# General practice patients' beliefs about their symptoms

MARIA WOLOSHYNOWYCH

ROLAND VALORI

PETER SALMON

*SUMMARY*

***Background.*** *Patients' beliefs about symptoms are major influences on consultation and its consequences. However, little information is available about the beliefs of patients when they consult their general practitioner (GP).*

***Aim.*** *To describe and quantify the range of beliefs of patients about their symptoms before consultation, and to test the hypothesis that patients who attribute symptoms to stress or lifestyle would expect less benefit than others from physical medicine but more from lifestyle change and emotional support.*

***Method.*** *Interviews with 100 patients attending one of two general practices were used to form a questionnaire, which was completed by 406 patients attending one of three general practices in contrasting areas of Greater London. This measured the frequency of specific beliefs about the causes of their symptoms and about effective forms of help. Patients were seen before their consultation.*

***Results.*** *The most common aetiological beliefs concerned stress and lifestyle. In general, the mechanisms underlying symptoms were thought to be disturbances in bodily functioning rather than pathological processes. The most valued form of help was explanation and discussion of symptoms. Nevertheless, about half the patients expected benefit from medication and only slightly fewer from hospital investigation or treatment. Patients who attributed symptoms to stress or lifestyle were no less likely to expect help from medication or specialist referral, but they were more likely to see benefit in explanation and counselling or lifestyle change.*

***Conclusions.*** *These findings suggest hypotheses for future research into the effects that patients' attributions of their symptoms to stress and lifestyle have on their health care demands, emphasize the importance of routinely assessing patients' beliefs on consulting the GP, and provide information that can help to direct this assessment in the individual case.*

*Keywords: general practitioners; consultations; patient health beliefs.*

## Introduction

BELIEFS about the causes of symptoms and about doctors' ability to alleviate them are major determinants of whether people consult and of satisfaction with the consultation, compliance with treatment, and, ultimately, the outcome.[1-5] The success of consultation therefore depends on the ability of the doctor to detect and, if necessary, modify the patient's beliefs. This is particularly important in primary care where, in the majority of consultations, patients commonly seek explanation of their symptoms and reassurance about them rather than active treatment.[4]

Beliefs about similar symptoms vary widely between patients and change over time.[2] Information about the range and frequencies of specific beliefs in general practice attenders before they consult would help to direct the GP's assessment of beliefs in individual consultations. Much work in this area has been purely qualitative, helping to define the range but not the frequency of beliefs.[6] Quantitative work has focused on beliefs about medically-defined illnesses rather than symptoms; moreover, patients have been asked about beliefs that have been chosen for their theoretical importance rather than because they represent the range of beliefs that patients actually hold.[7] Therefore, in the present study, we first used qualitative analysis of semi-structured interviews to define the range of beliefs that patients describe. Then, we quantified these beliefs in a larger sample of patients studied before their consultation with the GP.

As well as helping to inform the individual assessment of patients' beliefs by the GP in clinical practice, the present investigation allowed us to study two causal beliefs that are of particular importance in Western cultures: the attribution of symptoms to stress and to lifestyle.[6,8] Because a major reason why patients consult is to seek explanation, i.e. in order to have their beliefs confirmed or changed, it will be useful to know the prevalence of these beliefs in patients attending the GP, and whether having these beliefs has implications for other beliefs about aetiology and treatment. The importance of these beliefs for the GP goes beyond this because, logically, they might lead people to expect benefit from responses other than medical investigation and treatment, such as advice or emotional support. If this is so, the GP might, in specific instances, seek to encourage such beliefs (or disabuse patients of them) so as to stimulate the patient to take responsibility for changing behaviours that contribute to symptoms (or to seek medical attention more readily). However, the prediction that an attribution of symptoms to stress or lifestyle would be associated with a reduced demand for medical intervention and an increased reliance on other sources of help has not yet been tested. We, therefore, examined whether stress and lifestyle attributions were associated with beliefs about which treatments or types of management would be helpful.

## Method

### *Derivation of the questionnaire*

Patients ($n$ = 100) were studied in two inner city group practices. In each, patients were selected randomly in advance from the appointment book for interview. When the patient reported to the receptionist, one of two (male) interviewers introduced himself as a researcher from outside the practice and confirmed that each selected patient was aged 16 years or more and was attending to see a GP for current physical symptoms. He asked the patient to help with a study into 'what patients feel are the causes of their symptoms' and assured confidentiality. Patients were interviewed individually before consultation or, where this was not

M Woloshynowych, BSc, RGN, postgraduate researcher, Department of Psychology, University College London. R Valori, FRCP, consultant physician, Department of Gastroenterology, Gloucestershire Royal Hospital. P Salmon, DPhil, reader in clinical psychology, Department of Clinical Psychology, University of Liverpool.

Submitted: 18 November 1996; accepted 20 June 1997.

possible, afterwards, and were asked to describe the symptoms that caused them to attend and to explain how they arose. They were prompted to describe whether or not the symptoms were normal, whether they were worrying, factors that contributed to their causation, the mechanism by which they occurred and their time course, and the doctor's ability to treat them. The interviewer encouraged the patient to talk in their own way so that the pace and sequence of the interview depended on the patient. Each comment that reflected a patient's understanding of symptoms was recorded; the patients' reports of medical diagnoses were not. Interviews lasted 2–15 minutes.

To refine the resulting item pool, ambiguous, synonymous, and idiosyncratic items were discarded. The content analysis of the remaining items was qualitative, following established procedures to ensure that the categorization reflected common meaning between statements, rather than pre-existing theoretical or professional ideas.[9,10] Remaining items were formed into a questionnaire, which was completed by 20 further patients, chosen as above, and modified in the light of their comments. Two additional items were included because of their prominence in the literature: 'someone trying to harm me' and 'a payment for something I have done'. This process led to 65 items, each of which was given a three-point scale. Fifty-eight items concerning causation were answered in response to the question, 'whether it probably has or probably has not helped to cause your symptoms' (responses: 'probably has', 'don't know', 'probably has not'). Seven further items asked whether different ways of 'helping to deal with' the symptoms would probably help or not.

### *Patients and procedure*

Patients were recruited in three general practices in Greater London during early winter: two in poor inner city areas and one in a prosperous suburb. Patients ($n$ = 515) were approached, as above, by the female researcher. Consenting patients completed the questionnaire while waiting for their consultation. A frontsheet to the questionnaire sought demographic information. Patients were assured of confidentiality and asked not to write their name on the questionnaires.

### *Data analysis*

The beliefs were categorized a priori according to whether they described aetiology, the mechanism whereby symptoms arose, or ways in which the patient might be helped. The items in each set were ranked according to the proportion of patients affirming each item. Results are shown in Tables 1–3.

As expected, certain aetiological beliefs clearly represented an attribution of symptoms to psychological stress-related causes (items are marked with an asterisk in Table 1). These were identified by consensus among the authors and agreed by participating GPs. To examine the relationship of this type of aetiological belief with beliefs about help, patients who identified one or more stress-related items as a cause of their symptoms were compared with those who did not (Table 3). Similarly, patients identifying one or more causes related to lifestyle (identified as above) were compared with the remainder. Comparisons were by chi-square test.

## Results

The questionnaire was completed by 406 patients (79% of those approached). Mean age was 42 years (range 16–91 years); 34% were male, 66% female. Patients occasionally missed questions; to calculate percentages of positive responses to individual items, only those completing that item were included. The items were ranked according to the numbers of patients affirming them. Table 1 shows the resulting ranking of aetiological beliefs. The most popular causes were related to stress or lifestyle. A total of 211 (53%) patients affirmed at least one of the stress items (marked with an asterisk in Table 1). A similar number (206, 51%) affirmed at least one item that concerned aspects of lifestyle (marked '+' in Table 1); 146 affirmed both. Beliefs about mechanism (Table 2) showed that few patients suspected a problem that was serious or entailed structural or physiological changes in the body. Instead, the most popular beliefs described deterioration in the way that the body functions (slowing, wearing out, being strained) or the effects of germs. The most common beliefs about forms of help (Table 3) described responses that would be made primarily by the GP rather than specialist: explanation and discussion. These were valued most by those who attributed symptoms to stress (explanation: $\chi^2 = 13.61$, $P < 0.001$; talking about symptoms: $\chi^2 = 27.38$; $P < 0.001$). Medication was believed to be helpful by half the sample. One or more aspects of hospital medicine (seeing a specialist, tests or X-rays, operation) were thought to be helpful by 174 (43%) patients. Belief in stress- or lifestyle-related causes did not affect the benefit expected from medication or hospital medicine. Very few patients saw benefit from 'changing diet or lifestyle' unless they attributed symptoms to stress ($\chi^2 = 36.40$, $P < 0.001$) or lifestyle ($\chi^2 = 57.97$, $P < 0.001$).

## Discussion

Our results provide a unique survey of the range and frequency of beliefs of patients attending their GP. It is striking that factors related to stress and lifestyle were blamed by most patients as causes of their symptoms, which were regarded as products of disturbances of normal bodily function rather than as reflections of serious damage or pathology. Thus, the most common mechanisms from which symptoms were thought to arise were lay concepts, such as weakness, slowing down, or wearing out. Although 'germs' were cited frequently, it is unlikely that they were generally viewed as serious pathological agents.

Beliefs about effective help were consistent with this picture. The patients overwhelmingly expected benefit from explanation and discussion of their symptoms. Indeed, this number greatly exceeded those anticipating benefit from drug prescription or hospital medicine. A smaller but still substantial number believed that their symptoms would be helped by changing diet or lifestyle. Half the patients expected help from pharmacotherapy, which is in line with previous evidence of patients' expectations and levels of prescribing.[11] Given the nature of patients' beliefs about aetiology and mechanism, it is unlikely that medication was perceived as a way of correcting serious pathology or dysfunction. Instead, its perceived value probably derives from a view of it as being able to correct disturbance of normal bodily functions: that is as 'tonic', 'food', or 'fuel'.[12]

One can speculate that belief in the efficacy of medication reflects faith in the power of medicines and potions that is culturally and historically more extensive than modern Western medicine. However, a number of important beliefs clearly did concern modern hospital medicine, and the number of patients believing that they would be helped by one or other aspect of this technology was substantial. Indeed, this number was greater than those who thought they could be helped by changing diet or lifestyle, and it clearly exceeds the number that GPs are able to refer. If such high expectations reflect a Western cultural emphasis on the power of advanced medical technology, their modification will require a cultural change. Alternatively, GPs alone may be able to modify such expectations if they merely reflect patients' per-

**Table 1.** Beliefs about aetiology of symptoms in general practice attenders, ranked according to numbers identifying each as a probable cause of present symptoms.

| Aetiological beliefs | Probably does *n* (%) | Uncertain *n* (%) | Probably does not *n* (%) |
|---|---|---|---|
| *Stress | 145 (36) | 75 (19) | 179 (45) |
| +Not looking after myself properly | 103 (26) | 63 (16) | 232 (58) |
| *Moods/emotions | 99 (25) | 81 (20) | 219 (55) |
| *Overworked | 97 (25) | 69 (17) | 231 (58) |
| *Being rundown | 93 (24) | 64 (16) | 236 (60) |
| *'Nerves' | 78 (20) | 61 (15) | 255 (65) |
| My body lacking a substance it needs: e.g. vitamins | 76 (19) | 87 (22) | 233 (59) |
| +Not getting enough exercise | 75 (19) | 58 (14) | 266 (66) |
| Weather or changes in temperature | 74 (19) | 61 (15) | 259 (66) |
| *Personal, domestic or financial problems | 70 (18) | 36 (9) | 293 (73) |
| Job/housework | 69 (18) | 47 (12) | 277 (70) |
| +Warning from my body to change the way I treat it | 69 (18) | 65 (16) | 259 (66) |
| +Being over- or under-weight | 65 (17) | 44 (11) | 284 (72) |
| Work/living conditions | 61 (15) | 39 (10) | 295 (75) |
| Weak constitution or low resistance | 56 (14) | 71 (18) | 271 (68) |
| +Smoking and/or alcohol | 50 (13) | 35 (9) | 310 (78) |
| Dampness or a chill | 49 (12) | 49 (12) | 301 (75) |
| *Demanding family/friends | 49 (12) | 49 (12) | 295 (76) |
| +The food that I eat | 46 (11) | 56 (14) | 292 (75) |
| Something that runs in the family | 45 (10) | 54 (14) | 296 (75) |
| Pollution | 41 (10) | 58 (15) | 294 (75) |
| Time of the year | 38 (10) | 49 (12) | 308 (78) |
| An accident | 37 (9) | 29 (8) | 328 (83) |
| Not getting enough sleep | 36 (9) | 37 (9) | 320 (81) |
| Something I caught from someone else | 33 (8) | 45 (11) | 316 (80) |
| Impurities or additives in food/water | 32 (8) | 66 (17) | 295 (75) |
| Personality | 28 (7) | 59 (15) | 311 (78) |
| Pills or medicine | 28 (7) | 56 (14) | 310 (79) |
| Something I ate | 23 (6) | 44 (11) | 332 (83) |
| Problem I was born with | 20 (5) | 58 (15) | 320 (80) |
| A payment for something that I have done | 19 (5) | 33 (8) | 342 (87) |
| Someone trying to harm me | 15 (4) | 28 (7) | 350 (89) |

*Item regarded as indicating a stress-related cause; +item regarded as indicating a lifestyle-related cause.

ceptions that GPs cannot provide satisfactory explanations.

The prevalence of beliefs that lifestyle and stress cause symptoms is important information. It indicates a risk that many patients may hold erroneous beliefs of this kind, which require correction by the GP. Conversely, it suggests that a large proportion of patients are prepared to receive such explanations from the GP. The importance of discriminating the patients who attribute symptoms to stress and lifestyle is borne out by the different beliefs about help that were associated with these attributions. Patients with a stress-related attribution were more likely to see value in explanation and discussion. Both stress and lifestyle attributions greatly increased patients' beliefs in the value of changing their diet or lifestyle; indeed, patients without these attributions were resoundingly unconvinced by the value of making such changes. Our findings therefore support the value of attempts to educate patients (or reinforce existing beliefs) about the aetiological role of stress or lifestyle, so as to encourage them to take responsibility for managing their symptoms. Responding to patients' needs for information in order to reinforce or modify their beliefs is likely to be the most appropriate response to many symptom presentations. Moreover, useful behavioural change can follow change in beliefs or attitudes, although not in a simple or automatic way.[13]

Despite these positive implications of a belief in stress and lifestyle aetiologies, there was no corresponding reduction in expectations of benefit from medication or hospital medicine. One interpretation is that patients have a relatively sophisticated view of stress and lifestyle as causal factors that can influence physiological processes, which are then amenable to physical medicine. On this reasoning, to increase patients' awareness of the role of these factors in causing symptoms will not necessarily reduce their commitment to physical treatment. Indeed, it may be that patients seek medical treatment because they see stress and lifestyle as out of their control. A second interpretation is that patients believe in stress or lifestyle aetiologies but still harbour concerns about the possibility of physical disease unrelated to stress or lifestyle, and seek hospital medicine to dispel these concerns. On this reasoning, effective reassurance and reinforcement

**Table 2.** Beliefs about the mechanism by which symptoms occur in GP attenders, ranked according to numbers identifying each as a probable cause of symptoms.

| Beliefs about mechanism | Probably does *n* (%) | Uncertain *n* (%) | Probably does not *n* (%) |
|---|---|---|---|
| Part of body not working as well as used to | 139 (35) | 74 (18) | 185 (46) |
| A weak spot in my body | 123 (31) | 99 (25) | 176 (44) |
| Germ or infection | 112 (28) | 68 (17) | 215 (54) |
| Part of my body is inflamed | 108 (27) | 76 (19) | 216 (54) |
| Part of body slowing down | 93 (23) | 65 (16) | 238 (60) |
| Part of body wearing out | 91 (23) | 91 (23) | 219 (54) |
| Part of my body is strained | 72 (18) | 66 (17) | 256 (65) |
| A previous illness | 63 (16) | 61 (15) | 273 (69) |
| Worn joints | 63 (16) | 48 (12) | 281 (72) |
| Pressure building up somewhere in my body | 63 (16) | 62 (16) | 270 (68) |
| Body tissues less firm/supple | 60 (15) | 64 (17) | 266 (68) |
| Body tissues hard or soft | 55 (14) | 109 (28) | 231 (58) |
| Damage to part of my body | 45 (11) | 35 (9) | 313 (80) |
| An allergy | 40 (10) | 50 (13) | 304 (77) |
| Poor circulation | 39 (10) | 89 (22) | 272 (68) |
| Poor digestion or weak stomach | 38 (10) | 52 (13) | 308 (77) |
| Something out of place | 34 (9) | 69 (18) | 289 (73) |
| Illness that others can catch from me | 34 (8) | 18 (4) | 348 (87) |
| A blockage somewhere in my body | 29 (7) | 65 (17) | 300 (76) |
| Sluggish bowels | 27 (7) | 42 (10) | 328 (83) |
| Something seriously wrong with me | 22 (5) | 82 (20) | 296 (74) |
| Heart trouble | 20 (5) | 49 (12) | 326 (83) |
| Weak bones | 20 (5) | 33 (8) | 341 (87) |
| Weak kidneys | 17 (4) | 68 (17) | 315 (79) |
| A growth | 14 (3) | 71 (18) | 313 (79) |
| Weak blood | 11 (3) | 49 (12) | 334 (85) |

**Table 3.** Beliefs of GP attenders about the efficacy of clinical responses to their symptoms, ranked according to the number identifying each as 'probably' helpful.

| Beliefs about help | All patients | | | Stress-related cause (*n* = 211) | | | No stress-related cause (*n* = 190) | | | Lifestyle-related cause (*n* = 206) | | | No lifestyle-related cause (*n* = 195) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ✔ | ? | ✗ | ✔ | ? | ✗ | ✔ | ? | ✗ | ✔ | ? | ✗ | ✔ | ? | ✗ |
| **Having the GP explain what is wrong*** | 285 (73) | 32 (8) | 76 (19) | **162 (78)** | **20 (10)** | **26 (12)** | **123 (66)** | **12 (7)** | **50 (27)** | 156 (77) | 14 (7) | 33 (16) | 129 (68) | 18 (9) | 43 (23) |
| **Talking about my symptoms*** | 217 (55) | 45 (12) | 131 (33) | **140 (67)** | **22 (11)** | **47 (22)** | **77 (42)** | **23 (12)** | **84 (46)** | 125 (61) | 23 (11) | 56 (27) | 92 (49) | 22 (11) | 75 (40) |
| Medicine, pills or injection | 199 (51) | 99 (25) | 93 (24) | 107 (52) | 56 (27) | 44 (21) | 92 (50) | 43 (23) | 49 (27) | 105 (52) | 49 (24) | 48 (24) | 94 (50) | 50 (26) | 45 (24) |
| **Changing my diet or lifestyle*+** | 125 (32) | 88 (22) | 179 (46) | **92 (44)** | **48 (23)** | **69 (33)** | **33 (18)** | **40 (22)** | **110 (60)** | **98 (48)** | **45 (22)** | **61 (30)** | **27 (14)** | **43 (23)** | **118 (63)** |
| Seeing a specialist | 118 (30) | 104 (26) | 171 (44) | 73 (35) | 57 (27) | 79 (38) | 45 (24) | 47 (26) | 92 (50) | 67 (33) | 53 (26) | 84 (41) | 51 (27) | 51 (27) | 87 (46) |
| Tests or X-rays | 110 (28) | 89 (23) | 193 (49) | 64 (31) | 48 (23) | 96 (46) | 46 (25) | 41 (22) | 97 (53) | 68 (33) | 44 (22) | 91 (45) | 42 (22) | 45 (24) | 102 (54) |
| An operation | 32 (8) | 88 (23) | 271 (69) | 20 (10) | 47 (22) | 141 (68) | 12 (7) | 41 (22) | 130 (71) | 20 (10) | 48 (24) | 135 (66) | 12 (7) | 40 (21) | 136 (72) |

Numbers (and %) are shown of those identifying (✔), rejecting (✗), or uncertain about (?) each specific response. Results are also shown separately for patients who identified a stress-related cause vs those who did not, and for those who identified a lifestyle-related cause vs those who did not. Bold type indicates beliefs that differed according to whether or not patients identified stress* or lifestyle+ as a cause.

of stress and lifestyle beliefs in primary care could reduce such patients' commitment to hospital medicine. A third possibility is that patients' responses indicate a culturally conventional view as to the role of hospital medicine. In this case, only cultural change would modify these responses. Future work could test the predictions that arise from these different interpretations.

In conclusion, we have provided quantitative information about the range and frequency of beliefs of patients before they consult their GP. The high frequency with which symptoms are attributed to stress and lifestyle indicates the importance of doctors' attempts to identify and build on such explanations in individual consultations. Although this approach may not automatically reduce the demand for medication and investigation, it offers the opportunity to enhance the outcome of the consultation by the provision of explanation and support to a receptive patient. Assessment of the patient's beliefs about symptoms should form a routine part of the consultation process in primary care. Our findings can help direct and inform this assessment in the individual case.

## References


1. Becker MH, Maiman LA. Sociobehavioural determinants of compliance with health and medical care recommendations. *Med Care* 1975; **13:** 10-24.
2. Hunt LM, Jordan B, Irwin S. Views of what's wrong: diagnosis and patients' concepts of illness. *Soc Sci Med* 1989; **28:** 945-956.
3. Helman CG. Limits of biomedical explanation. *Lancet* 1991; **337:** 1080-1083.
4. Van de Kar A, Knottnerus A, Meertens R, *et al.* Why do patients consult their general practitioner? Determinants of their decision. *Br J Gen Pract* 1992; **42:** 313-316.
5. Wilson A, Hickie I, Lloyd A, *et al.* Longitudinal study of outcome of chronic fatigue syndrome. *BMJ* 1994; **308:** 756-759.
6. Helman CG. *Culture, health and illness.* 3rd edn. Oxford: Butterworth-Heinemann, 1994.
7. Murray M. Lay representations of illness. In: Bennett P, Weinman J, Spurgeon P. (eds). *Current developments in health psychology.* London: Harwood, 1990.
8. Brownell KD. Personal responsibility and control over our bodies: when expectation exceeds reality. *Health Psychol* 1990; **10:** 303-310.
9. Dey I. *Qualitative data analysis: a user-friendly guide for social scientists.* London: Routledge, 1993.
10. Patton MQ. *Qualitative evaluation and research methods,* 2nd edn. London: Sage, 1990.
11. Webb S, Lloyd M. Prescribing and referral in general practice: a study of patients' expectations and doctors' actions. *Br J Gen Pract* 1994; **44:** 165-169.
12. Helman CG. 'Tonic', 'fuel' and 'food': social and symbolic aspects of the long-term use of psychotropic drugs. *Soc Sci Med* 1981; **15B:** 521-433.
13. Petty RE, Cacioppo JT. *Communication and persuasion: central and peripheral routes to attitude change.* New York: Springer, 1986.


## Acknowledgments

We are grateful to the Astra Research Foundation for financial assistance. Preparation of the manuscript was assisted by a grant from the Middlesex Hospital Special Trustees. We are indebted to the general practitioners and staff at the following practices for their co-operation: Bethnal Green Health Centre, London E2; Clapton Health Centre, London E5; Purley Health Centre, Purley, Surrey. We thank Dr S Nazeer, Dr L Brad, and Ms N Breitschmid for their help with collecting data.

## Address for correspondence

Peter Salmon, Department of Clinical Psychology, University of Liverpool, Whelan Building, Liverpool L69 3GB.