnosis had been discovered to complete the cells of the sampling frame. The diagnoses were anxiety or phobic neurosis (33); depressive neurosis (56); physical disorders of psychogenic origin or tension headache (3); insomnia (2); other conditions (6).

Subjects were interviewed with the clinical interview schedule,¹⁴ the social stresses and support interview,¹⁵ and the standardised assessment of personality.¹⁶

At one year follow up 93 patients were reinterviewed. Two had died, three refused second interviews, and two had moved away. Interval assessments of mental state were recorded by the general practitioner during follow up.

11 YEAR FOLLOW UP

For the 11 year follow up we traced patients through the family health services authorities and approached them for a follow up assessment. They were sent a 12 item general health questionnaire and a semistructured schedule to collect retrospective follow up information about social circumstances and health from patients' perspectives. The schedule followed the items of the social stresses and support interview to allow comparison. The self reported data were also compared with general practitioners' records for the same period. Case notes were examined for consultation frequency, continuing psychiatric symptoms, physical illness, prescription of psychotropic drugs, and social events.

ANALYSIS OF DATA

We calculated the 11 year standardised mortality ratio for Warwickshire using data from the Office of Censuses and Population Surveys. Patient outcomes were classified by two methods. Firstly, we used the general health questionnaire to assess caseness (threshold score of 3) and total score according to the general health questionnaire method.¹³

Secondly, we used the pattern of the psychiatric disorder over the previous 11 years as shown in the case notes and the patients' reports. Classification of

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Table 1—Psychiatric and physical course* over 11 years among 68 general practice attenders alive at follow up (values are numbers of patients)

	Psychiatric course	Physical course
Well	22	5
Acute	14	14
Relapsing remitting	20	23
Chronic	12	26

*See text for a definition of outcome groups.

Table 2—Odds ratios for the association between high attendance in primary care and chronic psychiatric course

	Odds ratio (95% confidence interval)	P value
Unadjusted	10.95 (3.13 to 38.3)	< 0.001
Adjusted for age and sex	10.42 (3.03 to 32.89)	< 0.001
Adjusted for age, sex, and chronic physical illness	4.72 (1.12 to 20.28)	< 0.037

outcome was the same as in the one year follow up: well (the patient had no more psychiatric illness after the index episode); acute (the patient and the case notes record that he or she had been psychiatrically well during follow up with a maximum of one discrete episode lasting less than a year); variable or relapsing remitting (the patient and the case notes report patchy progress with no overall improvement; evidence of relapse and remission with one or more discrete acute episodes lasting more than six months); and chronic (the case notes record almost continuous psychiatric symptoms with one or more episodes lasting over a year).

Descriptive statistics and multiple regression analyses were done with SAS v6.04. Logistic regression analyses were done with EGRET to determine independent factors associated with a course of psychiatric disorder and consultation rate over 11 years.

Results

We traced 87 (90%) subjects at the 11 year follow up. Missing subjects did not differ by sex, diagnosis, or initial severity from those traced but were younger (mean age at follow up 49.5 (95% confidence interval 41.2 to 57.8) years *v* 60 (56.8 to 63.2) years). Full case note and patient report data were available for 68. Despite the difficulties of recalling past events and the likelihood of present mental state introducing recall bias, there was reasonable agreement between the patients' and general practitioners' records ($\kappa > 0.7$ for serious physical illnesses and major life events such as births and deaths).

Nineteen patients had died. The 11 year standardised mortality ratio for this cohort was 173 (95% confidence interval 164 to 200) compared with 104 for Warwickshire as a whole. The patients who had died were older than survivors (mean age 74.6 (65.9 to 83.2) years *v* 57.7 (54.5 to 69.8)) but did not differ in sex or initial

severity of psychiatric illness. Death was from common causes such as cardiovascular, respiratory, and malignant disease. There were no recorded suicides.

PSYCHIATRIC OUTCOME

Of the 68 who returned the 12 item postal general health questionnaire, 35 were classified as cases. Forty seven, however, had lower scores than at one year. Table 1 shows the course of psychiatric and physical illness over the 11 years. Thirty two had a relapsing or chronic psychiatric disorder. Patients with a relapsing course had a mean of 4.9 episodes (median 5, mode 5). Eight of those with a chronic course were psychiatrically unwell throughout the follow up period according to case notes and self report. Forty nine had a relapsing or chronic physical illness.

Benzodiazepines were the most commonly prescribed treatment. Sixteen patients received antidepressants at some time, but only one was prescribed an adequate dose.¹⁷ The psychiatric disorders were managed almost exclusively in primary care; there were three referrals to psychiatrists, two to psychologists, and two to social services.

CONSULTATION PATTERNS

The subjects consulted their general practitioners frequently (mean = 115, median = 84, range 0-590 consultations over 11 years). There were no significant differences in consultation rates between the sexes. We defined high attendance as more than 12 visits a year and calculated odds ratios using high attendance as the dependent variable (table 2). Eighteen patients attended more than 12 times a year over the entire follow up period. Psychiatric illness was independently associated with high attendance after age, sex, and physical illness were adjusted for.

ANALYSIS OF GENERAL HEALTH QUESTIONNAIRE SCORE

Associations between continuous variables at 0, 1, and 11 years were investigated by multiple regression analyses with adjustment for age and sex (table 3). High initial general health questionnaire score was strongly associated with high general health questionnaire score at 11 years, chronic course of psychiatric illness, and high consultation rates with and without adjustment for age and sex.

We found no association between initial personality assessment or social problems and psychiatric outcomes at 11 years, in contrast to our results at one year. Positive and negative life events recorded by general practitioners in the case notes and reported retrospectively by patients were not associated with psychiatric outcomes, although these are likely to be underreported.

Discussion

METHODOLOGICAL CONSIDERATIONS

The cohort was designed to be representative of people attending general practice with common mental disorders. Our results should therefore be generalisable, although it is a small study. Subjects were included only

Table 3—Regression coefficients for outcome at 11 years

Outcome variable	Entry variable	Unadjusted R (standard error of estimate)	P value	Adjusted R and (standard error of estimate)	P value
GHQ score	GHQ score	0.42 (0.14)	0.0041	0.38 (0.13)	0.0097
Chronic psychiatric course	GHQ score	0.067 (0.02)	0.0008	0.07 (0.018)	0.0005
Log total consultations	GHQ score	0.28 (0.08)	0.025	0.28 (0.08)	0.019

GHQ = general health questionnaire.

Key messages

- People attending primary care with neurotic disorders have high psychiatric morbidity and increased mortality from all causes
- In this study almost half had a chronic course over 11 years
- Chronic neurotic disorder is associated with high consultation regardless of physical illness
- Initial severity at diagnosis is the best predictor of long term outcome and consultation rate
- Practices need to develop systems to identify and manage effectively people with these common mental disorders

if the general practitioner agreed a psychiatric disorder was present so the results do not apply to patients with hidden morbidity.

The subjects missing at 11 year follow up were younger than the traced subjects. Younger patients may have moved away from the area or their deaths may not have been ascertained.

The 11 year data were obtained from patients retrospectively by postal questionnaire. There was thus a possibility of recall bias and underrecording. However, we also used general practitioners' contemporaneous records over the 11 years to confirm the patients' accounts and classify the course of psychiatric and physical illness. The case notes provide firm data on consultation rate and prescriptions and the analysis has emphasised these.

As general health questionnaire scores were highly correlated with those on the clinical interview schedule ($R = 0.518$, $P < 0.0001$ at recruitment) and as follow up was by post, we thought it was appropriate to send only a general health questionnaire. We recognise, however, the limitations and loss of data incurred by this approach.

OUTCOMES

The death rate among psychiatric outpatients with neurotic disorders is raised by a factor of 1.5 to 2.0.^{18 19} Our findings are consistent with this. Increased deaths have been ascribed to suicide, accidental deaths, or even misdiagnosis of underlying physical conditions, but all our subjects died from common physical disorders.

Our findings support the view that patients with detected neurotic disorders have appreciable illness.²⁰ Even if the illness was associated with or secondary to physical conditions, we found persistent psychiatric morbidity of a severity that met case criteria after 11 years.

Severity of psychiatric illness at 11 years was associated with severity at entry and one year follow up. A chronic course of psychiatric illness over 11 years was also predicted by initial severity. Social and personality variables were, however, not associated with clinical outcome or course over the 11 years. We had detailed information on social circumstances at entry and one year, case note data during follow up, and retrospective information from the patients after 11 years. None of these data was found to be relevant. However, the sample may have been too small or too homogeneous in

terms of social circumstances to detect an effect. In addition, little social information was recorded in the general practitioner's notes; a type II error is therefore possible. The problem of statistical power could also account for personality disorder not predicting outcome. Only 31 patients were initially rated as having abnormal personality.

Chronic psychiatric illness was associated with high consultation rates independently of physical illness, age, and sex. All subjects were high users of general practitioner care, and little use was made of other resources.

CONCLUSIONS

We did not interfere with the normal management of the patients. After 11 years a large proportion had become chronically unwell high users of primary care services. These findings highlight the need for early identification and prompt and effective treatment of patients with neurotic disorders. The simplest way of identifying this group would be to assess initial severity and morbidity over one year with a simple screening instrument such as the general health questionnaire. Appropriate physical, psychological, and social interventions could then be introduced.²¹

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