A study of the presentation of somatic symptoms in general practice by patients with psychiatric disturbance

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SUMMARY. A computerized questionnaire was used to collect information on the presentation of symptoms in all 125 new patients presenting to one general practitioner in the course of one year who were considered to be suffering clinically significant psychiatric disturbance. Comparison was made between the 73 (58%) patients presenting with psychological symptoms and the 52 (42%) patients presenting with somatic symptoms for which no physical explanation was evident at the time of the consultation. Important differences emerged between the groups. Those patients presenting somatic symptoms had lower scores on the tests of psychiatric distress (indicating severity), fewer individual symptoms and fewer severe symptoms than patients presenting with psychological problems. This group also had statistically significant differences in personality profile and reported significantly fewer social problems. Prognosis for both groups was similar in that patients in both groups were equally likely to have a normal psychiatric distress score after six months.

Adequate management of somatizing patients calls for vigilance and for improved detection and negotiating skills. Reviewing the computer results with patients helped them discuss their symptoms and the system allowed the general practitioner not only a clinical assessment of these patients' problems but a measure of psychological, social and personality components.

Introduction

THERE is no shortage of evidence that many patients with psychiatric illness go unrecognized by the general practitioner.[1-4] Apart from the pressure of short appointment times and the differing abilities of individual doctors, a likely reason for failure to detect psychiatric illness is that patients may present somatic rather than psychological symptoms. This tendency of certain patients with psychiatric problems selectively to present physical symptoms to their doctor rather than their underlying psychosocial problem is known as somatization.[5-8] Compared with those presenting with psychological symptoms, these patients with hidden psychiatric illness are said to have as many symptoms, be just as ill and not to have a better prognosis.[9]

The study reported here aimed to study how many patients who presented new problems to their general practitioner and who were suspected of suffering from a psychiatric disorder first present with somatic rather than psychological symptoms as their main complaint. These patients were followed up for six months to see how their illness progressed and to compare patients with a psychological presentation with those with a somatic presentation.

The study aimed to assess patients not only in terms of psychiatric state, for which purpose several reliable and well validated questionnaires are available, but also in terms of their personality and the social stresses and supports acting on their daily lives at the time of presentation. However, accurate assessment of personality and social situation can present problems, especially when the funding of a study does not allow for the employment of trained interviewers. A system was therefore developed using the desktop computer as a means of gathering data on psychiatric and social problems directly from patients.

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Method

Computerized assessment method

Lewis and colleagues[10] have described the development, validation and use of IPSAG-CIS (the interactive psychosocial assessment for use in general practice–clinical interview schedule), a computerized assessment for minor psychiatric disorder based on the clinical interview schedule, a standardized semi-structured inventory widely used in community settings.[11] They found 'good agreement between the computerized assessment and the clinical interview schedule administered by psychiatrists, both in assessing overall severity and in defining "cases" of psychiatric disorder'. They found this computerized assessment, which eliminates observer bias, to be valid and reliable and an efficient use of research resources. The software for IPSAG-clinical interview schedule used in the present study was supplied by the Institute of Psychiatry.

The 28-item general health questionnaire, a well validated screening questionnaire much favoured in community surveys to assess psychiatric status, was converted for use on computer and was used as a comparison for the IPSAG-clinical interview schedule.[12-14] A third questionnaire — the social problems questionnaire[15] — was also used in the computerized assessment to record personal, social and marital status and to count the number of social problems. Software for the 28 item general health questionnaire and the social problems questionnaire was written by the author using the dBASE II commercial database programme.

The computer assessments were carried out in a quiet room reserved for the purpose. The patient sat in front of a computer screen and was presented with a series of multiple choice questions which were answered by pressing the appropriate key on the computer keyboard. The questions asked depended on answers to previous questions. The patient could not overlook a question (which is not uncommon when the questionnaire is printed) as each response had to be registered before it was possible to pass on to the next question.

Study of symptom presentation by patients with psychiatric disturbance

The study was begun after a pilot run of six months to test the method of data gathering. Patients with psychotic illnesses and chronic cases were excluded from recruitment. Thereafter, all adult patients presenting a new problem in the course of one year who were considered by the general practitioner to be suffering clinically significant psychiatric disturbance were recruited to the study. Patients were selected on the basis of clinical judgement, taking account of symptoms, past knowledge of the patient and changes in usual behaviour. Two patients refused to participate and one very distressed woman with psychiatric

symptoms refused initially then accepted recruitment a few weeks later.

Patients were divided into two groups at the first consultation: one group comprised a consecutive sample of patients presenting symptoms of psychological distress as their main complaint; the other group comprised a consecutive sample presenting as their main complaint somatic symptoms for which no physical explanation was evident at the time of the consultation and which were considered to be due to psychological causes.

At recruitment, a clinical assessment was made and the doctor recorded a preliminary diagnosis. Patients were then asked to use a computer to complete the IPSAG-clinical interview schedule, the 28-item general health questionnaire and the SPQ. As well as providing an overall score for psychiatric status, the clinical interview schedule records the number of psychological and somatic symptoms experienced and the severity of these symptoms. The general health questionnaire provides a score which indicates the degree of psychiatric distress; a cutoff score of 8/9 for psychiatric 'caseness' was chosen in preference to the more usual 4/5 as previous work in the same practice had indicated that the higher threshold gave the best trade-off between sensitivity and specificity in this practice population.[4] The computer programme incorporating the social problems questionnaire was used to collect data about patients' personal details, such as age, sex, employment status (employed, unemployed, retired, student, housewife), socioeconomic status (registrar general's classification), marital status (single, married, separated, divorced, widowed) and smoking habit (smoker, non-smoker). It was also used to count the number of social problems as perceived by the patient, without attempting to assess their severity.

Patients were invited back for a follow up consultation after six months and asked to repeat the computerized general health questionnaire to enable these results to be compared with the initial questionnaire results. To avoid overloading on the initial visit and because personality is usually considered to be stable over time a paper based assessment of personality, the Eysenck personality questionnaire,[16] was completed at this follow up visit. The number of consultations with any doctor in the practice, the length of these consultations, the diagnosis or reason for attendance and any prescriptions issued were recorded for the six month period. After this consultation the doctor reviewed the preliminary diagnosis made.

Statistical tests

For data recording the numbers of patients with a given attribute the chi-squared test was used to test for the significance of the difference between two proportions. Yates correction for continuity was applied for all two by two tables. Where three variables were cross tabulated they were analysed using a log-linear model.[17]

When each patient had a score on a variable, a two-tailed *t*-test was used to detect significant effects in either direction. Probabilities not reaching the 5% level are recorded as 'not significant'. Statistical analysis was performed directly on the data stored in the computer memory without the need for transcription from paper questionnaires and thus transcription errors were eliminated.

Results

Characteristics of patients

Over a 12 month period 125 patients agreed to participate in the study, 91 women and 34 men. Seventy three of these patients (58%) presented mainly psychological symptoms and 52 (42%) presented somatic symptoms. The mean age of the participating patients was 42.2 years (range 21–64 years) for men and 40.5 (range 18–78 years) for women.

There was no statistically significant difference between men and women in age or smoking habit. Many more women presented than men but there was no significant difference in the type of presentation (psychological or somatic) and the likelihood of being a psychiatric case (score on the 28 item general health questionnaire of 9 or over) between men and women ($\chi^2=2.21$, df=1, $P>0.1$).

There was no statistically significant difference in socioeconomic status or employment situation between the patients with psychological or somatic presentation. Both groups were broadly similar in terms of marital status, though the psychological group had nine individuals who were separated compared with none in the somatic group. Despite this the difference in marital status was not statistically significant. Smoking habit was very different between the groups as 40 (55%) patients presenting psychological symptoms smoked cigarettes compared with 15 (29%) patients presenting somatic symptoms ($\chi^2=7.28$, df=1, $P<0.01$).

Computerized assessment method

Almost all the patients were competent and were happy to use the normal computer keyboard, and the keypad specially modified for one test proved unnecessary. Very few patients expressed any concerns regarding confidentiality, the main criticism being that they could not qualify their answers, being obliged to reply 'yes' or 'no' when they wished to say 'yes, but...' and so have more response categories. Patients readily accepted that the tests were not a substitute for consultation but provided additional diagnostic information in the same way as an x-ray or blood test. Several remarked that working through the tests helped them clarify their ideas on their symptoms and formulate questions to discuss with the doctor at their next consultation. Many patients commented on the thoroughness of the questionnaire method and some said that they enjoyed interaction with the computer.

There was good agreement between the results of the two methods used to estimate current psychiatric state, the 28 item general health questionnaire screening test and the IPSAG-clinical interview schedule (correlation coefficient 0.83, $P<0.001$).

Initial data

Psychiatric state and social problems. At recruitment the means of test scores for psychiatric state and mean number of social problems were significantly different between the groups (Table 1). Forty one patients with a psychological presentation (56%) reported social problems and 25 (34%) had more than one problem, compared with 17 (33%) and eight (15%) of patients presenting with somatic symptoms.

Symptoms. At recruitment the mean number of individual symptoms for patients presenting with psychological symptoms was significantly greater than for patients with somatic symptoms ($P<0.01$) (Table 1). Similarly, severe symptoms were significantly commoner in the psychological group ($P<0.01$).

Comparison between the two groups of patients in their pattern of symptoms on the IPSAG-clinical interview schedule showed marked differences, with significantly higher scores on somatic symptoms for patients presenting with somatic symptoms ($P<0.05$) (Table 2). Patients with a psychological presentation had significantly higher scores for sleep disturbance, phobias and indecision ($P<0.05$) and very significantly higher scores for irritability, loss of concentration, depression, depressive thoughts, anxiety, excessive checking and unwelcome thoughts ($P<0.01$). There was no statistically significant difference in hypochondriasis or tiredness or the relatively rare symptoms of depersonalization or derealization.

Diagnoses. The clinical diagnoses at recruitment in the psychological group were: depression (38 patients), anxiety states without depression (27), alcohol problems (three), other (five). In the somatic group diagnoses were very varied but the main groups were: headache (13), other pains (seven), lassitude/anorexia (12), giddiness (five), palpitations (three), other (12).

Follow-up data

In the group presenting with psychological symptoms three patients left the practice, one died and one became too ill to complete the six month tests. In the group presenting with somatic symptoms two patients left the practice before follow up could be completed. No patient refused the six month follow up. Follow up questionnaires were therefore completed by 118 (94%) of the initial patients.

Personality. The Eysenck P scores (tough mindedness) and Eysenck N scores (neuroticism) were significantly higher for the group who had originally presented with a psychological problem compared with the group presenting a somatic problem (Table 3).

Table 1. Initial scores on psychiatric tests, number of social problems and number of symptoms presented for the two groups of patients.

	Psychological group ($n=73$)	Somatic group ($n=52$)	Probability (2 tailed *t*-test)
Mean (SD) scores on psychiatric tests			
General health questionnaire	16.8 (7.5)	12.6 (5.4)	$P<0.01$
IPSAG-clinical interveiw schedule	28.2 (12.8)	21.2 (9.4)	$P<0.01$
Mean (SD) number of social problems	1.2 (1.4)	0.6 (1.1)	$P<0.01$
Mean (SD) number of symptoms	10.8 (3.0)	9.1 (3.3)	$P<0.01$
Mean (SD) number of severe symptoms	5.6 (4.1)	3.7 (3.0)	$P<0.01$

n = number of patients at recruitment. SD = standard deviation.

Table 2. Initial scores on individual symptoms for the two groups of patients.

	Mean (SD) scores		
	Psychological group ($n=73$)	Somatic group ($n=52$)	Probability (2-tailed *t*-test)
Irritability	2.11 (1.38)	1.46 (1.29)	$P<0.01$
Concentration loss	2.18 (1.21)	1.31 (1.11)	$P<0.01$
Depression	2.36 (1.23)	1.58 (1.18)	$P<0.01$
Depressive thoughts	1.93 (1.11)	1.35 (1.08)	$P<0.01$
Anxiety	2.44 (1.22)	1.81 (1.30)	$P<0.01$
Excessive checking	1.52 (1.44)	0.52 (1.02)	$P<0.01$
Unwelcome thoughts	2.34 (1.41)	1.50 (1.36)	$P<0.01$
Somatic symptoms	1.67 (1.51)	2.23 (1.37)	$P<0.05$
Sleep disturbance	2.41 (1.55)	1.87 (1.37)	$P<0.05$
Phobias	0.85 (1.00)	0.50 (0.80)	$P<0.05$
Indecision	1.97 (1.49)	1.33 (1.40)	$P<0.05$
Hypochondriasis	2.07 (0.99)	1.92 (0.81)	NS
Tiredness	2.36 (1.25)	2.52 (1.02)	NS
Depersonalization	1.01 (1.61)	0.65 (1.27)	NS
Derealization	0.89 (1.46)	0.54 (1.11)	NS

SD = standard deviation. *n* = number of patients at recruitment.
NS = not significant.

Psychiatric state. Outcome was assesed on the basis of changes in psychiatric caseness (that is change in general health questionnaire scores from 'abnormal' ($\geqslant 9$) to 'normal' ($\leqslant 8$)) in Table 4 and on mean general health questionnaire scores on Table 5. It will be seen that there was no statistically significant difference in prognosis between groups, both were equally likely to have normal scores after six months. Although patients presenting with psychological symptoms had significantly higher mean scores at recruitment the difference in scores was not significant after six months.

Number of consultations and prescriptions. The mean number of long consultations (eight or more minutes in duration) over the six month period in both groups is illustrated in Table 6 and it will be seen that while the psychological group did not have significantly more consultations over six months, they had more long consultations. Comparison of the number of prescriptions issued to the groups over six months showed a significant difference only in the case of antidepressants (Table 7). While patients were free to consult any of the six doctors in the practice for follow up, it was supposed that many patients would continue to consult their 'usual' doctor (who had in fact recruited them). Forty seven of the psychological patients (69%) consulted

Table 3. Scores on Eysenck personality questionnaire for the two groups of patients.

	Mean (SD) scores		
	Psychological group ($n=68$)	Somatic group ($n=50$)	Probability (2 tailed *t*-test)
P score (tough mindedness)	2.6 (2.1)	1.8 (1.8)	$P<0.05$
E score (extraversion)	10.2 (5.0)	9.7 (5.4)	NS
N score (neuroticism)	16.1 (5.1)	14.0 (4.8)	$P<0.05$

SD = standard deviation. *n* = number of patients at follow up.
NS = not significant.

Table 4. Changes in general health questionnaire scores at six months for those patients followed up.

	Number of patients			
	Psychological group		Somatic group	
	Follow up score $\geqslant 9$ (case)	Follow up score $\leqslant 8$ (non-case)	Follow up score $\geqslant 9$ (case)	Follow up score $\leqslant 8$ (non-case)
Initial score $\geqslant 9$ (case)	23	34	10	29
Initial score $\leqslant 8$ (non-case)	1	10	1	10

Log linear analysis showed no significant difference in prognosis.

Table 5. Mean initial and follow up scores on the general health questionnaire at six months for those patients followed up.

	Mean (SD) scores		
	Psychological group ($n=68$)	Somatic group ($n=50$)	Probability (2-tailed *t*-test)
Initial	16.6 (7.6)	12.3 (5.2)	$P<0.001$
Follow up	7.1 (7.7)	5.6 (5.2)	NS
Change	9.5 (8.5)	6.7 (5.8)	$P<0.05$

SD = standard deviation. *n* = number of patients followed up at six months.
NS = not significant.

only this doctor over the six month period compared with 29 (58%) somatic patients. The difference was not statistically significant.

Diagnoses. In the 68 patients who had presented originally with psychological symptoms the diagnosis was changed in five patients from anxiety to depression. Of the 52 patients who had originally presented somatic symptoms, 50 were followed up and 13 were given a formal psychiatric diagnosis within six months of recruitment.

Discussion

Computerized assessment method

Almost all patients found the computer acceptable and easy to use and this confirms the experience of other researchers.[18,19] It can also produce reliable information[20,21] and patients seem more ready to divulge sensitive information to a computer than to an interviewer.[18,20,22]

Computerized assessment offers several advantages to the general practitioner researcher. It is relatively cheap, portable and reliable and avoids the need for a specialist interviewer. The assessment can be thorough, can avoid irrelevant questions and is uninfluenced by patient characteristics such as age, sex and social status. Computerized assessment also offers possibilities in diagnosis and routine patient management as it is convenient, simple to arrange, saves doctor time and the result is instantly available. As a consequence of this research, computerized psychosocial testing is available as a service in the practice and has been found useful in assessment and management of new cases. Far from displacing clinical responsibility from the doctor, it allows more time to analyse the patient's symptoms and to make more informed decisions.

It is important to remember that the use of tests is not a substitute for clinical assessment, particularly assessment of suicide risk. The doctor should see the results of tests very soon after they are available. Some patients may admit suicidal ideas to the computer rather than the doctor and may expect that the doctor will take notice of them.

Table 6. Number of consultations and number of long consultations over six months for those patients followed up.

	Mean (SD) number of consultations		
	Psychological group ($n=68$)	Somatic group ($n=50$)	Probability
All consultations	5.2 (3.3)	4.6 (2.4)	NS
Long consultations (⩾8 minutes)	1.4 (1.7)	0.8 (1.0)	$P<0.01$

SD = standard deviation. n = number of patients followed up at six months. NS = not significant.

Table 7. Number of prescriptions issued over six months for those patients followed up.

	Number (%) of prescriptions			
	Psychological group ($n=68$)	Somatic group ($n=50$)	Total ($n=118$)	Probability
Antidepressants	43 (*63*)	15 (*30*)	58 (*49*)	$P<0.001$
Anxiolytics	9 (*13*)	10 (*20*)	19 (*16*)	NS
Hypnotics	6 (*9*)	8 (*16*)	14 (*12*)	NS
Non-psychotropic drugs	38 (*56*)	33 (*66*)	71 (*60*)	NS

n = number of patients followed up at six months. NS = not significant.

In routinely assessing psychiatric state the clinical interview schedule has some advantages over the 28-item general health questionnaire previously used for screening in the practice[4] as it is more thorough and accords better with clinical judgement, though it cannot easily be used without a computer. The clinical interview schedule administered by a psychiatrist is widely regarded as a good standard for case identification. All interview techniques are vulnerable to differences in perception and inference between observers and as Lewis and colleagues[10] point out 'computerized assessment might be more reliable than a standardized interview because it eliminates all observer bias'.

There is, as yet, no evidence that use of this computerized method results in improved patient care but further research would seem amply justified. Apart from its usefulness in management, the method might improve the general practitioner's ability to diagnose and also facilitate the gathering of data on outcome. It might contribute to the development of management protocols for psychiatric illness in general practice and even help to clarify the taxonomy of the illnesses really seen in general practice populations.

Study of symptom presentation by patients with psychological disturbance

This study presents some data on the presentation of minor psychiatric illness in a general practice and gives a measure of the incidence of diagnosed disorder. It complements data on the prevalence of psychiatric illness and of various disease groups in patients attending the same general practitioner.[4] It confirms that a substantial proportion of psychiatric patients, that is 42% of cases suspected by the general practitioner, initially present physical symptoms to their general practitioner.

That so many patients express their distress in this way has important implications for clinical care. Adequate management of somatizing patients calls not only for vigilance but also for improved detection and negotiating skills as they do not volunteer and often deny affective symptoms. We are far from a full understanding of this phenomenon of somatization though the results of this study showed that somatizing patients reported fewer social problems, had different personality profiles, were less likely to be smokers (itself probably a personality indicator) and less likely to be prescribed antidepressants than patients presenting psychological problems.

In this study there was no statistically significant difference between the two groups in the number defining themselves as cases at the end of six months, confirming that the prognosis for psychiatric patients presenting psychological or somatic symptoms is similar. Comparison of mean scores for the 28-item general health questionnaire and the IPSAG-clinical interview schedule at recruitment and comparison of the number of individual symptoms and severity scores confirmed that patients presenting somatic problems are somewhat less ill than patients presenting psychological problems and less dissatisfied with their social circumstances. These results are in broad agreement with the findings of Bridges and Goldberg[5,23] who studied somatic presentations of psychiatric illness in primary care.

It should be remembered, however, that the difference in the distribution of individual symptoms between the groups is partly a consequence of how the groups were defined in the first place. As Goldberg[13] pointed out, while each patient experiences symptoms on a continuous spectrum of severity, for practical purposes patients must be divided into those who are psychiatric cases and those who are not. Questionnaire measures of 'caseness' depend on a sum of symptom scores. Somatizing patients do not have, or do not recognize that they have, low mood, an important component of our definition of common psychiatric illnesses.[24]

It is crucial to try to understand why large numbers of patients with psychosocial disorder present with somatic symptoms. Reviewing the results of the computerized assessment with patients helped them discuss their symptoms, aided diagnosis and facilitated a problem-oriented treatment plan. This was particularly so with somatizing patients who seemed helped by the process to recognize and accept the psychological component of their illness and to articulate their feelings. We aim to define our patients' problems in physical, psychological and social terms. The means to begin to measure these factors and increase our understanding has been provided by research psychiatrists and by the advent of the desk top computer.

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