Cross sectional study of symptom attribution and recognition of depression and anxiety in primary care

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Abstract

Objectives To examine the effect of patients' causal attributions of common somatic symptoms on recognition by general practitioners of cases of depression and anxiety and to test the hypothesis that normalising attributions make recognition less likely.
Design Cross sectional survey.
Setting One general practice of eight doctors in Bristol.
Subjects 305 general practice attenders.
Main outcome measure The rate of detection by general practitioners of cases of depression and anxiety as defined by the general health questionnaire.
Results Consecutive attenders completed the general health questionnaire and the symptom interpretation questionnaire, which scores style of symptom attribution along the dimensions of psychologising, somatising, and normalising. General practitioners detected depression or anxiety in 56 (36%; 95% confidence interval 28% to 44%) of the 157 patients who scored highly on the general health questionnaire. Subjects with a normalising attributional style were less likely to be detected as cases; doctors did not make any psychological diagnosis in 46 (85%; 73% to 93%) of 54 patients who had high questionnaire and high normalising scores. Those with a psychologising style were more likely to be detected; doctors did not detect 21 (38%; 25% to 52%) of 55 patients who had high questionnaire and high psychologising scores. The somatisation scale was not associated with low detection rates. This pattern of results persisted after adjustment for age, sex, general health questionnaire score, and general practitioner.
Conclusions Normalising attributions minimise symptoms and are non-pathological in character. The normalising attributional style is predominant in general practice attenders and is an important cause of low rates of detection of depression and anxiety.

Introduction

Recognition of depression and anxiety is a key issue in general practice. If these disorders are not recognised they cannot be treated. There are a number of treatments of proved efficacy[1 2] and some evidence to show that recognition improves outcome,[3 4] though this has been questioned.[5]

Most episodes of depression and anxiety—the "common mental disorders"—are contained and managed in primary care.[6] Yet less than half of these episodes are identified in the consultation.[7] Why is recognition of depression and anxiety such a problem in general practice? Doctors' skills and attitudes play a part. Certain key skills in the consultation have been identified that are both teachable and associated with increased rates of recognition.[8] Teaching better consultation skills, however, leads to only a modest increase in detection rates.

Most consultations in primary care are initiated by the patient. The content of the typical primary care consultation and its outcome will be influenced by what the patient chooses to present and how he or she chooses to present it.[9] Common somatic symptoms are the currency of general practice; they are also concomitants of anxiety and depression.[10] Numerous studies have categorised this combination of mood disorder and somatic symptomatology as "somatisation" and have shown it reduces general practitioners' ability to identify mental disorder.[10 11] But this use of the term somatisation has certain disadvantages in the context of primary care. It associates a common mode of presentation with the much rarer, more serious, chronic, and treatment resistant "somatisation disorder."[12] It also implies that patients who present with psychological disorders and common bodily symptoms tend to think of themselves as physically ill. Attempts to redefine somatisation for primary care have led to a confusion of multiple and at times complex definitions.[10 11 13] One way to simplify the issue is to ask patients themselves for their causal attributions for common somatic symptoms.

Patients' beliefs about their symptoms are powerful influences on their decision to consult a doctor and how they present their problem when they do consult.[14] In other words, do we think our fatigue is caused by emotional exhaustion? Is it due to anaemia? Or could it be because we have been overdoing it or not doing enough exercise? In the example given above three types of explanation or attribution have been offered for a common somatic symptom, fatigue. The first, the idea that it is due to emotional exhaustion, can be called a psychologising attribution. The second, that it is caused by anaemia, is a somatising attribution. In the third explanation the experience of fatigue is thought to be related to overexertion or not

exercising enough. This type of attribution has been called normalising.[15]

Until now most studies that have looked at patients' beliefs about their symptoms have focused on the dichotomy between somatising and psychologising. These are, in effect, "illness beliefs." Normalising attributions are qualitatively different in that they are non-pathological. They are the most prevalent attribution in primary care attenders as well as in the population as a whole.[15] This study asks whether such attributions have any effect on the general practitioner's ability to make a diagnosis of depression or anxiety. In particular it tests the hypothesis that normalising attributions reduce the likelihood of the detection of such disorders.

Methods

The study took place in an eight partner urban practice which serves 12 800 patients and has a slightly larger than average population of patients aged over 75. Surgeries were selected to ensure that both morning and evening attenders were represented and that all doctors were covered by the study. Consecutive attenders aged over 16 years were given two questionnaires before seeing their general practitioner. Twenty four questionnaires were incomplete, and 26 patients declined to participate.

The 12 item general health questionnaire has been widely used to detect psychiatric disorder in primary care[16] and validated in comparison with more detailed assessments. In a recent study it was compared with a more detailed psychiatric assessment and the optimal threshold for "caseness" found to be a score of 3 or more.[17] We have adopted this definition of a case of psychological disorder.

The symptom interpretation questionnaire is a self report questionnaire consisting of a list of 13 common bodily symptoms or sensations.[15] Attached to each symptom are three possible explanations, each one corresponding to one of the three styles of attribution: psychologising, somatising, or normalising. The patients were asked to choose one explanation for each symptom, giving each subject a numerical score from 0-13 along the three attributional dimensions. The sum of all three scales was therefore 13. Subjects were classified as predominantly normalisers, psychologisers, or somatisers if they scored 7 or more on that scale. Validation research has shown that these scores remain reasonably consistent over time, supporting the theory that they may reflect underlying health beliefs.[15]

General practitioners, who were blind to the results of the questionnaires, were asked to report any diagnoses of depression or anxiety they made and to note whether this was a new diagnosis or if the patient was already under treatment. The proportion of patients diagnosed as anxious or depressed was calculated according to scores on the normalising, psychologising, and somatising scales of the symptom interpretation questionnaire. For presentation purposes the scores were divided into four categories, but the scales were also examined as continuous variables. Logistic regression was used to estimate odds ratios for the detection of psychiatric disorder and to adjust for the confounding variables of age, sex, general health questionnaire score, and general practitioner consulted (as a categorical variable). Results were unchanged when data from the subjects who were "false positives" on the general health questionnaire were excluded. Statistical analysis was done with STATA.[18] Ethical approval was obtained from the local research ethics committee.

Results

There were 225 women and 80 men in the study, a ratio of 2.8:1. The mean (range) age was 44 (16-90) years. The men were significantly older than the women (mean age 49.2 *v* 42.0 years; $P<0.003$). On the general health questionnaire 157 (52%; 95% confidence interval 46% to 57%) of all the attenders scored 3 or more. The general practitioners made a diagnosis of depression in 57 (19%; 15% to 24%) patients and anxiety in 14 (5%; 3% to 8%). Measured against the general health questionnaire threshold of 3 or more the general practitioners showed a specificity of 80% (69% to 89%) and a sensitivity of 57% (50% to 63%). There were 14 false positive results: patients who were diagnosed as depressed or anxious by the general practitioner but scored less than 3 on the general health questionnaire. Of these, seven had already been diagnosed with depression by a general practitioner and were receiving treatment.

In the symptom interpretation questionnaire the normalising attribution was most often selected, with 146 out of 305 (48%) choosing seven or more normalising explanations out of a possible 13. Seventy one patients (23%) selected seven or more psychologising explanations, and only 16 patients (5%) chose seven or more somatising attributions (table 1). This pattern of distribution was also found in the initial validation studies.[15] High scorers on the somatisation scale were older, normalisers younger ($F_{3,301}=7.54$; $P<0.0001$). Psychologisers were more likely to be female and normalisers and somatisers to be male (likelihood ratio $\chi^2=11.2$; $df=3$; $P<0.01$).

Symptom interpretation questionnaire and general practitioner diagnosis of anxiety and depression

Table 2 shows that the higher the patient's score on the normalising dimension of the symptom interpretation questionnaire the less likely the general practitioner was to diagnose depression or anxiety ($P<0.0001$) and that the higher the patient's score on the psychologising dimension the more likely was the general practitioner to diagnose depression or anxiety ($P<0.0001$). For normalising and psychologising the relation was still present after adjustment for age, sex, general health questionnaire score, and which doctor

Table 1 Detection by general practitioner of anxiety and depression in 305 patients with different styles of symptom attribution

Attributional category	No of patients (No of women)	Mean age (years)	GHQ cases	
			No (%)	No (%; 95% CI) not detected*
Psychologising score ≥7	71 (61)	43.4	55 (77)	21 (38; 25 to 52)
Normalising score ≥7	146 (99)	40.4	54 (37)	46 (85; 73 to 93)
Somatising score ≥7	16 (9)	58.6	6 (38)	5 (83; 36 to 100)
No predominant score	72 (56)	48.8	42 (58)	29 (69; 53 to 82)

GHQ=general health questionnaire.
*Patients classified as depressed according to general health questionnaire but not diagnosed as such by general practitioner.

Table 2 Detection by general practitioner (GP) of anxiety and depression in 305 patients with different degrees of normalising, psychologising, and somatising symptoms

SIQ score*	No in category	No (%) detected by GP	Odds ratio (95% CI)	Adjusted odds ratio† (95% CI)
Normalising				
0-3	51	27 (53)	1	1
4-6	108	29 (27)	0.33 (0.16 to 0.65)	0.26 (0.11 to 0.62)
7-10	110	10 (9)	0.09 (0.04 to 0.21)	0.10 (0.04 to 0.29)
11-13	36	4 (11)	0.11 (0.03 to 0.36)	0.20 (0.05 to 0.82)
Psychologising				
0-3	138	16 (12)	1	1
4-6	96	16 (17)	1.32 (0.72 to 3.12)	1 (0.42 to 2.36)
7-10	61	29 (48)	6.91 (3.35 to 14.25)	4.05 (1.66 to 9.87)
11-13	10	9 (90)	68.6 (8.15 to 577)	31.6 (3.06 to 327)
Somatising				
0-3	228	52 (23)	1	1
4-6	61	14 (23)	1.00 (0.51 to 1.97)	1.45 (0.63 to 3.37)
7-10	16	4 (25)	1.13 (0.35 to 3.65)	1.86 (0.45 to 7.66)

*Symptom interpretation questionnaire; subjects classified as predominantly normalisers, psychologisers, or somatisers if they scored 7 or more on that scale. †Adjusted for age, sex, general health questionnaire score, and doctor consulted.

the patient saw. There was no evidence of an association between detection by the general practitioner and the patient's somatising score (table 2). This lack of relation was confirmed by using somatisation as a continuous variable (likelihood ratio $\chi^2 = 0.19$; df = 1; P = 0.7).

Recognition of anxiety and depression in general health questionnaire cases with different symptom attributional styles

General practitioners did not diagnose depression or anxiety in 21 (38%; 25% to 52%) of the 55 patients who were cases according to the general health questionnaire and had a predominantly psychologising style of symptom attribution. In contrast depression or anxiety went undetected in 46 (85%; 73% to 93%) of the 54 patients who were cases according to the general health questionnaire but had a predominantly normalising style of symptom attribution (see table 1). There was no evidence that the association between normalising style and low rates of detection was influenced by score on the general health questionnaire (test for interaction, likelihood ratio $\chi^2 = 0.19$, df = 1, P = 0.66). Patients with a normalising style were less likely to be detected even when the analysis was restricted to those with a score of 7 or more.

Discussion

We found that different styles of symptom attribution are strongly associated with different rates of detection of depression and anxiety. Patients who make psychologising attributions are more likely to get a psychological diagnosis; the stronger their tendency to make such attributions the more likely such a diagnosis becomes. A normalising style of attribution has the opposite effect, and the stronger a patient's tendency to normalise or minimise his or her symptoms the less likely he or she is to be seen as depressed or anxious by the general practitioner. Somatising attributions, which are the least common, had no measurable effect on diagnostic rates, though this may have been because of lack of statistical power.

Normalising attributions are the most common both in studies of populations and primary care attenders.[15] Even among those with a high general health questionnaire score there are large numbers of "normalisers." It is in this group, who tend to be younger and male, that general practitioners particularly did not detect depression and anxiety. Only eight out of 54 patients with a normalising attributional style and a high general health questionnaire score were diagnosed as being depressed or anxious. Forty six of the 101 (45.5%; 35.6% to 55.8%) undetected cases had a predominantly normalising style of attribution. Does this strong association between a normalising style of attribution and low rates of detection of mental disorder represent a causal relation? Our study suggests that it does. The association is robust and remains strong even after adjustment for which general practitioner the patient saw, general health questionnaire score, age, and sex. One limitation of the study is that we were not able to adjust for presenting symptom, but we might expect this to be influenced by causal attributional style. The normalising style arises out of the "discounting principle."[19] This is the idea that symptoms are often "explained away" as being caused by a minor environmental irritant or as the result of "overdoing it." Such explanations propose a non-pathological cause for the symptom. In other words "normalisers" play down the significance of their symptoms. For the general practitioner to respond to the patient's own attribution of his or her symptoms is an expression of empathy and an important part of the negotiation between patient and doctor in moving towards a diagnosis. Such negotiations are the cornerstone of the doctor-patient relationship in general practice. Thus a psychological style of attribution is likely to elicit questions from the doctor about mental wellbeing and mood state and would favour a psychological formulation for the problem. In contrast, a normalising attribution, with its powerful "commonsensical" overtones, may influence the doctor to join with the patient in minimising and even dismissing the symptoms.

It is easy to understand why people who make a somatising attribution for their symptoms would seek the advice of their general practitioner. It is also clear that the general practitioner is the first port of call for many in psychological distress. But when "normalising" attributions are concerned there seems to be a paradox. Why should someone who is making a normalising attribution seek a doctor's advice? The answer may lie in a need to check the normalising style of attribution and to be reassured that it is the correct one. If this is so, then the implicit question that the normaliser asks the physician is "there's nothing really wrong with me, is there?" In the same way that we respond to somatisers and psychologisers by accepting their attribution, so we may respond to the normalisers by agreeing with them. This collusion could result in a tendency to neglect symptoms of depression and anxiety.

The rate of apparent underdiagnosis of psychological disorder in primary care remains stubbornly high. Patients with such disorders may often present with somatic symptoms but are rarely committed "somatisers." Instead they are more likely to be normalising their symptoms and giving them a

Key messages

- Many patients with psychological disorders present to their general practitioner with common somatic symptoms. This combination has been referred to as "somatisation" and is associated with lower rates of diagnosis of depression and anxiety
- When questioned directly about the cause of their symptoms most patients choose "normalising" attributions, which tend to minimise the importance of the symptoms; somatising attributions are uncommon
- The more normalising attributions patients choose, the less likely are general practitioners to diagnose depression or anxiety; the association remain after adjustment for age, sex, general health questionnaire score, and which doctor the patient saw
- The normalising attributional style makes a considerable contribution to the non-detection of depression and anxiety. A better understanding of how depressed patients view their symptoms may be the key to understanding low diagnostic rates

non-pathological attribution. The question of whether such patients would benefit from detection could be examined by a comparison of outcomes for detected and undetected depressed patients with different attributional styles.

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Commentary: There must be limits to the medicalisation of human distress

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This paper sets out to elucidate further the much reported "failure" of general practitioners to diagnose depression. The 12 item general health questionnaire was administered to 305 consecutive patients attending general practice, and the threshold for the diagnosis of depression was set at a score of 3 or more, which meant that a staggering 51.5% of the patients were considered by the researchers to have measurable depression. This extraordinary finding does not seem to have disturbed them. The patients' general practitioners made a diagnosis of depression or anxiety in only 23% of the attenders, but this is still a huge proportion of unselected patients from a waiting room. None the less, the paper reports these figures as showing a significant and serious failure to diagnose.

The patients were also given a questionnaire which enabled them to be divided into three categories: those who tend to find psychological explanations for their symptoms, those who find physical explanations, and those who tend to normalise their symptoms by finding explanations in their life circumstances. The major finding of the paper is that general practitioners are much more likely to "fail" to diagnose depression in patients who tend to normalise their symptoms. Surely this conclusion provides us with a superlative example of the folly of medicalisation.[1]

The general health questionnaire includes the following questions. In the past few weeks, have you been able to concentrate on whatever you're doing? been able to enjoy your normal day to day activities? been feeling reasonably happy, all things considered? By setting the threshold for caseness at 3, the researchers will have defined as depressed all those who answered "less so than usual" to all of these three questions or any other three questions out of the full range of 12.

Patients come to the general practitioner for many reasons but most commonly because they are

disturbed or distressed. They may be in pain, and they may be worried that their symptoms are the first indication of serious or life threatening disease. They may have lost someone close, their job may be under threat, their partner may have hit them, or their home may be damp or frightening or overcrowded. Any such patient is likely to answer "less so than usual" to the three questions but is it helpful to consider them as depressed?

Human beings struggle to make sense of suffering and illness by finding meaning for it in the very particular context of each individual life. Patients who normalise their experience may have already begun this process of finding meaning, making sense, and learning to cope.[2] Do we have any evidence that the medical treatment of depression improves outcomes to an extent which would justify pressurising patients into accepting psychiatric explanations for symptoms they are willing to normalise? What evidence we do have suggests that the depression which is apparently missed by general practitioners runs a relatively benign and self limiting course.[3]

General practitioners should not be castigated when they try, alongside the patient, to find out what is the matter rather than to make a diagnosis.[4]

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Experiences with "rapid appraisal" in primary care: involving the public in assessing health needs, orientating staff, and educating medical students

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The incorporation of lay perspectives in research and development in the health service is not only politically mandated in recent white and green papers but also has the potential to improve the relevance and impact of research and the quality of subsequent services.[1] There are many ways of identifying lay views and incorporating these into decisions, but the methods used to achieve this need further evaluation. Traditional methods to encourage public participation—such as public meetings, patient participation groups, and complaints procedures—have met with limited success.[2]

During the past decade the technique named "rapid appraisal" has begun to make important contributions in the assessment of local needs and planning in the developed and developing countries (see box on p 441). Its use in the United Kingdom has been guided by the work of Chambers,[3] Annett and Rifkin,[4] and Ong,[5] and Manderson and Aaby have described an "epidemic increase" in the use of this method.[6] Rapid appraisal has now been used by community workers and primary healthcare teams to gain public involvement in the assessment of needs from the Isle of Skye to inner city London and from Belfast to Norway. Initially used for assessment of global needs it has also been used with specific groups of patients and to gain broad perspectives on accident and emergency services.[7]

Rapid appraisal has great potential but also has important limitations. A sharing of practical experiences may be helpful for individual practices, groups of practices, and health authorities considering how to gain public involvement in assessing local health needs.

Summary points

- Rapid appraisal can be used to involve the public in the identification of local health needs and can supplement more formal methods of assessing needs
- Rapid appraisal is best used in homogeneous communities: practice populations tend to be heterogeneous
- Rapid appraisal can be modified to focus on the needs of specific groups of patients
- The process of rapid appraisal can give a structured orientation to new workers in the community
- Rapid appraisal can be adapted to introduce medical students to the concept of community diagnosis as a natural companion to individual clinical diagnosis

Public participation in assessing needs: five applications of rapid appraisal

In the first study an expanded primary healthcare team adapted this method to describe the health needs of a small housing estate of 1200 residents in central Edinburgh.[9] In the second study, comprising the same population, a psychiatrist, community psychiatric nurse, and general practitioner focused an appraisal more specifically on mental health needs and suggested changes.[10] In a third study three community psychiatric nurses, each with catchment areas of around 40 000 residents, used the format of rapid appraisal to orient themselves to their new areas while assessing the need for their services.[11] Fourthly, with a population of 120 000 residents, an external researcher was commissioned to assess broad health needs with this approach—which in fact failed.[12] Finally this technique was successfully used in a community