Factors influencing general practitioners' management of psychosocial and physical problems: a study using case vignettes

JEREMY DALE

HUGH MIDDLETON

SUMMARY. The reactions of a random sample of 72 Oxfordshire general practitioners to case vignettes illustrating psychosocial and physical presentations were assessed with a set of attitude rating scales. Two main underlying factors appeared to influence responses. The first reflected positive attitudes to both physical and psychosocial problems, and was associated with postgraduate experience in psychiatry and with older age. The second, reflecting measures of flexibility and responsibility for outcome, was associated with younger age and not having received vocational training. Other characteristics of the practitioners and their practices were not significantly related to these factors, and there was considerable unexplained variance. In addition, certain sex differences emerged: men general practitioners rated their ability to manage cases more highly than did their women colleagues, while women practitioners experienced more anxiety. These findings suggest that personal traits and qualities may remain a stronger determinant of general practitioners' reactions to patients' problems than formal training and qualifications.

Introduction

A CONSIDERABLE proportion of general practice consultations are made by people with psychosocial problems. While general practitioners acknowledge their role in the detection and treatment of such problems, their ability to do so varies widely.[1-4] Recently a 12-fold difference was reported in the extent to which a sample of 201 urban general practitioners diagnosed psychosocial problems.[5]

Many minor psychiatric disorders and social problems, such as marital discord, have natural histories that may be little influenced by medical intervention. Early detection, however, may affect the outcome and shorten the duration of more severe disorders.[6] For example, deliberate self-harm is frequently preceded by a visit to the general practitioner, although such consultations are often described by patients as unsatisfactory.[7-9]

Despite developments in undergraduate medical training, psychiatry remains a minority interest among students in general, reflecting both prevailing unfavourable attitudes to the mentally ill and uncertainty about the role of doctors in their management.[10] General practice vocational training provides extensive experience in the assessment and treatment of physical disorders, but may offer little further training in psychiatry.

J Dale, MA, MRCGP, lecturer in primary care, Department of General Practice Studies, King's College School of Medicine and Dentistry, London. H Middleton, MRCP, MRCPsych, research psychiatrist, Oxford University Department of Psychiatry.
Submitted: 7 November 1988; accepted: 21 December 1989.

Attempts have been made to improve psychiatric case detection in general practice by the use of screening questionnaires,[4,11,12] but this is only a partial solution. The accurate evaluation of psychosocial problems and their effective management demand specific skills; in particular, the ability to gain trust through developing an empathic relationship.[13,14] The development of such a relationship in general practice is likely to depend upon the practitioner's reactions to cues suggesting the presence of an underlying psychosocial problem. Interest and concern have been identified as the most important factors affecting general practitioners' ability to assess psychiatric morbidity accurately.[15]

The purpose of this study was to investigate whether general practitioners react to physical and psychosocial case presentations in a global way or in a way influenced by their perception of the psychosocial content of the case, and how such reactions are associated with features of the practitioner.

Method

Half the general practitioners within Oxford and the surrounding area bound by Witney, Abingdon and Thame were selected at random from the Oxford family practitioner committee list. The 78 doctors were contacted by letter and invited to participate in 'a study of attitudes to patients presenting to general practitioners in various states of distress'. This was followed by a telephone call to arrange an appointment for the interview. Reluctant doctors were contacted again after six weeks. All the interviews were carried out by a non-medical research assistant whose interview technique had been standardized by videotaped feedback.

In the first part of the interview sociodemographic details of the practitioner and the practice were obtained. Next, the subjects were presented with eight written case vignettes. An example of the case vignettes is shown in Appendix 1. They were designed in pairs, each patient in the pair being of similar age, sex and background. One of each pair of the case presentations was intended to suggest a psychosocial problem and the other a physical disorder of comparable severity. They were presented on printed cards in a random sequence in order to obscure this design. For each vignette the participants were asked to rate their response to six cue phrases. These addressed the general practitioners' enthusiasm, sympathy, irritation and anxiety concerning each case, and how appropriate and urgent they perceived the consultation to be. Respondents were asked 'What action would you take to clarify this problem?' and 'What, if any, would be your plan for treatment and follow up?' The responses to these management questions were tape-recorded and later transcribed. Finally, information was provided about the clinical outcome of the eight cases, and for each case four more ratings were obtained. These covered flexibility in revising the management plan in the light of events, own responsibility for outcome, avoidability of outcome and self-perceived ability to manage the case successfully. The five-point rating scales were presented to the practitioners on printed cards. An example of the scales and cue phrases is reproduced in Appendix 2.

Data analysis

Numerical and categorical information was analysed by computer using SPSS PC+.[16]

The tape-recorded section of the interview was transcribed and reviewed by the authors independently blind to other information about the subjects. This review was used to establish the working diagnosis upon which the practitioner was basing plans for investigation and management of the problem. The general practitioners' perceptions of which cases were psychosocial and which were physical in character did not always correspond with the researchers' intentions. On the basis of the working diagnosis each general practitioner's perception of each case presentation was therefore classified by consensus between the authors as either psychosocial or physical.

To permit the use of parametric statistical tests to identify underlying relationships between attitude ratings, the rating scale data was transformed in the following way. For each case vignette the median score on each attitude rating scale was calculated; this enabled the sample to be split into two sub-groups according to whether a practitioner scored the same/above or below the median. Rating scale scores, therefore, were converted into a binary score depending on how the practitioner scored relative to the rest of the sample.

For each practitioner the binary scores on each attitude dimension were analysed in three sets: (1) vignettes perceived by that general practitioner as mainly psychosocial in content; (2) vignettes perceived by that general practitioner as mainly physical in content; (3) all eight vignettes. For each set of vignettes the mean of the binary scores was calculated. Thus on each attitude dimension three different means (each ranging between 0 and 1) were obtained for each practitioner, reflecting the propensity to score above or below the median.

Each of the three sets of means were submitted to factor analysis with varimax rotation to identify underlying relationships between the attitude rating scales used. Correlations between the emerging factors and the characteristics of practitioners and their practices were analysed using multiple regression with stepwise selection.

Results

Seventy two (92%) of the 78 selected general practitioners agreed to take part. They practised in 21 practices within Oxford and 15 practices outside the city. All six who refused were men, three were senior partners, and most were practising within the city of Oxford. The characteristics of the participating practitioners and their practices are given in Table 1.

Responses to the case vignettes

There was a high degree of consistency between practitioners in their perception of each case vignette (Table 2); for all cases, at least two-thirds of the sample had a shared perception of the described problem as being in main part either physical or psychosocial. In only three of the eight cases did the perception of more than two of the practitioners differ from that of the majority (cases 1, 4 and 5).

Table 3 shows the number of case vignettes perceived by practitioners to be in the main part psychosocial; 68 (95%) of the sample perceived between three and five of the eight cases to be psychosocial. There were no significant associations between the propensity to perceive psychosocial content in the vignettes and any of the studied practitioner and practice characteristics.

Factor analysis

As shown in Table 4, for the first set of vignettes (cases perceived by the doctor as psychosocial) two factors emerged from factor analysis of the means of the binary scores (the transformed attitude rating scale scores), and three factors for the second set of vignettes (perceived by the doctors as physical). Factors 1 and 3 reflect dimensions of positivity for psychosocial and physical cases respectively; that is, they were related to sympathy and enthusiasm for the case and perception of appropriateness

Table 1. Personal and practice characteristics of the 72 participants.

Demographic characteristics	
Age in years: range (quartiles)	28–65 (37, 42, 49)
Sex: number (%) male	53 *(74)*
Qualifications and experience	
Years in practice: range (quartiles)	1–39 (7, 13, 20)
Vocationally trained: number (%) of respondents	41 *(57)*
MRCGP/FRCGP: number (%) of respondents	41 *(57)*
Number of postgraduate qualifications: range (quartiles)	0–4 (1.0, 1.5, 2.0)
Postgraduate psychiatric experience: number (%) of respondents	24 *(33)*
Current or former trainer: number (%) of respondents	19 *(26)*
Practice characteristics	
Partnership size: range (quartiles)	1–8 (4, 5, 6)
Personal list: number (%) of respondents	35 *(49)*
Mean length of consultation in minutes: range (quartiles)	5–15 (8, 10, 10)
Located in Oxford city: number (%) of respondents	32 *(44)*
Trainee in practice: number (%) of respondents	41 *(57)*

Table 2. General practitioners' perceptions of whether cases were psychosocial or physical in relation to the intention of the researchers.

Case vignettes	Intention of researchers	Number (%) of GPs perceiving case as psychosocial ($n = 72$)
Case 1	Psychosocial	23 *(32)*
Case 2	Physical	2 *(3)*
Case 3	Psychosocial	72 *(100)*
Case 4	Physical	14 *(19)*
Case 5	Psychosocial	72 *(100)*
Case 6	Physical	22 *(31)*
Case 7	Psychosocial	72 *(100)*
Case 8	Physical	1 *(1)*

n = total number of participants.

Table 3. Distribution of numbers of vignettes perceived as presenting psychosocial problems.

Total number of vignettes perceived as psychosocial	Number of GPs ($n = 72$)
3	28 *(39)*
4	30 *(42)*
5	10 *(14)*
6	4 *(6)*

n = total number of participants.

Table 4. Factors derived for the physical and psychosocial case vignette sets by factor analyses with varimax rotation on the means of the transformed attitude ratings, and their correlations with practitioner variables by stepwise multiple regression

Contributing ratings	% variance	Correlating variables	Correlation coefficient R	R^2
'Psychosocial cases'				
Factor 1 Enthusiasm + sympathy + appropriateness − irritation	*28.3*	Greater experience of psychiatry***	0.42	0.18
Factor 2 Flexibility + responsibility + avoidability − ability	*21.6*	Longer mean consultation time**	0.32	0.10
		Less experience of psychiatry***	0.38	0.15
'Physical cases'				
Factor 3 Enthusiasm + sympathy + appropriateness − irritation	*30.3*	Increasing age**	0.24	0.14
		Greater experience of psychiatry***	0.48	0.23
Factor 4 Flexibility + responsibility + avoidability − ability	*16.8*	Younger age*	0.25	0.06
		Fewer qualifications**	0.37	0.14
Factor 5 Anxiety + urgency + avoidability	*13.5*	Longer mean consultation time**	0.33	0.11
All cases				
Factor 6 Sympathy + enthusiasm − irritation	*31.9*	Greater experience in psychiatry**	0.38	0.15
		Older age***	0.49	0.23
		Non-training practice***	0.53	0.28
Factor 7 Flexibility + responsibility + avoidability	*16.7*	Younger age*	0.26	0.07
		Not vocationally trained**	0.36	0.13
		Longer mean consultation time**	0.45	0.20
Factor 8 Appropriateness − irritation	*13.1*	Greater experience in psychiatry**	0.37	0.14
		Fewer qualifications***	0.48	0.23
		Older age***	0.54	0.30
Factor 9 Ability − responsibility	*8.8*	Male practitioner*	0.26	0.07
Factor 10 Urgency + anxiety	*6.9*	Female practitioner*	0.25	0.06

*$P<0.05$, **$P<0.01$, ***$P<0.001$.

of consultation and inversely related to irritation about the case. Factors 2 and 4 reflect a second trait derived from attitude scales reflecting the general practitioner's humility; that is, they were related to flexibility in revising the management plan, responsibility for outcome, avoidability of outcome and inversely related to self-perceived ability to manage the case successfully. Factor 5 reflects the anxiety and urgency evoked by the case presentation, and the doctor's perception of avoidability of outcome.

For the set including all eight vignettes five factors emerged accounting for 77.5% of the variance (Table 4). Three of these factors correspond to dimensions of 'positivity' and professional humility and together accounted for 61.7% of the variance. A fourth factor reflected professional self-confidence — self-perceived ability to manage the case and avoidability of the outcome — and accounted for 8.8% of the variance. A final factor — the urgency of consultation and the doctor's anxiety about the case — accounted for 6.9% of the variance.

Multiple regression analysis

Table 4 shows highly significant correlations between post-qualification experience in psychiatry and scores for 'positivity' to both psychosocial and physical cases (factors 1 and 3). In addition, for perceived physical cases there was a correlation between 'positivity' (factor 3) and increasing age. Factors 2 and 4 (reflecting measures of professional humility) correlated, for psychosocial cases, with longer mean consultation length and a lack of postgraduate experience in psychiatry, and inversely correlated, for physical cases, with older age and the number of postgraduate qualifications held.

For all the vignettes, multiple regression of the emergent factors suggested that having received vocational training and being in partnership in a training practice have an unfavourable effect on attitudes. For example, factor 6 reflecting 'positivity' (sympathy, enthusiasm, and lack of irritation), accounted for 31.9% of the variance, and correlated not only with greater experience of psychiatry and older age, but also with working in a non-training practice ($R=0.53$, $P<0.001$). Factor 7, a variant on professional humility (flexibility of management, responsibility for outcome, and avoidability of outcome), correlated with younger age, longer mean consultation times, and not having been vocationally trained ($R=0.45$, $P<0.01$). Professional self-confidence (self-perceived ability and perception of avoidability of outcome) correlated with male sex ($R=0.26$, $P<0.05$), while the factor reflecting urgency of the consultation and doctor's anxiety about the case correlated with female sex ($R=0.25$, $P<0.05$).

Discussion

This study of attitudes of general practitioners to psychosocial and physical case presentation was based on a 50% sample of general practitioners in and around the city of Oxford. The 92% response rate was excellent and provided a representative sample of general practitioners in this study area.

Practitioners informally reported considerable 'face validity' for the vignettes, recognizing them as representative of problems met in everyday practice. However, the case vignette method of assessing attitudes clearly has drawbacks. One limitation is the lack of interpersonal cues and background information that are important in real life consultations.[17] In addition, practitioners may tend to adopt 'professionally desirable' attitudes to portray themselves more favourably.[18] Nevertheless, the inter-case and inter-practitioner variation in attitude ratings plus the internal consistency identified through factor analysis suggest that practitioners' reactions to case presentations reflect perceptions about the individual cases and underlying personality traits.

On the whole practitioners conformed to the intention that half the vignettes would be perceived as physical problems and half would be perceived as psychosocial, allowing a comparison between the response patterns to each of these types of problem. Classifying scores in relation to the median, although resulting in some loss of information, proved a successful method of overcoming difficulties in making between-subject comparisons from individually-anchored interval scale ratings and allowed the use of factor analysis.

Our findings confirm the existence of a dimension of professional concern for distressed patients which can be measured (reflected in factors 1 and 3) and which influences responses to both physical and psychosocial cases alike. While there are significant correlations between this dimension and post-qualification experience in psychiatry there is still considerable unexplained variance. The association with age identified in this study may have been biassed by the disproportionate number of senior partners who refused interview.

Other investigations have shown that a positive attitude to working with psychosocial problems influences both job satisfaction and the accuracy of psychiatric diagnosis.[15,19] Our sample of general practitioners was too small to discriminate between the many forms of post-qualification experience in psychiatry; for example, while one general practitioner had gained the MRCPsych, for others further training had been only a brief course on counselling. Further investigation is needed to determine the extent to which the association between 'positive attitudes' to psychosocial problems and psychiatric training is causally related to the experience and skills gained or a consequence of other factors, such as pre-existing 'positive' personality traits that encourage some doctors to seek such further training.

The second important trait that emerged reflected aspects of professional humility. While older general practitioners may become more set in their ways, those with longer consultation times may respond more flexibly and so more readily feel responsibility for failures. Interestingly, those with fewer postgraduate qualifications display this trait only for cases perceived as 'physical'.

Women general practitioners tended to be less confident than men in their self-perceived ability to manage the case, felt greater anxiety about the case and were more likely to rate cases as urgent. This is consistent with other reports of relatively low self-esteem among female professionals,[20] and is interesting in relation to Boardman's finding of significantly poorer diagnostic skill among female general practitioners working with psychosocial problems.[3]

Completion of vocational training, the possession of higher diplomas and qualifications, membership of the RCGP, and being a general practitioner trainer were notable in failing to affect 'positive attitudes' to both psychosocial and physical cases supporting the view that vocational training does not significantly improve future management of psychosocial illness.[5] This should concern those responsible for the organization of vocational training. The attention paid to gaining higher qualifications during vocational training may be detrimental to the growth of caring and empathic attitudes.

In conclusion, while we do not know the extent to which these findings apply to general practitioners outside the Oxford area, out study indicates that formal training may play only a secondary role in preparing doctors for managing psychosocial problems. The development of such 'positive' personal traits as interest, enthusiasm, concern, and flexibility needs greater consideration.

References

1. Freeling P, Rao B, Paykel E, *et al.* Unrecognized depression in general practice. *Br Med J* 1985; **290:** 1880-1883.
2. Casey P, Dillon S, Tyrer P. The diagnostic status of patients with conspicuous psychiatric morbidity in primary care. *Psychol Med* 1984; **14:** 673-682.
3. Boardman A. The general health questionnaire and the detection of emotional disorder by general practitioners: a replicated study. *Br J Psychiatry* 1987; **151:** 373-381.
4. Goldberg D, Bridges K. Screening for psychiatric illness in general practice: the general practitioner versus the screening questionnaire. *J R Coll Gen Pract* 1987; **37:** 15-18.
5. Whitehouse C. A survey of the management of psychosocial illness in general practice in Manchester. *J R Coll Gen Pract* 1987; **37:** 112-115.
6. Johnstone A, Goldberg D. Psychiatric screening in general practice. *Lancet* 1976; **1:** 605-608.
7. Hawton K, Blackstock E. General practice aspects of self-poisoning and self-injury. *Psychol Med* 1976; **6:** 571-575.
8. Crockett A. Patterns of consultation and parasuicide. *Br Med J* 1987; **295:** 476-478.
9. Bancroft J, Skrimshire A, Casson J, *et al.* People who deliberately poison or injure themselves: their problems and their contacts with helping agencies. *Psychol Med* 1977; **7:** 289-303.
10. Furnham A. Medical students' beliefs about nine different specialities. *Br Med J* 1986; **293:** 1607-1610.
11. Wright A, Perini A. Hidden psychiatric illness: use of the general health questionnaire in general practice. *J R Coll Gen Pract* 1987; **37:** 164-167.
12. Goldberg D, Blackwell B. Psychiatric illness in general practice. A detailed study using a new method of case identification. *Br Med J* 1970; **2:** 439-443.
13. Bloch S. *What is psychotherapy?* Oxford University Press, 1982.
14. Davenport S, Goldberg D, Millar T. How psychiatric disorders are missed during medical consultations. *Lancet* 1987; **2:** 439-441.
15. Marks J, Goldberg D, Hillier V. Determinants of the ability of general practitioners to detect psychiatric illness. *Psychol Med* 1979; **9:** 337-353.
16. Norusis M. *SPSS/PC+*. Chicago: SPSS, 1986.
17. Norman G, Feighter J. A comparison of behaviour on simulated patients and patient management problems. *Med Educ* 1981; **15:** 26-32.
18. Kuyvenhoven M, Jacobs H, Touw-Otten F, van Es J. Written simulation of patient-doctor encounters. 1. Research instrument for registration of the performance of general practitioners. *Fam Pract* 1984; **1:** 14-19.
19. Cartwright A, Anderson R. *General practice revisited: a second study of patients and their doctors.* London: Tavistock, 1981.
20. O'Connor K, Mann DW, Bardwick JM. Androgyny and self-esteem in the upper-middle class. A replication of Spence. *J Consult Clin Psychol* 1978; **46:** 1168.

Acknowledgements

This project was supported by a generous grant from the Oxford district health authority. HCM acknowledges the support of the MRC. Thanks are due to Dr Godfrey Fowler, Jo Say, Drs Keith Hawton and Peter Anderson and the 72 general practitioners who gave of their valuable time.

Address for correspondence

Dr J Dale, Department of General Practice Studies, King's College School of Medicine and Dentistry, London SE5 8RX.

Appendix 1. Example of a pair of case vignettes.

Case 7

Presentation card: The telephone rings at 3 am. You waken and recognize the slurred voice of Arthur Mcdonald (45) speaking from a call box. He tells you that he is feeling desperate, that he is going to kill himself, and he then puts the telephone down without saying where he is. Arthur is an unemployed Scot living, you recall, in digs near the station. He had once been a regional sales manager with a good salary. His last

job, as a long distance lorry driver, had ended nine months earlier when he lost his driving licence because of drunkenness. This was followed by a large overdose of sleeping tablets. Since that time he has had two further admissions to hospital, each one following the break-up of relationships with women.

Outcome card: Arthur was admitted to hospital in the early hours of the morning. He had been found lying in the gutter by a patrolling police car. He smelled strongly of alcohol and had an empty pill bottle in his pocket. Casualty staff recovered tablet fragments at washout and he had an appreciable amount of salicylate in his blood. On the morning before his admission he had been evicted from his lodgings because of drunkenness.

Case 8

Presentation card: Mrs Connolly calls from a call box at 4 am. She hurriedly tells you that her husband, Sean (58), is ill and needs to be seen. He has become incoherent and is very breathless and weak. For a couple of days he has been coughing up lots of green sputum. Over the years you have seen Sean several times for bouts of bronchitis. You have often advised him to stop smoking his daily 30–40 cigarettes, but he has never taken heed. The pips sound and Mrs Connolly is cut off. As you start to rise from your bed you realize that you had forgotten to ask their address.

Outcome card: Going via the surgery you arrive at the house. Sean is very short of breath and has signs of pneumonia. You arrange his immediate admission to hospital where he makes a good recovery. Unfortunately sputum cytology reveals an underlying squamous cell carcinoma. There is no evidence of secondaries.

Appendix 2. An example of the rating scales

Appropriateness

'How appropriate do you rate it for you, as a general practitioner, to deal with this problem?'

1	2	3	4	5
Not at all appropriate				Entirely appropriate