Symptoms perceived and recorded by patients *

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SUMMARY. Health diaries were kept by 198 randomly-chosen women between the ages of 20 and 44. Symptoms were recorded on one day in three and on 57 per cent of symptom-days self-medication occurred. Even a minor shift from self-care to doctor care could make intolerable demands on the general-practitioner service in this country.

Only a minority of symptoms (one in 37) are taken to the doctor and patients are highly selective in deciding which symptoms are appropriate for medical care. The perception of symptoms and the response of seeking medical advice are both significantly related to anxiety as measured by a personality questionnaire.

Introduction

The frequency with which the individuals registered with general practitioners in this country consult their doctors varies widely. Some of the difference in consultation rates is accounted for by the differing morbidity experienced by individuals which is influenced among other factors by age and sex. This alone, however, does not account for the variations observed between high and low users of medical care.

The decision to consult a doctor is presumably made in response to a symptom of ill health. The factors which influence this decision are poorly understood and the actions taken in response to symptoms have in the past been studied mainly by retrospective surveys.

Aim

Our aim was to examine by a prospective investigation the relationship between the perception of symptoms and the action taken by patients in response to these symptoms.

Method

We have already described in detail the method we used (Banks *et al.*, 1975). A random sample of women aged 20–44 years was drawn from the age-sex register of a general practice in Lambeth which has 8,500 patients. The sample was divided into 12 groups, and in each calendar month one group was asked to complete a diary for a period of 28 days, recording any symptoms of illness they perceived and the action they took in response. These patients were also asked to complete a 40-item anxiety questionnaire from the Institute of Personality and Ability Testing, Illinois, U.S.A. and a social and health questionnaire. Throughout the year their requests for general-practitioner care were recorded in a manner similar to that used in previous studies in this practice (Morrell *et al.*, 1970).

*Professor Morrell described many of these results in the 1975 Gale Memorial Lecture, which he delivered at the Exeter Postgraduate Medical Centre, in October 1975.

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Results

There were 415 women in the sample. Of these, 19·5 per cent had moved house and could not be traced despite the fact that they were still registered with the practice. A further 14·9 per cent left the practice during the study year. The doctors excluded 2·2 per cent for reasons such as severe marital stress or severe mental illness. Of those contacted, completed data were available on 75 per cent, that is 198 women.

Symptom recording and consultations

Twenty four per cent of the sample did not consult during the year, but only ten per cent of these did not record any symptoms in their health diaries. On average a symptom was recorded in the diaries on one day in three.

When the same symptom was recorded on consecutive days this was described as one episode of symptoms. The episode was considered to have ended when no symptom was recorded or a new symptom was first recorded. When a symptom was recorded on only one day, it was counted as an 'episode'. On average each woman recorded six symptom episodes in the diary period, and the mean length of each episode was 1·6 days. Assuming no bias in the distribution of women keeping their diaries in different months of the year, one may extrapolate the diary experience to give an estimate of symptom episodes for an entire year. On this basis each woman would on average record 81 episodes in the year.

During the year the women in the sample consulted the doctor on 933 occasions giving a consultation rate of 4·7 per person per year. Four hundred and thirty two of these consultations were initiated by the patients in response to symptom episodes. This indicates that one symptom episode in 37 led to a consultation initiated by a patient in this sample.

TABLE 1
SYMPTOMS FROM THE DIARIES OF 198 PATIENTS

Symptom days (*First recorded symptom*)	*Number*
Headache	349
Changes in energy, tiredness	198
Backache	142
Cold	126
Disturbance of emotional response	98
Disturbance of gastric function	95
Sore throat	90
Abdominal pain	87
Cough	74
Pain in mouth (toothache)	55
Bleeding and abnormal discharge from nose	50
Disturbance of menstruation	48
Others	566
Total symptom days	1,978

We compared the symptoms experienced and recorded by the patients in their health diaries with the symptoms presented to the general practitioner. The 12 most frequently recorded symptoms in the health diary are shown in table 1. Headache was by far the most commonly recorded symptom, followed by changes in energy, backache, and cold. In contrast, the symptoms most often presented to the general practitioner (table 2) were sore throat, cough, abdominal pain, and skin rash.

TABLE 2

SYMPTOMS PRESENTED AT 432 CONSULTATIONS IN ONE YEAR INITIATED BY 198 PATIENTS KEEPING HEALTH DIARIES

Symptoms presented	*Number*
Sore throat	33
Cough	29
Abdominal pain	28
Skin rash	22
Disturbance of menstruation	21
Backache	21
Headache	20
Disturbance of bladder function	19
Bleeding or abnormal discharge from genital tract	15
Disturbance of bowel function	14
Chest pain	14
Disturbance of emotional response	11
Others	185
Total	432

The probability that an individual recording a symptom in the health diary will consult the doctor clearly varies with the symptom recorded.

The women in the sample were divided into those who had two or more self-initiated consultations with the general practitioner in the year and those who had less than two. The relationship between the number of symptom episodes recorded in the health diaries and the probability of consulting at least twice per year was statistically significant ($p<0{\cdot}05$).

Relationship of symptom recording and symptom reporting to anxiety

Anxiety, as measured by the questionnaire of the Institute of Personality and Ability Testing, was significantly associated with the frequency of symptom recording in the health diaries ($p<0{\cdot}01$). Anxiety was also shown to be related to the probability that the individual would initiate two or more consultations in the year ($p<0{\cdot}01$).

By use of a logit transformation and the method of maximum likelihood it was possible to examine the relationship between the probability of consulting and anxiety independent of symptom recording. This revealed that a high anxiety score was associated with a high probability of consulting at least twice a year independent of symptom recording ($p<0{\cdot}01$). It may therefore be concluded that the most anxious women recorded the greatest number of symptoms but, irrespective of the number of symptoms recorded, they showed the greatest propensity to consult.

Action taken in response to symptoms

The health diaries allowed patients to record how they responded to their symptoms. This response was in terms of restricting activities, lying down, and self-medication. The responses are illustrated in table 3. On average, normal activities were restricted on 18 per cent of days when a symptom was recorded and the patient had to lie down on 16 per cent. On 57 per cent of symptom-days medication was taken. Some form of medication was also taken on 16 per cent of non-symptom days, in addition to any oral contraceptives.

Action taken varied widely with different symptoms. Twenty seven per cent of patients with a cough, for instance, restricted their normal activities and 78 per cent

TABLE 3
ACTION TAKEN IN RESPONSE TO THE 12 MOST COMMON SYMPTOMS REPORTED IN HEALTH DIARIES

Symptom days (First recorded symptom)	*Total days*	*Normal activities restricted*	*Lie down*	*Some form of medication*
Headache	349	52 (*15*%)	54 (*15*%)	244 (*70*%)
Changes in energy, tiredness	198	52 (*26*%)	56 (*28*%)	76 (*38*%)
Backache	142	24 (*17*%)	33 (*23*%)	54 (*38*%)
Cold	126	30 (*24*%)	20 (*16*%)	77 (*61*%)
Disturbance of emotional response	98	21 (*21*%)	12 (*12*%)	60 (*61*%)
Disturbance of gastric function	95	7 (*7*%)	15 (*16*%)	38 (*40*%)
Sore throat	90	17 (*19*%)	14 (*16*%)	53 (*59*%)
Abdominal pain	87	18 (*21*%)	18 (*21*%)	46 (*53*%)
Cough	74	20 (*27*%)	14 (*19*%)	58 (*78*%)
Pain in mouth (toothache)	55	4 (*7*%)	1 (*2*%)	45 (*82*%)
Bleeding and abnormal discharge from nose	50	8 (*16*%)	3 (*6*%)	32 (*64*%)
Disturbance of menstruation	48	11 (*23*%)	11 (*23*%)	28 (*58*%)
Total symptom days	1,978	356 (*18*%)	322 (*16*%)	1,124 (*57*%)
Total non-symptom days	3,566	101 (*3*%)	42 (*1*%)	[illegible] (*16*%)

took some form of medication, compared with seven per cent of patients with disturbances of gastric function who restricted their activities and 40 per cent who self-medicated. Irrespective of the particular symptoms, anxiety was shown to be related to the response of patients to recorded symptoms of illness. Patients with high anxiety scores were more likely to restrict their normal activities, lie down in response to symptoms, and self-medicate ($p<0 \cdot 001$).

Discussion

The decision to study women in the age group 20 to 44 years was influenced by previous studies in this practice. It had been shown that this group of patients made high demands on the general practitioner, that on the whole they suffered from few chronic incurable diseases, and that the decision to consult appeared to reflect behaviour in response to illness rather than chronic morbidity. It was also recognised that they to a large extent control the consultation pattern of their children and that a better understanding of their behaviour would aid a more rational response to their demands for care for themselves and their children.

The social class distribution of patients in this sample does not differ significantly from the figure based on the National Census. The sample was, however, biased in favour of the less mobile elements in society in that the patients were available for study throughout one year. Because Lambeth is an inner London borough, there were likely to be

more flat dwellers and fewer house dwellers than would be expected from a national sample.

The finding that symptoms were recorded in the health diary on one day in three is in keeping with other studies using a health diary (Roghmann and Haggerty, 1972). That only one symptom episode in 37 led to a consultation is, however, at variance with other studies (Horder and Horder, 1954; Wadsworth *et al.*, 1971). It is likely that this difference is due to the method of study which used health diaries compared with other workers who have depended on patients recalling symptoms.

This study demonstrated that high users of general-practitioner care are high recorders of symptoms and that both the recording and reporting of symptoms is related to objective measures of anxiety. It might be argued that the act of keeping a health diary encouraged patients to consult by drawing their attention to their symptoms. However, analysis of the frequency of consultation before and after keeping a health diary did not reveal any significant change in consulting behaviour.

The difference between the spectrum of symptoms recorded in the health diaries and the spectrum presented to the doctor confirms that patients are selective in determining which symptoms to present. We have been able to demonstrate that this is not simply an artefact due to the doctor recording a presenting symptom which differs from that perceived by the patient by examining the 33 consultations recorded in the health diary (there was agreement in the patients' and doctors' recording of the presenting symptom in 29 of these consultations). We have not so far been able to interpret how this selection takes place, but it is probably related to the differing degrees of anxiety provoked by different symptoms and the patients' expectations of the doctor in terms of his acceptance of their symptoms and his ability to cure them.

The subject of self-medication has been studied in detail (Dunnell and Cartwright, 1972). Our study confirms that many people respond to symptoms by self-medication and that only a minority of symptoms are taken to the doctor. There is no evidence that self-medication is a substitute for consulting a doctor and both medication and the propensity to consult are related to anxiety.

This further demonstration of the large number of symptoms cared for without consultation with the doctor emphasises the importance of the decision-making by the individual which leads to a consultation and the information she uses to make this decision. Even a minor shift from self-care to doctor care could make intolerable demands on the general-practitioner service in this country.

Conclusion

It may be assumed that the occurrence of symptoms of illness provokes some anxiety. We have demonstrated that anxious people are more likely to record perceived symptoms, but cannot tell whether they are more sensitive to changes in health. We have shown that patients recording more symptoms are more likely to consult and that anxious people are more likely to lie down, disturb their normal activities, self-medicate, and consult the doctor. We have shown that some symptoms are more likely to lead to a consultation than others and that this bears no consistent relationship to the probability of self-medication. More detailed analysis of these data will make it possible to look critically at the appropriateness or otherwise of self-medication and should provide useful information for health education. It will also be possible to study the interaction of social factors on symptom recording and reporting and on the consulting behaviour of the participant's children.

An important element which is missing from the study is an effective measure of patients' and doctors' expectations of what is appropriate illness to take to the general practitioner.

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PATIENTS' ASSOCIATION

Last year the Patients' Association even achieved token recognition from the Department of Health in the form of a small £1,500 grant.

Increasingly the complaints that flow into the Association mention the family doctor's reluctance to make home visits, and the inadequacy of the commercial deputising services which take over his night emergency calls. " At what point do we reach the minimum standard of general-practitioner care? " asks Jean Robinson (Chairman of the Patients' Association). " Nobody is monitoring this. Yet if I was running the Health Service I would put all my money and effort into looking at general-practitioner care and bringing the standard of the worst up to the best. I see this as far more urgent than health centres, which aren't cheap."

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PRIMARY MEDICAL CARE IN THE ELDERLY

One doctor in an urban group practice surveyed his 362 patients aged over 65. During a period of 18 months, 343 were seen. When he went personally to interview the other 19, they told him that they were in excellent health and that they were pleased he was taking an interest. One asked to come to surgery to have her deafness investigated, one wanted her eyes tested and another had " a little rheumatism." The author concludes that failure to report ill health is not a problem among his elderly patients.

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