Characteristics of practices, general practitioners and patients related to levels of patients' satisfaction with consultations

RICHARD BAKER

SUMMARY

Background. *Despite interest in the relationship between patient satisfaction and consultation performance, there is little information about how other characteristics of general practitioners, practices and patients influence satisfaction with consultations.*

Aim. *To identify characteristics of patients, practices and general practitioners that influence satisfaction with consultations.*

Method. *In 1991–92, a consultation satisfaction questionnaire (CSQ) was administered to 75 patients attending each of the 126 general practitioners in 39 practices. Further questionnaires were used to collect information about the practice (such as total list size, training status, fundholding status and presence of a personal list system) and about the general practitioners (age, sex, whether vocationally trained, a trainer or a trainee, and the number of patients booked in the appointment system per hour). Stepwise multiple regression was undertaken to identify characteristics of patients, practices or general practitioners that influenced satisfaction.*

Results. *The mean of the response rates to the patient questionnaire for each general practitioner was 76.6%, with a standard deviation (SD) of 17.8. Practice characteristics associated with falls in satisfaction were an increasing total list size, the absence of a personal list system and its being a training practice. If more patients were booked in the appointment system per hour, satisfaction with the perceived length of consultations fell. Patient characteristics associated with falls in satisfaction were increased age and an increased proportion of male patients. The only characteristic of general practitioners associated with lower levels of satisfaction was increasing age. The sex of general practitioners did not influence satisfaction.*

Conclusions. *The findings of this study give further support to the importance of a personal service in determining patient satisfaction in general practice. General practitioners need to review the organization of practices to ensure an acceptable balance between the requirements of modern clinical care and the wishes of patients. Future studies should take account of the many variables that can influence patient satisfaction.*

Keywords: consultation process; doctor–patient relationship; patient satisfaction.

Richard Baker, MD, FRCGP, director, Eli Lilly National Clinical Audit Centre, Department of General practice and Primary Health Care, University of Leicester.

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Introduction

THERE is growing recognition of the importance of taking patient satisfaction into account when planning services in general practice. Developments in recent years have included arrangements for health authorities to undertake consumer surveys[1] and for medical audit advisory groups to use the findings.[2] A specific programme – the Patient's Charter initiative[3] – has been established to encourage the service to become more responsive to the requirements of patients. Furthermore, several instruments for measuring patient satisfaction have now been developed, including questionnaires for consultations[4,5] and for the service as a whole.[5,6,7]

However, in responding to the findings of patient surveys it is important to have information about those factors which are most important in determining satisfaction. Previous studies have indicated that characteristics of practices, general practitioners (GPs) and patients can influence levels of satisfaction, but have not identified those that are most important. Among the characteristics of practices that might influence satisfaction with consultations are the presence of a personal list system and lower list sizes, both of which were associated with higher satisfaction with services provided by general practices.[8]

Because shorter consultations are associated with lower satisfaction,[9] appointment systems which restrict the amount of time allocated to each consultation might be associated with reduced satisfaction. Continuity of care in general practice has also been shown to influence satisfaction,[10] so the practice policy on continuity may influence satisfaction with consultations.

While investigators have examined the extent to which aspects of consultation performance have affected satisfaction,[11] other characteristics of doctors that might influence satisfaction with consultations have received less attention. A doctor's sex is one of the characteristics that may be important. Studies in general practice have shown that women doctors see a higher proportion of female patients than male doctors.[12,13] Some of this difference may be due to the preference of patients with gender-related health problems to consult a doctor of the same sex.[13,14,15,16] In one study from North America, patients attending female residents reported higher levels of satisfaction with interpersonal aspects of care.[17] There is less information about the age of doctors and patient satisfaction, but, in a study of satisfaction with general practices, satisfaction with medical care was higher in practices with older doctors.[8]

The characteristics of patients that have been most frequently studied are age and sex.[18,19] Age is the variable having the most consistent effect, usually being associated with increases in satisfaction. Thus, a variety of patient, practice and GP characteristics might influence satisfaction with consultations. Research that seeks to explore the relationship between consultation performance and patient satisfaction should take into account the most important characteristics. However, from studies undertaken, it is not clear which characteristics have the most influence on satisfaction with consultations. Therefore, this study was undertaken to begin to identify those structural and organizational characteristics that do have an impact on satisfaction with consultations.

Methods

The consultation satisfaction questionnaire

The questionnaire used in this study was the consultation satisfaction questionnaire (CSQ).[4] It comprises 18 questions in four scales concerned with the patient's most recent consultation: general satisfaction, professional care (the examination, information about the illness and advice about its treatment, and interest in the patient as a person), depth of relationship (the doctor's knowledge of the patient and the patient's comfort about disclosing personal information), and perceived time (was the consultation long enough to deal with all the patient's concerns?). Each scale has between three and seven questions, each having five possible responses from 'strongly agree' to 'strongly disagree'. The scale scores are calculated by summing the scores of the questions in each scale and converting the results to a scale of zero to 100, with zero representing complete dissatisfaction and 100 complete satisfaction. The questionnaire also asks for the respondent's age and sex. It has been shown to have satisfactory levels of internal consistency, test–retest reliability and validity.[20]

The participating general practitioners

A letter was sent to all practices in the South Western Regional Health Authority in September 1991 offering them a patient satisfaction survey. They were told that the first 100 practices to agree would be included. Practices could choose to use the consultation satisfaction questionnaire or the surgery satisfaction questionnaire.[8] This paper is concerned with GPs in practices that chose to use the consultation satisfaction questionnaire.

Each participating GP was sent a questionnaire asking for the following details: age, sex, whether vocationally trained, whether trainee or trainer, and the number of patients booked in the appointment system per hour. A separate questionnaire was sent to practices to collect information about the practice itself, including presence of a practice manager, total list size, number, age and sex of partners, approval for vocational training, fundholding status, and whether the respondent viewed the practice's list system as being personal, partly personal or a pooled list system.

Patient sample

The practices were instructed to issue the consultation satisfaction questionnaire to 75 consecutive patients attending each participating GP. All patients attending each surgery session were included except those aged under 16 years, those too ill to complete the questionnaire, and those unable to read or write. Patients were asked to complete the questionnaire after their consultation with the doctor, and in respect of that consultation, and to return it before leaving the premises. The questionnaire indicated that responses would be anonymous and patients were asked not to write their names on the forms. The practices returned the completed questionnaires to the researcher for analysis.

Analysis

All data were entered onto SPSS-PC for analysis. The mean satisfaction scores for the patients of each doctor were calculated, and feedback was issued to the participating GPs showing the anonymous scores of other participants; this enabled them to identify their strengths and weaknesses in comparison with others. The size of the patient sample per GP was sufficient to ensure a 95% confidence interval of not more than ±2 points on the satisfaction scales.[21]

For each component of satisfaction a multiple regression analysis was undertaken. The components of satisfaction were the dependent variables, and the characteristics of practices, GPs and patients were the explanatory variables. The practice variables were total list size, number of patients booked in the appointment system per hour, whether the practice was approved for vocational training, whether it was fundholding, whether it had a practice manager, and type of list system (pooled, partly personal or completely personal). The type of list system was categorical and was included as a series of binary indicators. The GP variables were whether he or she was a trainer, a trainee, vocationally trained, and age and sex. The patient variables were mean age of the group of patients responding for each GP, female proportion of each group and response rate to the questionnaire. It should be pointed out that in multiple regression analysis 'explain' does not imply a causative relationship but does indicate an association. Forward stepwise regression was used to identify the main effects. In order to check for the influence of interactions between variables, possible interactions were entered into the regression with their main effects. For example, the presence of a personal list system may be more important to elderly patients. Therefore, binary indicators were included, computed from the interactions between two such variables.

Results

A total of 190 GPs in 59 practices administered the CSQ to their patients; 142 GPs (74.7%) from 49 practices returned the doctor characteristics questionnaire. Of these, 126 (66.3% of all the participating GPs) from 39 practices returned practice questionnaires. In all, 7273 satisfaction questionnaires were completed by patients of these 126 doctors, the mean of the response rates for the different GPs being 76.6% (SD 17.8). Trainers were overrepresented among the doctors in this study, although only three vocational trainees took part. The characteristics of the GPs, their practices and the responding patients are shown in Table 1.

The scores (mean, standard deviation and 10th and 90th centiles) for each component of satisfaction are shown in Table 2. Table 3 shows the findings of the multiple regression analyses for general satisfaction and professional care, and Table 4 shows the same information for depth of relationship and perceived time. For general satisfaction, scores fell as the following variables increased: mean age of female patients, doctor's age (although scores rose in fundholding practices), and total list size. The next variable was an interaction between the mean age of responding female patients and whether the practice was a training practice. This interaction was entered into the regression equation together with its main effect (training status). Training practices were associated with a substantial fall in general satisfaction with consultations, but this was ameliorated to some extent by the interaction with the mean age of the responding female patients: satisfaction increased by 0.49 points with each increase of one year in mean age.

Satisfaction with professional care fell slightly as the mean age of female patients increased and also as the proportion of male patients increased. It fell in practices which operated partial personal list systems rather than personal list systems. There was an interaction between the mean age of female patients and training practice status: a substantial fall in satisfaction was revealed in training practices, but satisfaction increased in these practices as the mean age of female patients increased.

Satisfaction with the depth of relationship fell as the mean age of female patients increased (except in training practices, where the reverse was true); it also fell if the practice had a partial personal list system rather than a completely personal list system, and fell as the proportion of male respondents increased. However, as with general satisfaction, there was a substantial fall

Table 1. Characteristics of the GPs (n=126) in the study, their practices (n=39) and their patients (n=7273) who completed the consultation satisfaction questionnaire.

Characteristics of the GPs:	
males	93
females	32
trainers	39
vocationally trained	94
trainees	3
number of patients booked/hour:	
4-5	7
6-7	75
8-9	36
10/+	6
age:	
mean	41.1 years (SD 7.3)
range	28-60
Characteristics of the practices for each GP:	
training practices	84
fundholding	11
practice manager	112
list system:	
none	63
partial	35
complete	22
number of GPs/practice:	
range	1-9
mean	4.4 (SD 1.7)
total list size/practice:	
range	1878-13 100
mean	7460 (SD 3435)
Characteristics of respondents:	
mean ages of each doctor's patient sample:	
range	32-56
mean	45.5 (SD 5.1)
mean age of male respondents	48.7 (SD 8.4)
range	29-62
mean age of female respondents	43.8 (SD 5.1)
range	32-55
% respondents who are female/GP:	
mean	66.4% (SD 11.0%)
range	44.3-94.7%

Table 2. Means and standard deviations of CSQ satisfaction scores for 126 GPs in the study of patient satisfaction and characteristics of GPs and their practices.

	Mean	SD	Range	Centiles 10th	Centiles 90th
General satisfaction	80.5	3.8	70.9-89.3	74.9	85.3
Professional care	82.6	3.5	73.5-91.9	78.0	87.2
Depth of relationship	73.6	4.3	61.4-85.9	67.8	78.4
Perceived time	72.4	4.0	62.2-84.0	67.5	77.5

in training practices. As before, the interaction was entered into the regression equation together with training status. Satisfaction with perceived time fell as total list size increased, rose as the mean age of male respondents increased, was higher in fundholding practices, but fell as the number of patients per hour in the appointment system increased.

Discussion

The GPs who took part in the study were all volunteers and this is reflected in the relatively high proportion who were approved as trainers. Thus, GPs who work in relatively undeveloped practices were under-represented and the satisfaction scores for a representative national sample of GPs cannot be determined from the findings. However, a large number of GPs took part and information was collected from a substantial number of patients. The CSQ has demonstrated reliability and validity and no previous study has reported the use of such a robust measure to determine the characteristics of patients, GPs and their practices that influence patient satisfaction with consultations in general practice. Therefore, the findings are an important contribution to an

Table 3. Results of multiple regressions analyses for the CSQ scales of general satisfaction and professional care (standard errors in paretheses). Number of GPs = 126. P values indicate the significance of the F-test for the addition of the particular variable at that stage in the model.

Explanatory variable	Regression coefficient	P value
General satisfaction:		
mean age of female patients	-0.16 (0.15)	<0.025
doctor's age	-0.16 (0.05)	<0.005
fundholding	2.5 (1.1)	<0.05
total list size (1000s)	-0.26 (0.09)	<0.05
mean age of female patients in training practices and training practice	0.49 (0.17) -20.66 (7.62)	<0.01
constant	95.28	
final r^2	0.27	
Professional care:		
mean age of female respondents	-0.05 (0.14)	<0.005
proportion of responders who are male	-10.6 (2.9)	<0.005
partial personal list system	-1.1 (0.72)	<0.01
mean age of female patients in training practices and training practice	0.46 (0.16) -19.32 (7.04)	<0.025
constant	88.07	
final r^2	0.30	

Table 4. Multiple regression models for the CSQ scales of depth of relationship and perceived time (standard errors in parentheses). Number of GPs =126. The P values refer to the significance of the F-test for the addition of the particular variable at that stage in the model.

Explanatory variable	Regression coefficient	P value
Depth of relationship:		
mean age of female respondents	-0.03 (0.17)	<0.001
partial personal list system	-1.8 (0.86)	<0.005
proportion of responders who are male	-8.3 (3.5)	<0.025
mean age of female respondents in training practices and training practice	0.53 (0.19) -23.32 (8.33)	<0.05
constant	78.13	
final r^2	0.31	
Perceived time:		
total list size (1000s)	-0.28 (0.11)	<0.005
mean age of male respondents	0.17 (0.06)	<0.01
fundholding	3.1 (1.23)	<0.025
patients seen per hour	-1.3 (0.60)	<0.025
constant	70.17	
final r^2	0.21	

understanding of patient opinions on the organization of practices.

The variables were able to explain approximately one-quarter to one-third of the variation in satisfaction scores for each component of satisfaction. A relatively complex pattern of variables explained levels of satisfaction; practice variables (list size, list system, fundholding status, training status), patient variables (mean age of female respondents, proportion who were male) and a doctor variable (age) were all associated with components of satisfaction. Nevertheless, a distinct picture of patients' preferences emerges from the analysis.

Characteristics of practices do have an impact on patient satisfaction with consultations. The characteristics concerned are similar to those that influenced satisfaction with the practice in general and that involve the provision of a personal service.[8] Practices that are smaller, that operate personal list systems and that experience fewer changes of doctors are more likely to be able to offer a personal service. This may explain why an increasing list size led to a fall in general satisfaction and also in satisfaction with perceived time. Furthermore, the operation of a partial personal list system, rather than a completely personal list system, led to falls in satisfaction with professional care and with the depth of relationship between doctor and patient. The effect of a completely personal list system was emphasized by the finding that a partial personal list system was not associated with higher levels of satisfaction than pooled list systems. Training practices were associated with a substantial fall in satisfaction with all components except perceived time. It may be that patient satisfaction is reduced by consultations with relatively inexperienced trainees or by a more general impact on continuity of care caused by the regular presence of a new trainee. An alternative explanation is that GPs in training practices have a style of consultation that is less flexible to patients' wishes.

Not unexpectedly, the number of patients seen per hour was associated with satisfaction with perceived time, but in fundholding practices there was an increase in satisfaction with perceived time and in general satisfaction. The interpretation of the finding about fundholding practices is unclear. The study was undertaken in the first year of fundholding, so these practices were a very select group. Generalization to all present day fundholding practices would be inappropriate. It may be that these particularly innovative practices possessed a characteristic not assessed in this study which influenced satisfaction.

The patient factors that influenced satisfaction were age and sex. However, the associations were not simple. As the mean age of female respondents increased, satisfaction with professional care, depth of relationship and general satisfaction fell. Other studies have indicated that levels of satisfaction increase as patients' ages increase.[18] This study has also taken several other variables into account and suggests that satisfaction is not influenced directly by the patient's age, but instead is subject to an interaction between age and other variables, including aspects of the service. For example, the degree of personal care may explain the relationship between satisfaction and age because older patients with chronic disorders may experience higher levels of continuity of care.

In training practices there was an increase in satisfaction as the mean age of female respondents increased. The explanation for this finding is unclear. It may be that training practices are less unsatisfactory to older female rather than male patients. Over a period of time, patients with chronic disease may establish continuing care from a particular GP; by making regular appointments in advance of the consultation, such patients would be less likely to have to see a trainee rather than their own GP. The findings did not suggest that female patients were expressing particular dissatisfaction with consultations. Male patients indicated reduced satisfaction with professional care and depth of relationship. It may be that male patients are more critical of these aspects of the service, or that proportionately more male than female patients attend infrequently with acute conditions, and so do not develop a close relationship with their GP.

The only doctor characteristic that was investigated in this study and found to be associated with satisfaction was age. In this study no doctor was aged above 60 years, but increasing age up to 60 led to a fall in general satisfaction — a finding in contrast to that of the medical care scale of the surgery satisfaction questionnaire, in which increasing age of doctors was associated with an increase in satisfaction.[8] These two studies suggest that patients' perceptions of doctors' ages, their relationship with their doctor, and the doctors' competence are relatively complex. The doctor's sex did not explain differences in levels of satisfaction.

This study has not taken into account the role of the doctor's consultation performance in determining patient satisfaction — a factor that may explain much of the variation in satisfaction not explained by the variables investigated in this study. Other studies have confirmed the importance of such activities as information-giving or positive talk.[17] In order to explore the relative importance of consultation behaviour and structural factors, further studies are required. However, the present study does make clear that many factors can influence patient satisfaction, and future studies of consultations should seek to take them into account. In the absence of studies which take account of most of these variables, our understanding of the impact of consultation behaviour on patient outcome will remain superficial.

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Address for correspondence
Dr R Baker, Department of General Practice and Primary Health Care, University of Leicester, Leicester General Hospital, Gwendolen Road, Leicester LE5 4PW.