

Development of a questionnaire to assess patients' satisfaction with consultations in general practice

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SUMMARY. *The assessment of patient satisfaction has become an important concern in the evaluation of health services. Measures of satisfaction must be valid and reliable if they are to be used widely. This paper reports the development of a new questionnaire to assess patients' satisfaction with consultations together with initial tests of the questionnaire's reliability and validity. Principal components analysis of the patients' assessments of care revealed three factors of satisfaction: the professional aspects of the consultation, the depth of the patient's relationship with the doctor, and the perceived length of the consultation. The consultation satisfaction questionnaire is reliable under the conditions of this study and may have a role in research, medical education and audit.*

Introduction

PATIENT satisfaction is one objective of care, and, along with recovery from illness or amelioration of the presenting problem, it is therefore an outcome of care. It is also a contributor to outcome, as satisfied patients are more likely to cooperate with treatment.¹ Moreover, satisfaction is the patient's judgement of the quality of care.² In addition to these three practical reasons why patient satisfaction should be assessed, there is the philosophical view that patients should by right have their concerns about care taken into account. The growing importance of consumerism in health care is but one element of a broader social movement, and it would be unrealistic to expect that health services will be allowed to remain undisturbed by changes taking place in the rest of society. The new contract for general practitioners instructs family practitioner committees to carry out consumer surveys aimed at measuring patients' satisfaction with general practitioner services,³ and the medical audit advisory groups to be set up from April 1991 have been given the duty of ensuring that patients' interests are taken into account.⁴

Assessment of patient satisfaction has been used as a measure of outcome in studies of aspects of general practice such as deputizing,⁵ length of consultations⁶ and workload.⁷ However, there are no patient satisfaction questionnaires devised for use in British general practice that have been subjected to thorough testing of reliability and validity. If surveys of patient satisfaction are to influence clinical care, it is important that the assessment instruments are tested as rigorously as other medical measurements, otherwise the quality of care might be made worse rather than better. Several questionnaires have been developed and tested in the USA and used in the UK^{8,9} despite the lack of evidence to show that they are reliable and valid when used outside the setting for which they were designed. Nevertheless, these American questionnaires have shown that it is possible to develop methods of assessing patient satisfaction with known levels of validity and reliability.¹⁰

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When the Bristol University quality assurance project was set up, one of its objectives was to develop methods for assessing patient satisfaction with general practice. There are many aspects of general practice that might be included in a patient satisfaction questionnaire, such as office organization, the work of practice nurses or attached staff, out of hours care, and availability of doctors, in addition to the doctor-patient relationship. However, a questionnaire covering all possible areas of concern would be too long for patients to complete quickly, and also inflexible for potential users who are unlikely to want to assess every aspect each time the questionnaire is used. Therefore, two questionnaires were planned, one to assess satisfaction after a consultation with a general practitioner, and the other to assess patient satisfaction with the services offered by a general practice as a whole but excluding the consultation. This paper reports the development of the questionnaire about the doctor-patient consultation.

Method

All the development work was undertaken in one suburban practice of 12 000 patients who were predominantly from social classes 1 to 3M. There were six principals in the practice, plus one trainee and one doctor working under the retainer scheme. Three of the doctors were women and five men.

The questionnaire was required to be brief, understandable and easy to complete for adults aged over 16 years. It was designed to be self-administered, so that it would be cheap and easy to use in different general practices. Throughout the development period it was administered in the same way, being given to patients as they arrived for consultations at the surgery, with instructions to complete it after the consultation but before departure, leaving it in a marked box in the reception lobby. Patients were excluded if they were under 16 years of age, too ill to complete the form, unable to read the form, or if they had already completed any version of the consultation satisfaction questionnaire. Questionnaires were not marked in any way that might permit identification of patients, and the method of collecting completed forms was chosen so that patients could feel certain that their comments would be anonymous. The questionnaire was also labelled to indicate that its origin was the general practice unit at the University of Bristol rather than the practice as an enquiry about satisfaction from the patient's own doctor might inhibit the expression of negative opinions.

The method of questioning chosen was a five-point Likert-type¹¹ scale asking for agreement or disagreement with statements about the doctor and the consultation. This scaling method has been employed in other surveys^{10,12} and has the advantage of being relatively easy for respondents to complete.

Question selection

The first step was to identify the various issues that patients may take into account in their assessment of consultations, and the second step was to refine the questions so that these issues were covered in a way that patients could understand and that obtained a range of opinion. An initial review of other questionnaires on patient satisfaction together with general practice studies that included surveys of patient opinions was therefore undertaken in order to determine what aspects of care had been

found to be of concern to patients. This review was supplemented by discussion with fellow general practitioners and personal experience of patients' comments on their care. This preliminary work led to the preparation of a list of statements about consultations that could be included in a questionnaire. Statements that would apply only in the study practice were omitted so that the questionnaire could be used in other practices. Finally, patients were asked for their comments by including on the first version of the consultation satisfaction questionnaire two open questions asking respondents to state whether there were any things they particularly liked or disliked about the doctor. However, there appeared to be no area of the consultation not covered by the existing statements. The most common extra statement was that the doctor was 'a good listener' and a statement to this effect was employed in later versions of the questionnaire, but it proved not to discriminate, having a narrow range of response and reflecting general satisfaction rather than a component of satisfaction. Some statements were included twice, worded positively on one occasion, and negatively on the second, to account for the tendency of some respondents to agree with all statements. In addition, single-item measures compared with multi-item measures are known to be poorly reliable.¹³ In scoring replies, the one to five scale was reversed when appropriate so that for all statements, a score of one indicated satisfaction, and five dissatisfaction.

Refinement of the questionnaire

Several methods were used to evaluate the selected statements. First, as a simple check, the comments of colleagues on the meaning of each were obtained. Secondly, the pattern of response to statements was studied to discover whether a range of opinions was being disclosed. To reveal skewness in replies, graphs of the results for each statement were plotted. Thirdly, wording was repeatedly reviewed for ambiguity and other problems. This process was assisted by checking the difficulty experienced by patients in answering statements as shown by additional comments written on questionnaires. Finally, the number of patients who failed to respond to each statement were recorded in order to reveal any problems.

If one of these methods showed a problem, the findings from the other selection methods were reviewed and statements were discarded or rewritten. This led to revised versions of the questionnaire that were subjected once again to testing by a group of patients.

From version three onwards, development of the questionnaire was also guided by the findings of principal components analysis, making use of Varimax rotation and Kaiser normalization.¹⁴ This procedure reveals how statements are answered relative to each other,¹⁵ and has the advantage that no assumptions about the distribution of data need be made. Statements are picked out which tend to be answered in a similar fashion and are therefore likely to be about the same broad issue. Thus, the different factors that influence satisfaction can be identified, and the homogeneity of the statements within each factor determined. Statements that were shown to relate only weakly to a factor were improved, replaced or discarded, depending on the findings of the other methods of statement assessment. For example, a statement used in version five, 'This doctor was not very friendly', was found to correlate only weakly with two components of satisfaction and as it therefore failed to assess any specific component of satisfaction it was omitted.

The development of the consultation satisfaction questionnaire resulted in improved statements, with a wider range of replies and the emergence of more homogeneous factors. This process became more rapid from version three onwards, when experience of the methods of questionnaire refinement had been

gained. Principal components analysis of version four revealed two factors, one concerned with the length of the consultation, and the other with technical aspects of care such as the thoroughness of the examination, and the adequacy of the explanation of the illness and its treatment. Version five included additional statements intended to reveal views on the interpersonal aspects of the consultation. These were largely successful, and version six, the final version, was a minor modification of version five.

Version six of the consultation satisfaction questionnaire was administered to 40 consecutive patients attending each of the eight doctors.

The reliability of the questionnaire was assessed using a test of internal consistency, Cronbach's alpha.¹⁶ This is a split-half method of estimating reliability that offers an alternative to test-retest methods which can be impractical when assessing views about a specific event, and it is frequently employed in questionnaire development. The coefficient of variation was determined for each statement to indicate the degree of response variability. In order to confirm that the individual factors were related to general satisfaction, Spearman correlation coefficients were calculated for each factor score with the score for general satisfaction.

Results

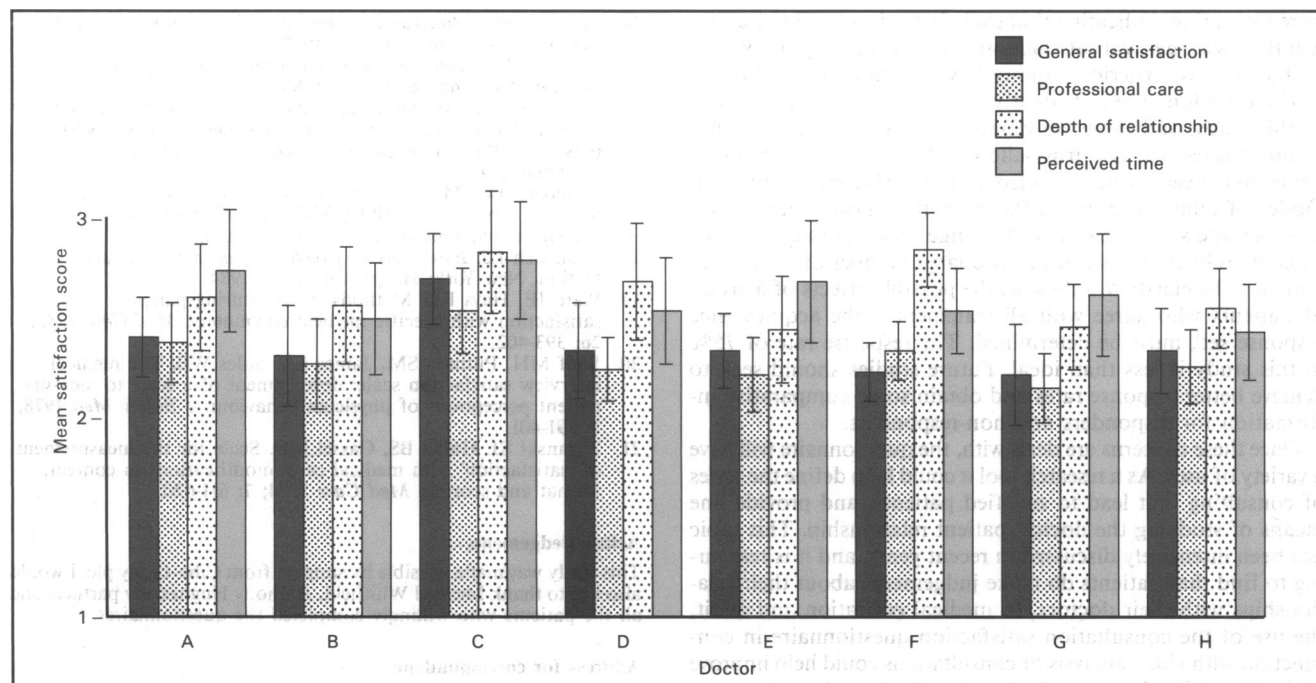
In the field test of version six, 239 completed forms were obtained, a response rate of 75%. The anonymity of the questionnaire precluded the collection of comparative information about responders and non-responders. Questions concerning general satisfaction failed to form a separate factor on principal components analysis of versions three to six of the questionnaire and these questions were extracted and used as a separate scale (Table 1). However, principal components analysis did reveal three factors (Table 1) and following discussion with 17 professionals, mostly general practitioners, but also nurses and psychologists, names were assigned to these factors. Factor one, professional care, includes the patient's concerns about the examination, the provision of information about the illness and its treatment by the doctor, agreement with the doctor's advice and the doctor treating the patient as a person. Factor two, depth of relationship, is concerned with the doctor's intimate knowledge of the patient within a relationship and the transmission of very personal information to the doctor. These factors suggest that the doctor-patient relationship is being judged on two levels, the first concerning all the traditional behaviours expected of a doctor, and the second at a more personal and emotional level. The third factor, perceived time, concerns the patients' perceptions of the length of consultations when related to their own requirements. The Spearman correlation coefficients for each factor with the general satisfaction scale were 0.64 for professional care and 0.50 for both depth of relationship and perceived time, indicating that each factor is related to but not identical with general satisfaction.

Cronbach's alpha for the complete questionnaire was 0.91, for professional care 0.87, for depth of relationship 0.83, for perceived time 0.82 and for general satisfaction 0.67. These results indicate that the questionnaire is sufficiently reliable to discriminate between groups of patients rather than individual patients.¹⁶ The mean scores for the statements used for factors two and three are reasonably close to but do not exceed 3, the midpoint in the scale. The statements for care and general satisfaction were more likely to have a mean score towards the satisfied end of the scale, although coefficients of variation were still satisfactory. The coefficients of variation for each statement (Table 1) indicate that the statements encourage a range of opinions. This is supported to some extent by the finding of

Table 1. Statements from version six of the consultation satisfaction questionnaire: correlations with factor, mean scores and coefficients of variation (total number of respondents = 239).

Statement	Correlation with factor	Mean score (SD)	Coefficient of variation (%)
<i>General satisfaction</i>			
1. I am totally satisfied with my visit to this doctor	—	1.71 (0.67)	39.3
7. Some things about my consultation with the doctor could have been better	—	2.32 (0.92)	39.4
17. I am not completely satisfied with my visit to the doctor	—	2.13 (1.02)	47.9
<i>Factor 1: Professional care</i>			
2. This doctor was very careful to check everything when examining me	0.79	1.89 (0.73)	38.7
9. This doctor examined me very thoroughly	0.79	2.07 (0.78)	37.7
6. This doctor told me everything about my treatment	0.75	1.98 (0.75)	37.8
10. I thought this doctor took notice of me as a person	0.68	1.87 (0.79)	42.2
3. I will follow this doctor's advice because I think he/she is absolutely right	0.65	1.75 (0.67)	38.4
13. This doctor was interested in me as a person, and not just my illness	0.63	2.08 (0.83)	39.8
12. I understand my illness much better after seeing this doctor	0.45	2.27 (0.81)	35.8
<i>Factor 2: Depth of relationship</i>			
8. There are some things this doctor does not know about me	0.85	2.93 (1.03)	35.1
14. This doctor knows all about me	0.83	2.74 (0.99)	36.1
15. I felt this doctor really knew what I was thinking	0.70	2.47 (0.92)	37.1
4. I felt able to tell this doctor about very personal things	0.55	2.09 (0.86)	41.3
18. I would find it difficult to tell this doctor about some private things	0.45	2.28 (0.95)	41.5
<i>Factor 3: Perceived time</i>			
11. The time I was allowed to spend with the doctor was not long enough to deal with everything I wanted	0.85	2.25 (0.90)	40.2
16. I wish it had been possible to spend a little longer with the doctor	0.84	2.68 (0.99)	37.2
5. The time I was able to spend with the doctor was a bit too short	0.81	2.47 (0.97)	39.1

SD = standard deviation.

**Figure 1.** Mean satisfaction scores for the eight general practitioners (total number of respondents = 239).

different mean scores for each of the eight participating doctors (Figure 1).

Discussion

Further interpretation of the differences in scores between patients consulting different doctors depends on determining the validity of the measuring instrument, and relating individual scores to a scale for which the meaning of individual values is already known. Validity cannot be confirmed by the findings of a single study, but depends on repeated tests which are interpreted in the light of a defined theory underlying the contents of the questionnaire.^{17,18} It is possible to advance arguments in support of the validity of version six of the consultation satisfaction questionnaire, but these should be seen as preliminary and incomplete, and subject to the findings of future studies.

One argument to support content validity is that the generation of statements followed careful review supplemented by patient opinion. Another argument is that the factors identified by the questionnaire as important for satisfaction are the same as those found in other studies. A recent American questionnaire has shown patient concern with technical and interpersonal aspects of care,¹⁹ factors that are similar to professional care and depth of relationship in the consultation satisfaction questionnaire. The cognitive and behavioural factors of the medical interview satisfaction scale²⁰ have similar content to the professional factor of version six, while the affective factor of the medical interview satisfaction scale compares to the depth of relationship factor. Another American scale revealed professional and personal factors,²¹ though concern about the financial cost of care is often included in American questionnaires. This is clearly less important to British patients, but another factor, perceived time, was found to be important in this study. This factor is given some validity by a study showing that patients were more likely to complain of shortage of time in consulting sessions booked at shorter intervals.⁶

To support construct validity, each factor measured by the questionnaire should be shown to be related to general satisfaction, but at the same time to be distinct. Spearman correlation coefficients for each factor with the general satisfaction scale were reassuring, indicating that each factor is related to but not identical with general satisfaction. This again supports validity, but tests of criterion validity have yet to be carried out.

The questionnaire is evidently reliable under the conditions of this study, and there are grounds for being optimistic that future studies will confirm validity. However, there are other issues that need to be considered. The influence of different modes of administration, different patient populations, their ages, sex and social class, and the range of scores in each factor when used by patients consulting a large number of doctors all remain to be clarified. Likewise, the possible effects of a group of patients who agree with all statements, 'the acquiescence response set', must be determined. The response rate of 75% in this study is less than ideal. Future studies should seek to achieve better response rates and obtain some comparative information for responders and non-responders.

Once these concerns are dealt with, the questionnaire will have a variety of uses. As a research tool it could help define the styles of consulting that lead to satisfied patients, and provide one means of studying the doctor-patient relationship. This topic has been intensively discussed in recent years, and it is reassuring to find that patients do make judgements about their relationships with their doctors. In medical education and audit, the use of the consultation satisfaction questionnaire in conjunction with video analysis of consultations could help improve consulting skills. However, feedback of findings from the questionnaire to trainees or principals must be done sensitively as,

given baldly, the views of patients could easily undermine self-esteem and the willingness to improve. The model for this type of feedback should be the same as that used for video analysis, when the positive is emphasized, and areas for improvement tactfully pointed out. A system of this kind could readily be employed within vocational training schemes, though for established principals special arrangements such as small group work or a distance learning programme may be required.

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