Family Practice Vol. 20, No. 4 © Oxford University Press 2003, all rights reserved. Printed in Great Britain
Doi: 10.1093/fampra/cmg417, available online at www.fampra.oupjournals.org

Patient expectations at a multicultural out-patient clinic in Switzerland

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Junod Perron N, Secretan F, Vannotti M, Pecoud A and Favrat B. Patient expectations at a multicultural out-patient clinic in Switzerland. *Family Practice* 2003; **20:** 428–433.

Background. Recognizing patient expectation is considered as an important objective for primary care physicians. A number of studies suggest that failure to identify patient expectations can lead to patient dissatisfaction with care, lack of compliance and inappropriate use of medical resources. It has been suggested that identifying patient expectations in multicultural contexts can be especially challenging.

Objectives. The aim of the study was to compare health care expectations of Swiss and immigrant patients attending the out-patient clinic of a Swiss university hospital and to assess physicians' ability to identify their patients' expectations.

Methods. Over a 3-month period, all patients attending the out-patient clinic at a Swiss university hospital were requested to complete pre-consultation surveys. Their physicians were requested to complete post-consultation surveys. Outcome measures were patients' self-rated health, resort to prior home treatment, patients' expectations of the consultation, physicians' perception of their patients' expectations and agreement between patients and physicians.

Results. We analysed 343 questionnaires completed by patients prior to their consultation (> 50% immigrants) and 333 questionnaires completed by their physicians after the consultation. Most expectations were shared by all patients. Physicians had inaccurate perceptions of their patients' expectations, regardless of patients' origin.

Conclusions. Our study found no evidence that immigrant patients' expectations differed from those of Swiss patients, nor that physicians had more difficulty identifying expectations of immigrant patients. However, physicians in our study were generally poor at identifying patients' expectations, and therefore inter-group differences may be difficult to detect. Our results point to the need to strengthen physicians' general communication skills which should then serve as a foundation for more specific, cross-cultural communication training.

Keywords. Immigrants, patients' expectations, physicians' perception.

Introduction

Recognizing patient expectations is a major element of an effective doctor–patient relationship in ambulatory care.[1] A number of studies suggest that failure to identify patient expectations can lead to dissatisfaction, lack of compliance and inappropriate use of medical resources.[2–4] It has been suggested that identifying patient expectations in multicultural contexts can be especially challenging.[5,6] Although physicians are increasingly in contact with patients from diverse social and cultural backgrounds, little is known of how patient diversity affects physicians' ability to identify patients' expectations.

In our university out-patient clinic, primary care is provided to a very heterogeneous population of patients, including Swiss nationals and immigrants mainly from southern Europe, the former Yugoslavia and Africa. Unlike other countries, our physicians receive little training in cultural competence and are ill-prepared to care for such diverse patient populations.[7–9] A number of studies have suggested that physicians consider immigrant patients to be more demanding, difficult to understand and to have greater expectations than native-born patients.[10–12] It is often assumed that communication may improve when patients and physicians share some common background.[13] Anecdotal evidence from our clinic suggested similar experiences and attitudes among physicians.

Received 30 September 2002; Revised 25 February 2003; Accepted 28 March 2003.
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The aim of the study was to identify and compare expectations of Swiss and immigrant patients attending the out-patient clinic of a Swiss university hospital and to assess physicians' ability to identify their patient expectations. We hypothesized that physicians would be less accurate in identifying the expectations of immigrant patients, due to language and cultural barriers. We were mostly interested in physicians' assessment of their immigrant patients' expectations, since difficulties were often reported by our physicians in such a field.

Methods

The study was carried out at the out-patient clinic of the Internal Medicine Department of the University Hospital of Lausanne, Switzerland, which provides medical care with or without appointment on a first-come first-served basis. Pre-consultation patient surveys and matched post-consultation physician surveys were administered over a 3-month period. Eligible subjects were all French-, Serbo-croat- or Albanian-speaking adult patients over 18 years old coming to the clinic without an appointment. They were asked to answer a self-administered questionnaire available in French, Serbo-Croat and Albanian in the waiting room before the medical visit. The Albanian and Serbo-Croat versions were translated and back-translated by two independent translators working in the clinic. Ninety-six percent of patients who were approached (343 out of 358) agreed to participate in the study. We defined patient expectations as desires, wishes or entitlements.[14] Expectations about the coming consultation (listening, reassuring, physical examination, diagnosis, investigation, referral to a specialist, counselling, prognosis, medication and sick leave) were adapted from existing scales and scored on a 5-point scale (not important to very important).[15,16] Immigrants were defined as patients reporting a country of origin other than Switzerland. We also included questions about health status, presenting symptoms, prior home treatment and socio-demographic data. We conducted a pilot study among 15 patients to make sure that questions were understandable and relevant. Fifteen physicians, all in general internal medicine post-graduate training, between 28 and 35 years of age and of Swiss origin, completed questionnaires about perceptions of their patients' expectations at the end of the medical consultation. The ethical committee of the University Hospital of Lausanne approved the study protocol.

Differences in Swiss versus immigrant patients' socio-demographic data, health status and prior use of home treatment were tested by the chi-square test; *P*-values $<5\%$ were considered to be statistically significant. To analyse socio-demographic and health data, we further classified immigrant patients into four groups based on common geographical entities and their representation rate in the study. In order to test differences in Swiss versus immigrant patients' expectations, we carried out a stepwise logistic regression using age, sex, marital status, education, subjective health assessment and presenting symptom as independent variables. Findings among immigrant patients were then adjusted to length of stay in Switzerland and French proficiency. Agreement between patients' expectations and their perception by physicians was evaluated using the kappa coefficient which measures the degree of agreement between two variables that occurs beyond that expected by chance. The 5-point scale scoring of expectations was reduced into two categories (i) important to very important; and (ii) not, a little or moderately important. We used the SPSS software 10.0 for the analysis.

Results

Three hundred and forty-three patient questionnaires and 333 physician questionnaires were analysed. There were 48.7% (n = 167) Swiss and 51.3% (n = 176) non-Swiss patients. Patients came mainly from western Europe (n = 50), the former Yugoslavia (n = 37) and Africa (n = 62). Among western Europeans, 75% were from Italy, Spain or Portugal. African patients mainly originated from Congo, Angola, Ethiopia, Eritrea and Somalia. Patients from the former Yugoslavia came mostly from Kosovo and Bosnia. Mean age was 39 ± 17 years for Swiss patients and 33 ± 11 years for immigrant patients. Socio-demographic data are shown in Table 1: patients from the former Yugoslavia were more often married, male and asylum seekers, and Africans had a higher level of education. There were no statistical differences in the type, occurrence and duration of symptoms, regularity of medical follow-up, previous home treatment and subjective degree of urgency to seek care among the five groups of patients (Table 2). However, patients from the former Yugoslavia and from Europe tended to have a more negative health self-assessment.

Patients' expectations and physicians' perceptions are shown in Table 3. As indicated, most patients hoped for reassurance, physical examination, diagnosis, counselling, information about prognosis and medication. More technical expectations such as desire for investigations and referral to a specialist were present, but to a lesser extent. The multivariate analysis showed that more immigrant patients asked for reassurance [odds ratio (OR) 3.3, 95% confidence interval (CI) 1.9–5.6] and referral to a specialist (OR 1.8, 95% CI 1.2–2.9). However, when adjusted for French proficiency and length of stay in Switzerland, such differences faded out.

Finally, we found poor agreement between patients' expectations and their physician's perception, regardless of patients' origin (highest kappa = 0.36). Physicians both failed to identify patients' expectations (underestimation) and erroneously identified expectations where they were absent (overestimation). Underestimation and

TABLE 1 *Socio-demographic data of Swiss and immigrant patients*

Socio-demographic data	Swiss % (*n*)	Western European % (*n*)	Ex-Yugoslav % (*n*)	African % (*n*)	Other % (*n*)	*P*
Sex						0.017
Male	46.7 (78)	34.0 (17)	64.9 (24)	51.6 (32)	66.7 (18)	
Female	53.3 (89)	66.0 (33)	35.1 (13)	48.4 (30)	33.3 (9)	
Civil state						<0.01
Single	52.1 (87)	44.0 (22)	37.8 (14)	38.7 (24)	51.9 (14)	
Married	24.6 (41)	42.0 (21)	59.5 (22)	53.2 (33)	48.1 (13)	
Divorced/separated/widowed	23.4 (39)	14.0 (7)	2.7 (1)	8.1 (5)	0.0 (0)	
Education						<0.01
⩽9 years	35.8 (58)	38.8 (19)	43.2 (16)	14.8 (9)	26.9 (7)	
10–13 years	26.4 (43)	28.6 (14)	43.2 (16)	55.7 (34)	26.9 (7)	
>13 years	38.0 (62)	32.7 (16)	13.5 (5)	29.5 (18)	46.2 (12)	
Legal status						<0.01
Long-term resident	–	100 (50)	38.9 (14)	67.2 (41)	81.5 (22)	
Asylum seeker	–	–	61.1 (22)	32.8 (20)	18.5 (5)	
Length of stay in Switzerland						<0.01
⩽5 years	–	18.2 (8)	64.5 (20)	46.4 (26)	40.0 (10)	
6–10 years	–	20.5 (9)	25.8 (8)	41.1 (23)	36.0 (9)	
>10 years	–	61.4 (27)	9.7 (3)	12.5 (7)	24.0 (6)	
French proficiency						<0.01
Good	92.8 (155)	66.0 (33)	24.3 (9)	54.8 (34)	40.7 (11)	
Average	7.2 (12)	32.0 (16)	35.1 (13)	40.3 (25)	55.6 (15)	
Poor	–	2.0 (1)	40.5 (15)	4.8 (3)	3.7 (1)	

TABLE 2 *Health status and behaviour of Swiss and immigrant patients*

Health status	Swiss % (*n*)	Western European % (*n*)	Ex-Yugoslav % (*n*)	African % (*n*)	Other % (*n*)	*P*
Do you have a regular physician?						0.259
Yes	42.5 (71)	46.0 (23)	40.5 (15)	27.4 (17)	40.7 (11)	
No	57.5 (96)	54.0 (27)	59.5 (22)	72.6 (45)	59.3 (16)	
What problem brings you here today?						0.841
Abdominal	21.0 (35)	16.0 (8)	21.6 (8)	19.4 (12)	18.5 (5)	
Ear–nose–throat or lung	20.4 (34)	24.0 (12)	24.3 (9)	29.0 (18)	29.6 (8)	
Musculo-skeletal	21.0 (35)	24.0 (12)	18.9 (7)	16.1 (10)	22.2 (6)	
Other	37.6 (63)	36.0 (18)	35.2 (13)	35.5 (22)	29.7 (8)	
For how long have you had the problem?						0.359
Days	59.4 (98)	49.0 (24)	40.5 (15)	54.8 (34)	44.4 (12)	
Weeks	23.0 (38)	30.6 (15)	24.3 (9)	25.8 (16)	26.9 (8)	
Months	17.6 (29)	20.4 (10)	35.1 (13)	19.4 (12)	25.9 (7)	
How do you assess your health?						<0.01
Good	55.1 (92)	34.0 (17)	24.3 (9)	43.5 (27)	40.7 (11)	
Average	39.5 (66)	34.0 (17)	40.5 (15)	45.2 (28)	44.4 (12)	
Poor	5.4 (9)	32.0 (16)	35.1 (13)	11.3 (7)	14.8 (4)	
Did you try to treat yourself at home before coming?						0.299
Yes	64.7 (108)	62.0 (31)	45.9 (17)	59.7 (37)	66.7 (18)	
No	35.3 (59)	38.0 (19)	54.1 (20)	40.3 (25)	33.3 (9)	
How urgent do you think your problem is?						0.164
Low	18.0 (30)	12.0 (6)	5.4 (2)	8.1 (5)	7.4 (2)	
Average	56.9 (95)	58.0 (29)	59.5 (22)	50.0 (31)	59.3 (16)	
High	25.1 (42)	30.0 (15)	35.1 (13)	41.9 (26)	33.3 (9)	

TABLE 3 *Expectations' rate among Swiss and immigrant patients, rate of physicians' perception of their patients' expectations, agreement between patients and physicians*

Expectations	Swiss		Kappa[a]	Immigrants		Kappa[a]
	Patients % (*n*)	Physicians % (*n*)		Patients % (*n*)	Physicians % (*n*)	
Diagnosis	90.4 (150)	82.9 (136)	–0.033	87.9 (153)	81.1 (137)	0.128
Listening	89.2 (148)	81.1 (133)	0.144	89.7 (156)	76.9 (130)	0.075
Physical examination	80.7 (134)	85.4 (140)	0.248	83.9 (146)	86.4 (146)	–0.031
Counselling	75.8 (125)	67.7 (111)	0.050	79.9 (139)	64.5 (109)	0.045
Prognosis	66.7 (110)	67.1 (110)	0.072	70.5 (122)	62.5 (105)	0.093
Reassurance	62.7 (104)	88.4 (145)	0.057	84.7 (145)	81.1 (137)	0.113
Medication	59.1 (97)	64.4 (105)	0.166	69.4 (120)	73.1 (122)	–0.066
Investigations	45.2 (75)	36.0 (59)	0.176	51.7 (90)	38.1 (64)	0.072
Referral to specialist	30.3 (50)	10.5 (17)	0.107	43.7 (76)	14.8 (25)	0.071
Sick leave	14.1 (23)	16.6 (27)	0.361	26.4 (46)	25.6 (43)	0.265

[a] Kappa coefficient measures the degree of agreement that occurs beyond that expected by chance between two ratings of the same phenomenon.

overestimation of patients' expectations by physicians are shown in Table 4. The main areas where physicians systematically underestimated both Swiss and immigrant patients' expectations were counselling, investigations and referrals to a specialist. They also underestimated immigrant patients' expectations of information for prognosis. Overestimation of patients' expectations occurred principally with regards to reassurance, prognosis and medication among immigrant patients.

Discussion

Over the last several decades, the importance of eliciting patients' perspectives on illness and health care expectations has been given increasing attention by both researchers and clinicians.[3,14,16–19] In addition, numerous studies have indicated that race, ethnicity, culture and origin frequently affect the quality of the patient–physician relationship, health care outcomes and patient satisfaction.[20–23] However, we know little about the impact of patient origin on physicians' ability to identify patients' expectations.

Our study produces three interesting results. First, most patients, whatever their origin, share similar expectations of health care. These include diagnosis, listening, physical examination and counselling. Similar rates are reported in other studies, with special value attributed to diagnostic and prognostic information.[2,3,16] Two specific expectations which were expressed more by immigrant patients, reassurance and referral to a specialist, were no longer present when such findings were adjusted for length of stay and French proficiency, two important factors of integration. Although physicians may often feel that immigrant patients have unrealistic health care expectations, we did not observe this in our study. It is of course possible that the structured nature of the design did not allow for patients to disclose their health care expectations fully.

Secondly, in our study, immigrant patients do not consult more quickly than Swiss patients. They have a regular physician and self-treat before attending the doctor as often as Swiss patients. These findings are similar to those of other studies that observed that ethnic, minority groups and immigrant patients do not systematically make heavier demands on physicians or health systems, contrary to our physicians' assumptions.[11,24,25]

Thirdly, the physicians in our study have a poor awareness of their patients' expectations, regardless of patients' origin. Lack of agreement between patients' expectations and physicians' perceptions of patients' expectations has been observed in a number of settings,[16,26] but not, to our knowledge, in a multicultural out-patient setting such as ours. Physicians' underestimation of patients' desire for counselling, prognosis, medication, investigations and referral to a specialist is of concern. Although we did not collect information on patients' satisfaction with their consultations, several studies have shown that patient's satisfaction was negatively correlated with unmet expectations.[3,4,27,28] Since unrecognized and/or unfulfilled expectations have been shown to influence other health outcomes negatively, physicians should be better trained to elicit and acknowledge their patients' expectations.[14] Exploring the patients' ideas, feelings

TABLE 4 *Over- and underestimation of Swiss and immigrant patients' expectations by physicians*

Expectations	Perception by physicians			
	Swiss patients		Immigrant patients	
	Overestimation % (*n*)	Underestimation % (*n*)	Overestimation % (*n*)	Underestimation % (*n*)
Diagnosis	10.2 (17)	16.8 (28)	6.1 (10)	14.1 (23)
Listening	5.4 (9)	18.6 (31)	8.0 (13)	16.0 (26)
Physical examination	10.8 (18)	8.4 (14)	17.2 (28)	12.3 (20)
Counselling	11.4 (19)	27.5 (46)	15.4 (25)	23.5 (38)
Prognosis	16.4 (27)	24.8 (41)	20.4 (33)	19.8 (32)
Reassurance	11.4 (19)	15.1 (25)	31.3 (51)	4.9 (8)
Medication	18.3 (30)	15.9 (26)	28.1 (45)	22.5 (36)
Investigations	13.9 (23)	27.7 (46)	17.8 (29)	27.6 (45)
Referral to specialist	6.0 (10)	34.7 (58)	5.6 (9)	26.9 (43)
Sick leave	12.0 (20)	12.7 (21)	10.7 (17)	8.2 (13)

about illness and expectations towards the physician is a major component of patient-centred care and should help in establishing effective communication with the patient and serve as a base for negotiation, discussion and counselling.[29] However, determinants of satisfaction are multidimensional and not only related to the communication inside the consultation.[30,31] The fact that physicians tended to overestimate their patients' desire for medication has already been reported.[16,32,33] Since physicians' opinion about patients' expectations appears to be the strongest determinant for prescribing, such expectations should be explored more carefully in order to avoid unnecessary medication and cost.[32,33]

We expected physicians to perform better with Swiss patients than with immigrant patients because common language, race, ethnicity or culture appear to improve understanding and satisfaction between patients and physicians.[34–36] However, in our study, this was not the case. There are several possible explanations for these findings. A structured non-open-ended questionnaire may not be the best way to assess differences in expectations and perception of expectations in such a heterogeneous population. Kravitz *et al.*[37] reported in a US study that non-white patients reported more expectations by questionnaire and fewer by interview. In a walk-in clinic setting, physicians and patients generally are not well acquainted, and this may contribute to difficulties in identifying patients' expectations, regardless of their social or cultural characteristics.

Our study has limitations. First, we only looked at differences in expectations between Swiss and non-Swiss patients because we did not expect to obtain enough questionnaires to be able to define any specific social, cultural, racial or ethnic subgroups. Classifying such a heterogeneous population of patients into subgroups often is misleading because it may mask important variations relevant to expectations such as language, levels of acculturation, health beliefs, previous experience of illness and health care, etc.[38–40] Secondly, as already mentioned, asking patients about their expectations as well as submitting a structured questionnaire with closed-ended questions might have affected the patients' spontaneous response by inducing unified and/or increased expectations. Differences between Swiss and immigrant patients' expectations may have been undetected. Thirdly, we did not assess patients' satisfaction with the consultation nor health outcomes, and therefore are unable to evaluate the impact of unfulfilled expectations on such issues among both groups of patients.

We found that physicians at our clinic were poor in identifying their patients' expectations. As a number of anthropologists have observed, even when patients and physicians share some common socio-cultural background, important differences in expectations, concerns, meanings and values remain.[40] Our results point to the need to strengthen physicians' general communication skills, in addition to more specific, cross-cultural communication training.

Acknowledgements

The authors thank Bernard Burnand and Patricia Hudelson for their comments on an earlier version of this article.

References

[1] Strasser J. The doctor–patient relationship in general practice. *Med J Aust* 1992; **156:** 334–338.

[2] Ware JE, Davies AR. Behavioural consequences of consumer dissatisfaction with medical care. *Eval Program Plann* 1983; **6:** 291–297.

[3] Kravitz RL, Cope DW, Bhrany V, Leake B. Internal medicine patients' expectations for care during office visits. *J Gen Intern Med* 1994; **9:** 75–81.

[4] Jackson JL, Kroenke K. The effect of unmet expectations among adults presenting with physical symptoms. *Ann Intern Med* 2001; **134:** 889–897.

[5] Rothschild SK. Cross-cultural issues in primary care medicine. *Dis Mon* 1998; **44:** 293–319.

[6] Mull JD. Cross-cultural communication in the physician's office. *West J Med* 1993; **159:** 609–613.

[7] Bobo L, Womeodu RJ, Knox AL. Principles of intercultural medicine in an internal medicine program. *Am J Med Sci* 1991; **302:** 244–248.

[8] Chugh U, Dillam E, Kurtz SM, Lockyer J, Parboosingh J. Multicultural issues in medical curriculum: implications for Canadian physicians. *Med Teach* 1993; **15:** 83–91.

[9] Rubenstein HL, O'Connor BB, Nieman LZ, Gracely EJ. Introducing students to the role of folk and popular health belief systems in patient care. *Acad Med* 1992; **67:** 566–568.

[10] Tocher TM, Larson EB. Do physicians spend more time with non-English-speaking patients? *J Gen Intern Med* 1999; **14:** 303–309.

[11] Favrat B, Francillon C, Burnand B, Pecoud A, Decrey H. La satisfaction du médecin lors d'une première consultation diffère-t-elle selon l'origine du patient? *Schweiz Med Wochenschr* 1994; **124:** 1955–1958.

[12] Brod M, Heurtin-Roberts S. Older Russian émigrés and medical care. *West J Med* 1992; **157:** 333–336.

[13] Lin EHB. Intraethnic characteristics and the patient–physician interaction: cultural blind spot syndrome. *J Fam Pract* 1983; **16:** 91–98.

[14] Kravitz RL. Measuring patients' expectations and requests. *Ann Intern Med* 2001; **134:** 881–888.

[15] Good MD, Good BJ, Nassi AJ. Patient requests in primary health care settings: development and validation of a research instrument. *J Behav Med* 1983**; 6:** 151–168.

[16] Sanchez-Menegay C, Stalder H. Do physicians take into account patients' expectations? *J Gen Intern Med* 1994; **9:** 404–406.

[17] Kleinman A. *Patients and Healers in the Context of Culture: An Exploration of Borderland Between Anthropology, Medicine and Psychiatry*. Berkeley: University of California; 1980.

[18] Sanchez-Menegay C, Hudes ES, Cummings SR. Patient expectations and satisfaction with medical care for upper respiratory infections. *J Gen Intern Med* 1992; **7:** 432–434.

[19] Marple RL, Kroenke K, Lucey CR, Wilder J, Lucas CA. Concerns and expectations in patients presenting with physical complaints: frequency, physician perception and actions, and 2-week outcome. *Arch Intern Med* 1997; **157:** 1482–1488.

[20] Ferguson WJ, Candib LM. Culture, language and the doctor–patient relationship. *Fam Med* 2002; **34:** 353–361.

[21] Murray-Garcia JL, Selby JV, Schmittdiel J, Grumbach K, Quesenberry CP. Racial and ethnic differences in a patient survey: patients' values, ratings, and reports regarding physician primary care performance in a large health maintenance organisation. *Med Care* 2000; **38:** 300–310.

[22] Taira DA, Safran DG, Seto TB *et al*. Do patient assessments of primary care differ by patient ethnicity? *Health Serv Res* 2001; **36:** 1059–1071.

[23] Chin MH, Humikowski CA. When is risk stratification by race or ethnicity justified in medical care? *Acad Med* 2002; **77:** 202–208.

[24] Carne S. The immigrant patient in general practice. *Proc R Soc Med* 1970; **63:** 629–631.

[25] Gillam SJ. Sociocultural differences in patients' expectations at consultations for upper respiratory tract infection. *J R Coll Gen Pract* 1987; **37:** 205–206.

[26] Anderson LA. Zimmermann MA. Patient and physician perceptions of their relationship and patient satisfaction: a study of chronic disease management. *Patient Educ Couns* 1993; **20:** 27–36.

[27] Joos SK, Hickam DH, Borders LM. Patients' desires and satisfaction in general medicine clinics. *Public Health Rep* 1993; **108:** 751–759.

[28] Williams S, Weinman J, Dale J, Newman S. Patient expectations: what do primary care patients want from the GP and how far does meeting expectations affect patient satisfaction. *Fam Pract* 1995: **12:** 193–201.

[29] Stewart M, Brown J, Weston W, Mc Whinney I, Mc William C, Freeman T. *Patient-centred Medicine: Transforming the Clinical Method*. London: Sage; 1995.

[30] Weiss GL. Patient satisfaction with primary medical care. *Med Care* 1988; **26:** 383–392.

[31] Seibert JH, Brien JS, Maaske BL *et al*. Assessing patient satisfaction across the continuum of ambulatory care: a revalidation and validation of care-specific surveys. *J Ambulatory Care Manag* 1999; **22:** 9–26.

[32] Cockburn J, Pit S. Prescribing behaviour in clinical practice: patients' expectations and doctors' perceptions of patients' expectations —a questionnaire study. *Br Med J* 1997; **315:** 520–523.

[33] Britten Nicky, Ukoumunne O. The influence of patients' hopes of receiving a prescription on doctors' perceptions and the decision to prescribe: a questionnaire survey. *Br Med J* 1997; **315:** 1506–1510.

[34] Ahmad WI, Kernohan EE, Baker MR. Patients' choice of general practitioner: importance of patients' and doctors' sex and ethnicity. *Br J Gen Pract* 1991; **41:** 330–331.

[35] Saha S, Taggart SH, Koepsell TD, Bindman AB. Patient–physician racial concordance and the perceived quality and use of health care. *Arch Intern Med* 1999; **159:** 997–1004.

[36] Cooper-Patrick L, Gallo JJ, Gonzales JJ *et al*. Race, gender and partnership in the patient–physician relationship. *J Am Med Assoc* 1999; **283:** 583–589.

[37] Kravitz RL, Callahan EJ, Azari R, Antonius D, Lewis CE. Assessing patients' expectations in ambulatory medical practice. Does the measurement approach make a difference? *J Gen Intern Med* 1997; **12:** 67–72.

[38] Carillo JE, Green AR, Betancourt JR. Cross-cultural primary care: a patient-based approach. *Ann Intern Med* 1990; **130:** 829–834.

[39] Senior PA, Bhopal R. Ethnicity as a variable in epidemiological research. *Br Med J* 1994; **309:** 327–330.

[40] Bhopal R. Is research into ethnicity and health racist, unsound, or important science? *Br Med J* 1997; **314:** 1751–1756.