

# Problem patients in general practice: identifying young women with recurrent abnormal illness behaviour

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**SUMMARY.** *The concept of recurrent illness behaviour and the importance of problem patients in general practice are discussed. The need for further research and the early identification of these patients is emphasized. The medical records of 1134 women between the ages of 16 and 25 years were analysed. The annual rate of potentially functional complaints was determined for each woman. The 51 women with the highest annual rates were selected as cases for interview, along with 51 randomly selected controls.*

*Analysis showed there were significant differences between the cases and controls. The cases reported more health and emotional problems and had a higher dependence on alcohol and cigarettes than the controls. They had more social disadvantages, such as a history of parental death and unemployment; they were more likely to be housewives with children; they had fewer qualifications, held jobs for shorter periods of time and had a history of truancy from school. They were heavy users of primary care facilities and also hospital services but, despite this, were dissatisfied with the service provided and were less compliant with treatment. Finally, despite a need to discuss health problems, they experienced less family support in this area. Significant variables were entered into a step-wise multiple regression analysis to predict rates of potentially functional complaints and a logistic discriminant analysis was also carried out. The results of these analyses were used in a further discriminant function to form an index for the identification of recurrent abnormal illness behaviour.*

## Introduction

It has been estimated that between 68% and 92% of those who visit their doctor have no serious medical disease.<sup>1,3</sup> Furthermore, general practitioners will recognize from their registers a sub-group of patients who complain on a regular basis of symptoms in the absence of verifiable pathology. Because medicine traditionally tends to focus on disease rather than the patient's perception of, and response to, the symptoms,<sup>4</sup> these frequent visitors to the surgery are often labelled as problem patients,<sup>5,6</sup> or medical care abusers,<sup>7</sup> as well as hysterics and hypochondriacs.

Recently, interest in these patients has increased, largely in the USA. In order to increase the understanding of these patients, Pilowsky proposed the concept of 'abnormal illness behaviour'.<sup>8,9</sup> This concept can be applied to any situation where the patient wishes to be regarded as sick, but where the examinations and investigations of the doctor do not justify this. American psychiatrists have attempted to classify recurrent abnormal illness behaviour into discrete disorders according to the clinical picture and the patients' varying abilities to control behaviour and produce symptoms at will.<sup>10,11</sup> One diagnostic

label to emerge from this classification is 'somatization disorder' (formerly Briquet's syndrome). This is a disorder which is said to chiefly affect women and to begin around the menarche.<sup>12</sup> Its characteristic features, which are all unexplained by other known clinical disorders, are recurrent complaints of varied pains, anxiety symptoms, gastrointestinal disturbances, urinary symptoms, menstrual difficulties, sexual and marital maladjustment, mood disturbances and conversion symptoms.<sup>13,14</sup>

It is debatable whether somatization disorder is a useful diagnostic label to describe a discrete cluster of psychopathology.<sup>15,16</sup> However, this area of patient behaviour is worthy of further research because these patients are expensive in terms of time, money and patience and have a deleterious effect on the efficient running of a practice.<sup>17</sup>

Epidemiological investigation of such patients may help to determine the aetiology of this complex disorder. Perhaps, as has been suggested by some workers, these patients can be best understood in terms of a 'doctor-addiction' syndrome.<sup>7</sup> If this model is applicable, it would seem that more appropriate management of these patients must begin with early identification. It was decided to investigate this problem in a general practice setting, using somatization disorder as a model of recurrent abnormal illness behaviour.

The objectives of this study were:

- To design a reliable and valid method for the identification of female patients with recurrent abnormal illness behaviour.
- To compare the psychiatric, social and family histories of these patients with the rest of the female population, and to assess the satisfaction of these patients with the medical services.
- To describe those characteristics of an individual which are useful in predicting recurrent abnormal illness behaviour and in discriminating between patients showing such behaviour and the rest of the population.

## Method

The target population was all women between the ages of 16 and 25 years inclusive, registered with three general practices which were situated around Whickham, near Gateshead, Tyne and Wear. The total list size of these three practices was approximately 26 000. This target population was chosen because as a group these patients have a very high consultation rate,<sup>18</sup> and are more likely to have complete medical records than older patients. Recurrent abnormal illness behaviour is also said to be more common in females and to begin early in life.<sup>12</sup> The medical records of all women on the age-sex registers of the practices were sought. Pilot studies showed that of a random sample of 250 notes only 90% could be found. Further searches improved this figure to 92% but more than three separate searches for missing notes made no further improvement.

## Selection of patients

In the first phase of the study, the medical records of the patients were analysed from 1 January of the year in which the patient had her twelfth birthday to 31 August 1982, when the pilot work had commenced. For each patient, the total number of potentially functional complaints was recorded. A complaint was

defined as a distinct episode of a symptom or symptoms which cause the patient to visit the doctor. A complaint begins at the first consultation with that complaint, and ends either then, if there are no recorded return visits, or at a subsequent visit when the patient reports a return to usual health or the doctor discharges her from his care. A potentially functional complaint was defined as a complaint which did not lead to any recorded diagnosis either at the first consultation or at any subsequent consultation, despite examination and investigation (whichever the general practitioner thought necessary). In addition, the complaint had to have symptoms which appeared on the list for somatization disorder shown in Figure 1. In order to make the diagnosis of somatization disorder two criteria have to be satisfied: a dramatic, vague or complicated medical history beginning before the age of 30 years and at least 25 medically unexplained symptoms distributed in at least nine out of the 10 groups shown in Figure 1. In interobserver reliability studies on 40 randomly selected case notes, the complaint scores measured by two independent observers for each set of case notes were very highly correlated (Spearman's  $\rho = 0.99$ ). In addition there was 94.5% agreement as to which complaints satisfied the criteria for a potentially functional complaint. It was felt that this was a measure both of the reliability of the definitions, and of the high quality of note-keeping in these medical records. The validity of this complaint classification was tested in the second phase of the research.

Therefore, from the first phase, each woman had a score for potentially functional complaints, which was readily converted into an annual rate in order to make the scores comparable. The population was stratified into three age groups: 16 to 19, 20 to

22 and 23 to 25 years inclusive. Within each stratum, the 17 patients with the highest annual rates were selected to be the cases. In addition, random samples of 17 women from the rest of each stratum were chosen to act as controls.

### Interviews with patients

In the second phase the cases and controls were interviewed at their homes and the following were included:

- The 60-item version of the general health questionnaire, including the somatic symptom scale.<sup>19,20</sup>
- Questions covering the medical, psychiatric, social and family histories of each patient.
- Questions on the use of medical services, satisfaction with the service, and compliance with treatment.
- Questions enquiring into the support of family and friends in health problems.

The wording of the questions in the interview was tested for bias by interviewing colleagues in pre-tests. Pilot studies revealed that the interview took between 30 and 45 minutes to complete, and seemed acceptable to patients. Three interviews were recorded and an independent observer coded the responses for comparison with the coding of the interviewer. The few discrepancies were discussed, and the coding modified appropriately.

Initial contact with the patients was by a letter of introduction and explanation from their doctor. The letter also had a rejection slip which could be returned by the patient if she did not wish to participate.

### Analysis of data

The analysis of the second phase was conducted on an IBM 370/168 computer, using the statistical package for social sciences which included chi-square tests to determine significant differences between cases and controls for the interview data; step-wise multiple regression analysis, to determine a prediction equation for potentially functional complaint rates; and logistic discriminant analysis, to determine those variables which best discriminate between cases and controls, and to design an index for case identification.

Full approval was given for the research by the doctors involved and the ethical committee of the local area health authority.

### Results

Of the 1165 notes analysed from the three practices, 31 (2.7%) were incomplete for the period under study. However, there was no significant difference in the potentially functional complaint rates for the groups with complete and incomplete records (Mann-Whitney U-test,  $z = 0.60$ ,  $P = 0.55$ ). The sampling fractions are shown in Table 1.

**Table 1.** Distribution of cases and controls in age strata and sampling fractions for controls ( $n = 1134$ ).

Age stratum (years)	Number of cases	Number of potential controls	Sampling fraction (No. of controls / No. of potential controls) %
16-19	17	512	3.3
20-22	17	277	6.1
23-25	17	294	5.8
Total	51	1083	4.7

<b>Group 1</b> Headaches Sickly majority of life	<b>Group 6</b> Abdominal pain Vomiting
<b>Group 2</b> Blindness Paralysis Anaesthesia Aphonia Fits or convulsions Unconsciousness Amnesia Deafness Hallucinations Urinary retention Trouble walking Other unexplained 'neurological' symptoms	<b>Group 7</b> Dysmenorrhoea Menstrual irregularity Amenorrhoea Excessive bleeding
<b>Group 3</b> Fatigue Lump in throat Fainting spells Visual blurring Weakness Dysuria	<b>Group 8</b> Sexual indifference Frigidity Dyspareunia Other sexual difficulties Vomiting all nine months of pregnancy at least once, or hospitalized for hyperemesis gravidarum
<b>Group 4</b> Breathing difficulty Palpitation Anxiety attacks Chest pain Dizziness	<b>Group 9</b> Back pain Joint pain Extremity pain Burning pains of the sexual organs, mouth, or rectum Other bodily pains
<b>Group 5</b> Anorexia Weight loss Marked fluctuations in weight Nausea Abdominal bloating Food intolerances Diarrhoea Constipation	<b>Group 10</b> Nervousness Fears Depressed feelings Need to stop working, or inability to undertake regular duties because of feeling ill Crying easily Feeling life was hopeless Thinking a good deal about dying Wanting to die Thinking of suicide Suicide attempts

**Figure 1.** Symptoms for Briquet's syndrome.

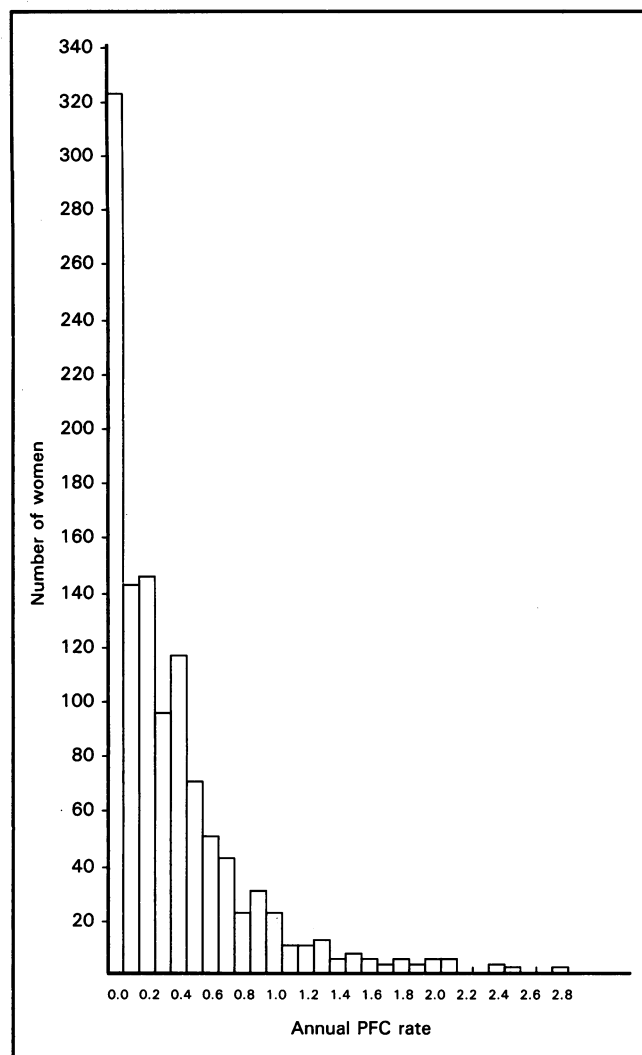


Figure 2. Distribution of the annual potentially functional complaint (PFC) rates for the study population.

The potentially functional complaint rates for the randomly selected controls were not significantly different from the rest of their age strata. The distribution of the rates for the study population is shown in Figure 2. The mean potentially functional complaint rate for the cases was 5.5 times greater than for the controls (1.53 compared with 0.28).

The distribution of those who completed the interviews and those who had moved or failed to respond are shown in Table

2. The cases had a mean score of 11.4 on the 60-item version of the general health questionnaire, compared with 4.1 for the controls (Mann-Whitney U-Test,  $z = 4.12$ ,  $P < 0.001$ ). On the somatic symptoms scale the cases had a mean score of 2.0 (out of a possible 7.0) and the controls 0.5 ( $z = 4.36$ ,  $P < 0.001$ ).

A summary of the significant differences in the interview for cases and controls is shown in Table 3. All variables demonstrating a significant difference between cases and controls were given an equal opportunity to enter a stepwise multiple regression model to predict the potentially functional complaint rate. Variables with a partial  $F$  greater than 4.08 were included in the equation. This is the level of variance for 5% significance for 1.40 degrees of freedom. In order to normalize the skewed distribution of the potentially functional complaint rates (see Figure 2), the  $\log_{10}(1 + x)$  transformation was used. The result is shown in Table 4.

The same variables were entered into a logistic discriminant analysis to determine the best variables for discriminating between cases and controls. Details of this technique are discussed elsewhere.<sup>21,22</sup> The best discriminators are listed below in order of significance:

1. More than two consultations with general practitioner in past year.
2. Patient reports previous history of emotional problems.
3. Patient is dissatisfied with the general practitioner's explanation and information.
4. Psychotropic drugs prescribed in past year.
5. Score on the 60-item version of the general health questionnaire less than three.
6. Mother unsupportive in health problems.
7. Patient is a past or present smoker.
8. Fair or poor overall support in health problems.
9. Patient needs to discuss nervous problems.
10. History of parental death.
11. History of truancy from school.

It was decided to perform a further logistic discriminant analysis in order to design an index for the identification of young women likely to demonstrate recurrent abnormal illness behaviour. Variables shown to be important in the previous logistic discriminant analysis and step-wise multiple regression analysis were entered into the analysis in a hierarchical fashion based on their degree of objectivity, as illustrated in Figure 3.

Successive hierarchical analyses were performed, removing the variable with the lowest coefficient at each step (that is the variable making the least predictive contribution to the discriminant function), until the nine best variables remained. An index was designed which is shown in Table 5.

In this study, a score of 3.2 or more on the index implies a 95% chance of that patient having a long-term total complaint

Table 2. Distribution of those who completed the interviews and those who had moved or failed to respond for each age stratum for cases and controls.

	Controls				Cases				Total	(%)
	16-19 yrs	20-22 yrs	23-25 yrs	Total	16-19 yrs	20-22 yrs	23-25 yrs	Total		
Completed interview	14	11	14	39	14	12	14	40	79	( 77.5)
Moved from address <sup>a</sup>	1	5	2	8	0	3	3	6	14	( 13.7)
Failed to respond	2	1	1	4	3	2	0	5	9	( 8.8)
Total	17	17	17	51	17	17	17	51	102	(100.0)

<sup>a</sup>All patients who had moved had done so in the period between 31 August 1982 and the start of the interview phase in February 1983. The potentially functional complaint rates of those who had moved or failed to respond were not significantly different from those who had completed interviews.

**Table 3.** Significant differences in the interview data for cases and controls.

Area of interest	Item	Percentage of cases (n = 40)	Percentage of controls (n = 39)	$\chi^2$
<i>Personal history</i>				
Psychiatric and medical	1. Reports problem with health	50.0	5.1	19.8 ***
	2. Reports emotional problems	67.5	17.9	19.8 ***
	3. Past psychiatric consultation	20.0	2.6	6.0 *
	4. Reports past or present alcohol problems	25.0	5.1	6.1 *
	5. Past or present smoker	47.5	20.5	6.4 *
Social	6. Patient has one or more children	35.0	10.3	6.9 **
	7. First degree relative with chronic or recurrent hospitalization	40.0	17.9	4.5 *
	8. History of truancy from school	47.5	17.9	7.8 **
	9. Involuntarily unemployed	42.9	7.7	8.0 **
	10. Housewife (as opposed to employed)	50.0	17.2	6.5 *
	11. Four 'O' levels or less	75.0	51.3	4.8 *
	12. More than one previous job	64.9	25.8	10.3 **
	13. History of parental death	20.0	2.6	6.0 *
<i>Relationship with medical services</i>				
Recent use	1. More than two consultations with GP in past year	95.0	23.1	42.4 ***
	2. More than one GP seen in past year	80.0	37.9	12.7 **
	3. More than one home visit in past year	20.0	5.1	6.0 *
	4. Seen hospital specialist in past year	60.0	12.8	18.9 ***
	5. Drugs prescribed in past year	92.5	64.1	9.4 **
	6. Psychotropic drugs prescribed in past year	70.3	8.0	4.3 *
Satisfaction	7. Dissatisfied with information provided by GP	55.0	31.4	4.2 *
	8. Difficulty in communicating with GP	25.0	5.9	4.9 *
	9. Dissatisfied with examination and investigation of complaints	72.5	6.5	5.2 *
Compliance	10. Full compliance with prescribed drugs	51.4	84.6	7.3 **
<i>Support in health problems</i>				
	1. Mother is a significant confidante in health problems	52.6	85.7	7.9 **
	2. Patient needs to discuss nervous problems	52.5	23.1	7.3 **
	3. Good overall support in health problems	52.5	86.2	8.6 **
	4. Mother's general health good	32.5	56.4	4.6 *

\* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .

rate which is three times greater than that of the rest of the population, and 46% of the complaints will satisfy the criteria for a potentially functional complaint — compared with 26% in the rest of the population.

## Discussion

There are numerous potential pitfalls in a retrospective study which attempts to classify data in medical records. In this study an attempt has been made to demonstrate that missing and incomplete records have introduced no bias. The complaint classification seems reliable and the medical records studied appear to be of sufficient quality to be used as a data base. However, the validity of this complaint classification is uncertain. In order to accurately classify a complaint, it is assumed that the general practitioner makes an unbiased appraisal of the presenting symptoms and records his observations in sufficient detail to allow a researcher to correctly interpret the complaint. It is also assumed that the doctor is reliable in his judgement. Complaints are treated simplistically; they either are or are not functional.

However, it can be argued that the general practitioner is the best person to make this judgement. In addition, the many different doctors attached to practices over the years reduces the bias of any one doctor. Finally, errors in individual complaint classification may balance out when considering the complaints of a patient over many years. Despite the problems with individual complaints, this method would appear to be valid in detecting women with recurrent abnormal illness behaviour, in that those with a high potentially functional complaint rate have

a much higher present psychiatric morbidity and complain of many more somatic symptoms at interview than those with a low rate; they also believe that they have bad health.

Table 3 demonstrates that many differences between the cases and controls were found in the interview data. All the signifi-

<i>Objective; can be ascertained from the medical records</i>	
1.	More than two consultations with GP in the past year
2.	Psychotropic drugs prescribed in past year
<i>Fairly objective; relies on an accurate response by the patient</i>	
3.	Patient reports previous psychiatric illness
4.	History of truancy from school
5.	History of parental death
6.	Patient is a past or present smoker
<i>More subjective; relies on an accurate response by the patient and interpretation of the response by the doctor</i>	
7.	Mother unsupportive in health problems
8.	Fair or poor overall support in health problems
9.	Patient needs to discuss nervous problems
10.	Fair or poor maternal general health
<i>Highly subjective; relies on interpretation by the doctor</i>	
11.	Present psychiatric status (corresponding to cut-off score of two or three on the 60-item version of the general health questionnaire)
12.	Patient is dissatisfied with the doctor's explanation and information

**Figure 3.** Hierarchy for logistic discriminant analysis to design an index for the identification of young women likely to demonstrate recurrent abnormal illness behaviour.

**Table 4.** Stepwise multiple regression to predict potentially functional complaint rate.<sup>a</sup>

Variable	B	Partial F
More than two consultations with GP in past year	0.22	119.9
Psychotropic drugs prescribed in past year	0.15	30.8
Fair or poor maternal general health	0.06	10.5
History of truancy from school	0.06	7.7
Mother unsupportive in health problems	0.06	9.1
History of parental death	0.09	7.3

<sup>a</sup>The regression sum of squares is 1.63 and the residual sum of squares 0.50. Therefore this equation accounts for 23.4% of the variance.

**Table 5.** An index for predicting recurrent abnormal illness behaviour in young female patients in general practice. The index score of the patient is the sum of the scores of the individual questions minus 4.3.

1. Has the patient attended the surgery more than twice in the last year for her own problems? (Assess from medical records.)	Yes	+ 5.6
	No	0
2. Has the patient been taking psychotropic drugs in the last year? (Assess from medical records.)	Yes	+ 2.5
	No	0
3. Does the patient report previous psychiatric illness? (Can also be assessed from medical records.)	Yes	+ 0.9
	No	0
4. Does the patient report a history of truancy while at school? (Any history of truant scores 'yes'.)	Yes	+ 1.8
	No	0
5. Does the patient report a history of parental death?	Yes	+ 1.5
	No	0
6. Assess. Is the patient's mother a significant confidante for health and emotional problems?	Yes	0
	No	+ 2.5
7. Assess. Does the patient have good overall support in health and emotional problems so that there is at least one person in the same house with whom she can discuss these problems?	Yes	0
	No	+ 1.1
8. Assess. Does the patient demonstrate any signs or complain of any symptoms of anxiety or depression? <sup>a</sup>	Yes	0
	No	- 2.7
9. Assess. Does the patient appear to be completely satisfied with your explanation of and information about her problem?	Yes	- 2.1
	No	0

<sup>a</sup>This corresponds to a score of greater than 2.0. The 60-item version of the general health questionnaire is a very sensitive instrument, so that any evidence of anxiety or depression will result in the patient scoring above this level.

cant variables are of interest. In summary, the cases report more health and emotional problems, and have a higher dependence on alcohol and cigarettes than the controls. They have more social disadvantages, such as a history of parental death and unemployment, they are more likely to be housewives with children, they have fewer qualifications, they hold jobs for shorter periods of time and they have a history of truancy from

school. They are heavy users of primary care facilities and also hospital services, but despite this, they are dissatisfied with the service provided and are less compliant with treatment. Finally, despite a need to discuss health problems, they experience less family support in this area.

The most important factor in both the regression and discriminant functions is the higher consultation rate over the past year. Patients selected on the basis of a high long-term complaint rate appeared to continue this behaviour in the year under study.

The index in Table 5 is a summary of this study. Many experienced general practitioners may consider the items to be common sense and second nature in identifying patients with recurrent abnormal illness behaviour. However, the importance of a history of truancy from school, parental death, support in health problems and patient satisfaction with her doctor must be emphasized as factors which are associated with a particular type of patient whose illness behaviour includes multiple complaints of somatic, as well as emotional, symptoms.

This index requires further research and formal reliability and validity studies to indicate its value in identifying recurrent abnormal illness behaviour, and its applicability to other populations, such as males and older females.

## References

1. Backett EM, Heady JA, Evans JCG. Studies of a general practice (II): the doctor's job in an urban area. *Br Med J* 1954; **1**: 109-115.
2. Garfield SR, Collen MF, Feldman R, et al. Evaluation of an ambulatory medical-care delivery system. *N Engl J Med* 1976; **194**: 426-431.
3. Van der Gagg J, Van de Ven W. The demand for primary health care. *Med Care* 1978; **26**: 299-312.
4. Kleinman A, Eisenberg L, Good B. Culture, illness and care: clinical lessons from anthropologic and cross-cultural research. *Ann Intern Med* 1978; **88**: 251-258.
5. Malcolm R, Foster HK, Smith C. The problem patient as perceived by family physicians. *J Fam Pract* 1977; **5**: 361-364.
6. Drossman DA. The problem patient: evaluation and care of medical patients with psychosocial disturbances. *Ann Intern Med* 1978; **88**: 366-372.
7. Ries RK, Bokan JA, Katon WJ, et al. The medical care abuser: differential diagnosis and management. *J Fam Pract* 1981; **13**: 257-265.
8. Pilowsky I. Abnormal illness behaviour. *Br J Med Psychol* 1969; **42**: 347-351.
9. Kendall RE. A new look at hysteria. *Medicine* 1972; **30**: 1780-1783.
10. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 3rd edition. Washington D.C.: American Psychiatric Association, 1980.
11. Mendel JG. Mind-body disorders: classification. *NY State J Med* 1982; **82**: 76-78.
12. Cloninger CR, Guze SB. Psychiatric illness and female criminality: the role of sociopathy and hysteria in the antisocial woman. *Am J Psychiatry* 1970; **127**: 303-311.
13. Guze SB. The diagnosis of hysteria: what are we trying to do? *Am J Psychiatry* 1967; **124**: 491-498.
14. Guze SB. The role of follow-up studies: their contribution to diagnostic classification as applied to hysteria. *Semin Psychiatry* 1970; **2**: 392-402.
15. Slater E. What is hysteria? In: *New psychiatry*. Hospital and Social Service Publications, 1976.
16. Anonymous. Briquet's syndrome or hysteria? *Lancet* 1977; **2**: 1138-1139.
17. Collyer JA. Psychosomatic illness in a solo family practice. *Psychosomatics* 1979; **20**: 762-767.
18. Cartwright A, Anderson R. *General practice revisited*. London: Tavistock Publications, 1981.
19. Goldberg D, Blackwell B. Psychiatric illness in general practice. A detailed study using a new method of case identification. *Br Med J* 1970; **2**: 439-443.
20. Goldberg D, Hillier VF. A scaled version of the general health questionnaire. *Psychol Med* 1979; **9**: 139-145.
21. Anderson JA. Separate sample logistic discrimination. *Biometrika* 1972; **59**: 19-35.
22. Russell I, Gregson B. Trainees' assessments of their trainers: statistical analysis. In: Ronalds C, Douglas A, Pereira Gray D, Selley P (eds). *Fourth National Trainee Conference. Occasional paper 18*. London: Royal College of General Practitioners, 1981: 73-80.

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