

# Factors affecting the decision to consult with dyspepsia: comparison of consulters and non-consulters

SUSAN LYDEARD

ROGER JONES

**SUMMARY.** To identify factors associated with the decision to consult with dyspepsia, patients with dyspepsia were identified from a postal survey in the community. A random sample of 69 patients who had consulted their general practitioner and 66 patients with dyspepsia who had not consulted were interviewed in their homes. Differences in consultation behaviour were not explained by differences in self-reported severity or frequency of symptoms or by the presence of associated symptoms. The most striking difference between the two groups was concern among the consulters about the possible seriousness of symptoms. Consulters were also more likely to be worried about cancer and heart disease and to have experienced more disruptive or threatening life events than the non-consulters.

These results emphasize the importance of looking beyond the presentation of common symptoms in general practice to patients' fears about the significance of the symptoms and to non-physical determinants of consultation behaviour.

## Introduction

ONE of the tasks of general practice is to assess accurately an often ill-defined list of symptoms while taking social and psychological factors into account in diagnosis and management.<sup>1</sup> This requires an understanding of the range of possible reasons why a person seeks medical advice; not surprisingly, these factors have been the subject of intense interest and research.<sup>2-4</sup> A number of explanatory models of both illness onset<sup>5,6</sup> and illness declaration<sup>7,8</sup> have been proposed and although they are sometimes confused, it is important to distinguish between them. For example, it may be inaccurate to assume that the psychological or emotional disturbances which may be important in triggering a disorder are also responsible for the patient seeking medical advice.

We know that most common symptoms are dealt with by individuals in the community without recourse to medical facilities. In diary studies, for example, Morrell and Wale<sup>9</sup> and Freer<sup>10</sup> have shown that only about one symptom in 40 is the subject of a medical consultation. In a recent survey of the prevalence of dyspepsia in the community we have shown that only one in four patients consult their general practitioner about their symptoms.<sup>11</sup> Despite this, dyspepsia is still a common reason for consultation, with upper abdominal symptoms accounting for 3-4% of patients seen by general practitioners.<sup>12,13</sup> These may be the presenting symptoms of serious illness such as peptic ulceration and oesophageal or gastric malignancy which re-

quires urgent investigation and appropriate treatment. On the other hand, many patients recover after simple advice or symptomatic treatment<sup>14</sup> or turn out to have no physical abnormality when they are investigated.<sup>15</sup>

Many doctors find it difficult to make an accurate diagnosis on the basis of clinical symptoms alone.<sup>16</sup> In this study we have set out to examine a range of factors which may be important determinants of the decision to consult with dyspepsia, in an attempt to define those of particular importance to general practitioners. To do this we have conducted detailed interviews in two groups of patients with dyspepsia: those who had consulted and those who had not consulted their general practitioner.

## Method

In a previous study, patients registered with eight general practitioners in two health centres in Hampshire were divided by sex and stratified into 10 year age bands from age 20 years and over. A one in five sample was obtained within each age band using tables of random numbers. A postal questionnaire survey of these subjects identified 766 patients with recent dyspepsia and ascertained whether or not they had consulted their general practitioner about their symptoms in the last six months.<sup>11</sup>

Dyspeptic subjects were sub-divided according to whether or not they had consulted their general practitioner and 75 were randomly chosen from each group for interview in their homes. Of the 150 patients selected, 12 indicated that they did not wish to be interviewed; those declining were evenly distributed between the groups and most gave work or holiday commitments as a reason. Interviews were then arranged at a time convenient to the patient. Three further patients declined to participate at the time of interview for personal reasons.

The interview schedule, developed and validated in a pilot study during 1986 (Thomas A. A comparison of consulting and non-consulting dyspeptic patients in general practice. 4th year study, University of Southampton, 1986), was designed to focus attention on four areas. The first part of the interview collected basic demographic data. The second collected a detailed account of the duration, frequency and severity of dyspepsia and associated symptoms.

The experience of recent life events was evaluated next, using an open ended method with reference to published schedules of life events<sup>17,18</sup> but concentrating specifically on the impact of these events on the individual's own situation. An abbreviated multi-dimensional health locus of control scale (Thomas A, 1986) and a Spielberg self-evaluation questionnaire on 'anxiety trait'<sup>19</sup> were also completed.

The final section concentrated on the subjects' knowledge and beliefs about digestive function, symptoms and treatment, their beliefs about the seriousness and possible relation of dyspepsia to malignancy, and more detailed anxieties and experiences of gastrointestinal disorders, malignancy and heart disease. The number and nature of contacts with people in whom the subjects could confide about health matters or from whom they could seek advice was also recorded.

Non-parametric statistics were used to measure differences between groups and a logistic regression was performed on the variables associated with consulting behaviour.

S. Lydeard, BSc, research assistant, and R. Jones, MRCP, senior lecturer, Department of Primary Medical Care, University of Southampton. Date submitted: 24 February 1989; date accepted 25 July 1989.

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## Results

### Patient characteristics

Sixty-nine patients who had consulted and 66 patients who had not consulted the general practitioner in the last six months completed interviews. The sex ratio was similar in both groups and comparable to the ratio in the population from which the sample was drawn. Mean age was slightly higher for the consulters (55.4 years, 95% confidence intervals, 51.4 to 59.4 years) than for the non-consulters (48.6 years, 95% CI 45.7 to 52.5 years) with the difference being slightly more marked among the men (male consulters  $56.3 \pm 5.9$  years at 95% CI versus male non-consulters  $46.7 \pm 6.4$  years at 95% CI). The social class distribution of the subjects is shown in Table 1; social class 3M and 4 were prominent among the consulters while social class 2 was over-represented in the non-consulters ( $\chi^2 = 11.27$  df=5,  $P < 0.05$ ). The social class structure of all those interviewed was similar to that of the population from which the sample was drawn.

**Table 1.** Social class distribution of consulters and non-consulters.

|                            | Social class (number (%)) of respondents |         |        |         |         |       |
|----------------------------|--|---------|--------|---------|---------|-------|
|                            | 1  | 2       | 3N     | 3M      | 4       | 5     |
| Consulters<br>(n = 69)     | 3 (4)                                    | 14 (20) | 8 (12) | 32 (46) | 8 (12)  | 4 (6) |
| Non-consulters<br>(n = 66) | 1 (1.5)                                  | 27 (41) | 8 (12) | 26 (39) | 1 (1.5) | 3 (5) |

Associated with the different social class structure between the groups, far fewer of the consulters (8%) than non-consulters (30%) had continued in full-time education after the school leaving age ( $\chi^2 = 8.79$ , df=1,  $P < 0.01$ ). There was no difference between the two groups in travel time either to the general practitioner's surgeries or to the nearest pharmacist.

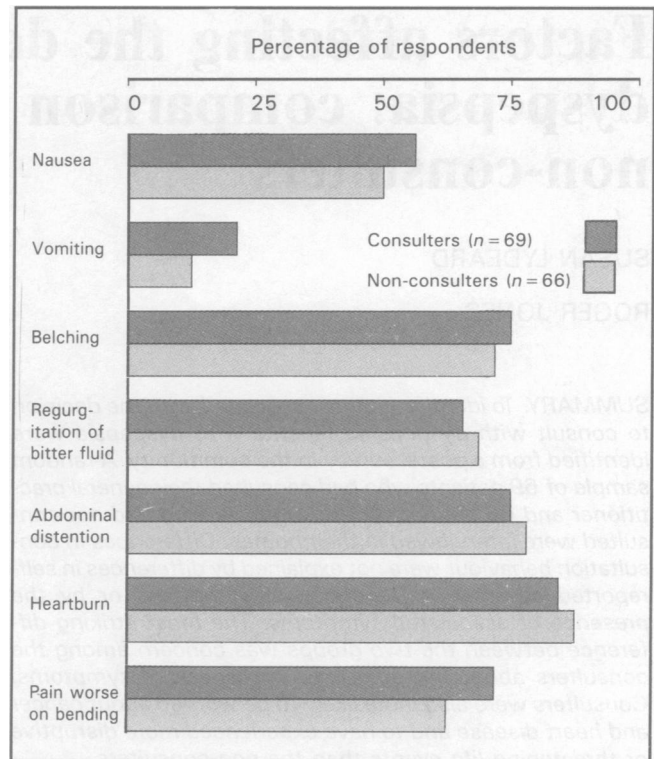
### Symptoms

The frequency of symptoms was similar in both groups: the mean number of episodes per week for consulters was  $3.02 \pm$  standard deviation 2.69 and for non-consulters was  $2.20 \pm 2.25$  (not significant, Mann-Whitney U-test). The perceived symptom severity, derived from responses on a 1–10 visual analogue scale, was, however, significantly higher in the consulters (mean  $6.45 \pm 2.25$ ) than the non-consulters (mean  $5.55 \pm 1.95$ ; Mann-Whitney U = 37.5,  $z = 2.40$   $P < 0.05$ ). Nevertheless, 21% of non-consulting patients reported severe symptoms (8–10 on the visual analogue scale) and 30% had dyspepsia more than three times a week, whereas as many as 20% of consulters only experienced mild symptoms (1–4 on the visual analogue scale) and 27% experienced their symptoms less than once a week.

The prevalence of symptoms associated with indigestion was surprisingly high in both groups (Figure 1) and there were no significant differences between the groups in this respect.

More of the patients who had consulted in the last six months with dyspepsia believed a diagnosis of peptic ulcer disease had been made in the past, than did the non-consulters (12 versus five) but the difference was not significant so that the presence of organic lesions was not in fact a major factor affecting consultation rate. Not surprisingly, however, the percentage of patients who had had a barium meal or gastroscopy investigation at some time in the past was higher among consulters than non-consulters (45% versus 15%;  $\chi^2 = 12.32$ , df=3,  $P < 0.01$ ).

There was no significant difference between the two groups



**Figure 1.** The symptom complex of dyspepsia: frequency of associated symptoms in consulters and non-consulters.

in how long they had suffered with the symptoms of indigestion (median for consulters: seven years, range 1–60 years; median for non-consulters: 10 years, range 1–50 years; Mann-Whitney U test).

### Life events

During the interview the number of stressful or threatening life events the subject had experienced over the previous six months was ascertained and how disruptive they felt these had been. For the purposes of this analysis, however, subjects were simply grouped according to whether or not they had experienced any of these events.

Life events were significantly more common among consulters than non-consulters; 65% of consulters compared with 47% non-consulters experienced these events in the six months before interview ( $\chi^2 = 4.56$ , df = 1,  $P < 0.05$ ). However, the 76 subjects who had experienced a life event did not perceive their symptoms as being any more severe than those who had not experienced an event ( $\chi^2 = 3.85$ , df = 1,  $P < 0.05$ ).

### Advice and treatment

There were few differences in the extent or nature of lay networks used to obtain advice about dyspepsia, although 48% of consulting patients appeared to have sought advice from someone other than their general practitioner compared with 33% of non-consulters (not significant,  $\chi^2$  test). For consulting patients the immediate family had suggested a medical consultation much more often than for the non-consulters (14 compared with one; Fisher's exact test  $\chi^2 = 10.21$ , df = 1,  $P < 0.001$ ). Significantly more non-consulters than consulters possessed health literature in their homes (59% versus 23%,  $\chi^2 = 9.01$ , df = 1,  $P < 0.01$ ) and also read articles in newspapers or magazines (70% versus 46%;  $\chi^2 = 7.52$ , df = 1,  $P < 0.01$ ). It would seem, therefore, that non-consulters tended to obtain more

advice from books and the media, while consultants preferred to turn to other people.

### Locus of control

There was no systematic differences between the groups in the importance of 'powerful others' and 'fate' on the health locus of control scale with both groups scoring  $10 \pm 4$ . Scores for 'internality' (a measure of the patient's belief that they have control over their own health) were slightly higher in the non-consulters than the consultants ( $14 \pm 3$  versus  $9 \pm 4$ ).

### Knowledge

There were no differences between the groups in their knowledge about the anatomy of the gastrointestinal tract or their understanding about the nature of peptic ulceration and its treatment with antacids. There were also no differences between the groups in their views about whether smoking, alcohol, foods, stress and drugs were likely to adversely affect indigestion. Smoking and drinking habits were not different in the groups, although it was interesting to note that about one third of each group consumed more than 15 units of alcohol weekly, and smokers were less likely to be aware of the effect of their habit on dyspepsia.

### Beliefs and concerns

There was a major difference in the belief that indigestion could lead to a serious or fatal condition (Figure 2) with 74% of the consultants concerned about the likely implications of their symptoms, compared with only 17% of the non-consulters ( $\chi^2 = 57.8$ ,  $df = 1$ ,  $P < 0.001$ ). Consultants were also significantly more concerned about stomach cancer than were non consultants (29% versus 13%;  $\chi^2 = 4.71$ ,  $df = 1$ ,  $P < 0.05$ ) and cancer generally (55% versus 30%;  $\chi^2 = 7.46$ ,  $df = 1$ ,  $P < 0.01$ ). There was also more concern about heart disease in the consultants than in the non-consulters (66% versus 35%;  $\chi^2 = 14.01$ ,  $df = 1$ ,  $P < 0.001$ ). Although there were no differences in family history of dyspepsia, peptic ulcer or heart disease in the two groups, a significantly greater proportion of the consultants said there was a family history of stomach cancer compared with the non-consulting group (19% versus 6%;  $\chi^2 = 5.0$ ,  $df = 1$ ,  $P < 0.05$ ).

Analysis of the Spielberger self evaluation inventory for anxiety trait showed no significant differences between the two groups.

In order to explore the importance of different variables in explaining consultation behaviour a logistic regression analysis was performed using the British Medical Data Processing package. This confirmed the results of the univariate tests in that concern about the possibility of the symptoms leading to a serious or fatal condition was the most important predictor of consultation with a general practitioner (log likelihood =  $-59.641$ ,  $P < 0.001$ ). Concern about heart disease ( $P < 0.01$ ), severity of symptoms ( $P < 0.01$ ) and concern about cancer in general ( $P < 0.05$ ) were entered into the regression next, while reading books and magazines about health and medicines was a predictor for non-consultation ( $P = 0.039$ ). Social class ( $P < 0.05$ ) was the last variable entered. The experience of life events did not quite reach significance after the first six variables had been entered ( $P = 0.068$ ).

### Discussion

This study provides evidence that the most important difference between dyspeptic patients who consult and those who do not consult their general practitioner is concern about the possible serious nature of their symptoms. This was reflected in answers to questions about the links between dyspepsia and potentially serious or fatal disease, anxieties about cancer generally, and more specifically about stomach and abdominal cancer and heart

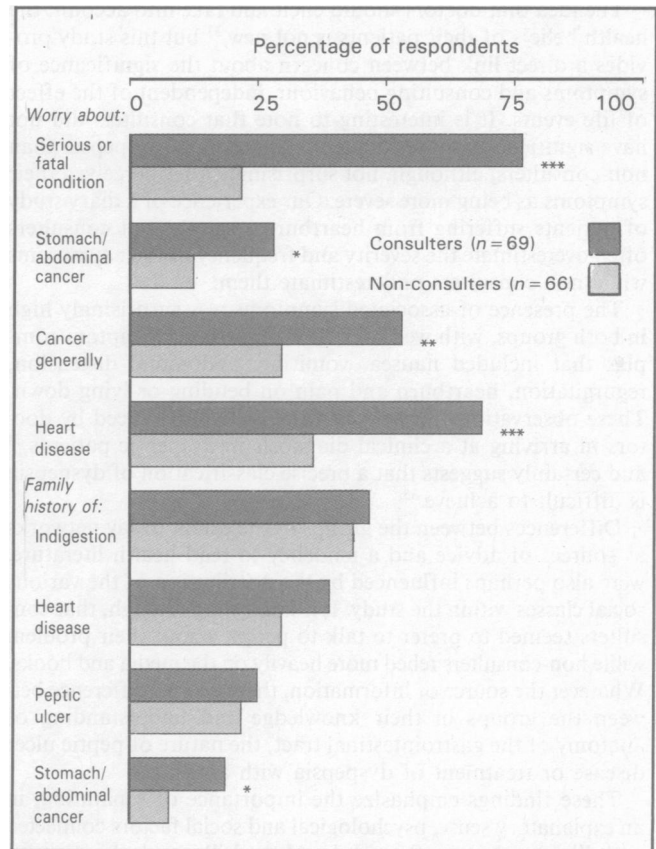


Figure 2. Health concerns of consultants and non-consulters, \* $P < 0.05$ , \*\* $P < 0.01$ , \*\*\* $P < 0.001$ .

disease. Compared with these strong associations, other factors affecting consultation behaviour, including stressful or threatening life events, seemed to play a less important role and may partly have depended on variations in the pattern of socioeconomic classes within the two groups.

There is considerable evidence in support of the belief that life events can provoke physical illness such as gastrointestinal disorder.<sup>6</sup> For example, when Creed studied the relationship between life events and appendicectomy he found that more patients coming for appendicectomy, whether the appendix was inflamed or not, had experienced a recent threatening or disruptive life event than a group of community controls.<sup>20</sup> Similar findings were reported in a study of patients with 'functional' abdominal pain attending a gastroenterology outpatient clinic.<sup>21</sup> More recently Talley and Piper were unable to confirm such an association in patients with non-ulcer dyspepsia,<sup>22</sup> although the methodology used in their research has been severely criticized<sup>23</sup> and the findings are more applicable to illness declaration than illness onset. A series of studies from the USA have now provided compelling evidence linking psychological stresses to the development of peptic ulceration.<sup>24,25</sup>

People in lower socioeconomic groups, as well as those experiencing more adversity, are probably more vulnerable to the effects of life events. Brown and Harris's original study<sup>18</sup> of the social origins of depression was performed in a working class setting, and a number of subsequent publications have confirmed and extended their findings.<sup>26-28</sup> In our study we found there was a greater experience of adverse life events and an over-representation of lower social classes among the patients consulting the doctor. Similar links between psychological problems and presentation with irritable bowel syndrome have been reported.<sup>29-32</sup>

The idea that doctors should elicit and take into account the health beliefs of their patients is not new,<sup>33</sup> but this study provides a direct link between concern about the significance of symptoms and consulting behaviour, independent of the effect of life events. It is interesting to note that consultants did not have significantly more frequent symptoms of dyspepsia than non-consulters, although, not surprisingly, they perceived their symptoms as being more severe. Our experience of a diary study of patients suffering from heartburn suggests that consultants often overestimate the severity and frequency of their symptoms while non-consulters underestimate them.

The presence of associated symptoms was surprisingly high in both groups, with well over 50% reporting a symptom complex that included nausea, vomiting, abdominal distension, regurgitation, heartburn and pain on bending or lying down. These observations may explain the difficulties faced by doctors in arriving at a clinical diagnosis in dyspeptic patients,<sup>34</sup> and certainly suggests that a precise classification of dyspepsia is difficult to achieve.<sup>35</sup>

Differences between the groups in the extent of lay networks as sources of advice and a tendency to read health literature, were also perhaps influenced by the distribution of the various social classes within the study. It is interesting, though, that consultants seemed to prefer to talk to people about their problem while non-consulters relied more heavily on the media and books. Whatever the source of information, there was no difference between the groups in their knowledge and understanding of anatomy of the gastrointestinal tract, the nature of peptic ulcer disease or treatment of dyspepsia with antacids.

These findings emphasize the importance of separating, in an explanatory sense, psychological and social factors connected with illness onset on the one hand, and illness declaration on the other. Recognition of the link between stress and stress-related behaviour and the development of dyspepsia and peptic ulcer disease is important in the management of patients with these conditions and in preventive care, but is less helpful in attempting to understand why patients have chosen to consult at a particular time. For example, if a patient who was recently divorced or bereaved presented with dyspeptic symptoms it would be tempting to use the recent life stress as the focus of counselling and management. When trying to understand what prompted the patient to consult at this particular time, it might be equally appropriate and possibly more effective to ask the patient about personal and family concerns over the importance of their symptoms and to explore anxieties about malignancy and heart disease. Our patients' agendas frequently include fears and misapprehensions about their condition and its likely cause which we cannot afford to overlook if we are to optimize our use of time and resources.

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## Address for correspondence

Dr Roger Jones, Alderbrook Health Centre, Alderbrook Close, Southampton SO1 6ST.