Determinants of patient satisfaction with physician interaction: a cross-sectional survey at the Obafemi Awolowo University Health Centre, Ile-Ife, Nigeria

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Keywords: patient satisfaction; doctor-patient interaction; adherence intent; patient outcomes

Abstract

SA Fam Pract 2010;52(6):557-562

Background: Patient satisfaction influences the outcomes of the physician-patient encounter. Patient satisfaction has become a significant health care outcome and a useful indicator of the quality of care. The aim of the study was to assess the level of satisfaction among Obafemi Awolowo University Health Centre attendees in relation to physician-patient interaction and ascertain the relationship between the different aspects of physician-patient interaction, patient satisfaction and adherence intent.

Methods: Demographic information and information on patients' feelings about their doctors was collected from 300 consenting patients in a cross-sectional survey, using an adapted Medical Interview Satisfaction Scale self-administered questionnaire. Data were analysed with SPSS version 11. Logistic regression was conducted to identify the factors predicting patient satisfaction and adherence intent.

Results: Of the 300 patients studied, 63.3% were generally satisfied with their physician-patient interaction. Nineteen per cent of patients were uncertain of their level of satisfaction. Patient satisfaction was positively associated with adherence intent. Patient confidence in the doctor and good communication skills and information provision on the part of the doctor predicted patient satisfaction, while patient confidence in the doctor and information provision by the doctor predicted adherence intent.

Conclusions: A fifth of the study subjects were dissatisfied with their doctor-patient relationship. This study suggests the need for primary care physicians to be aware of the important place of interpersonal skills development in the application of medical knowledge and expertise in the provision of health care.

Ⓟ **Peer reviewed. (Submitted: 2010-03-01, Accepted: 2010-04-07).**

Background

Only a minority of persons who perceive themselves to be sick visit their doctor.[1–4] Previous experience with a doctor seems crucial to whether or not people choose to consult a doctor.[5] For every patient, a medical consultation forms part of a continuing process of coping with illness. Patients have expectations when they visit their doctors; the degree to which these expectations are met influences patients' perception of the quality of that experience and, thus, patient satisfaction, which is defined as the nature of an individual's experience compared with his or her expectations.[6]

There is a strong positive association between a patient's consultation experience and actual health outcomes.[7–9] There is a positive correlation between effective physician-patient interaction and patient adherence to scheduled appointments and other physician instructions.[10] Improvement in physician-patient communication can result in better patient care and help patients adapt to illness and treatment.[11]

In health care provision all over the world, client satisfaction is gaining more and more importance. Outcomes as assessed from the patient's perspective have been accepted as valid, important and standard indicators of quality of care.[12,13] Patients often fail to disclose their problems and anxieties when they are not satisfied with the doctor's attitude. Doctors are often unaware of whether or not patients are satisfied with a consultation because, whatever their views, patients tend to retain a deferential attitude in the medical encounter. The way patients feel about their physician-patient interaction affects future health-seeking behaviour.[14] Problems in physician-patient interaction,

especially communication barriers, are common; these adversely affect patient management.[15] Reports from the United States suggest that over 90% of medical litigation is prompted by patients' perception that the doctor did not care about them.[16,17] While litigation is uncommon in the Nigerian environment, dissatisfied patients suffer disadvantages from recourse to quacks, self-medication or delays in seeking medical assistance.

A high satisfaction with physician-patient interaction is associated with increased adherence, better continuity of care, client participation in important treatment decisions and even beneficial/positive adjustment.[12] It influences promptness in seeking help and increases patients' understanding and retention of information.[18] Communication skills, often not sufficiently emphasised during medical training, make a huge difference in patient satisfaction and health outcomes.[19,20] Communication effectiveness determines the usefulness and applicability of all other clinical activities, skills and expertise, hence patient adherence.[21–23] Good communication skills are essential if doctors are to gain their patients' trust. The clinical interview is the most common clinical procedure a physician conducts. The aim of the study, therefore, was to assess the factors affecting satisfaction and adherence intent among patients attending Obafemi Awolowo University (OAU) Health Centre Out Patients Department (OPD) in relation to physician-patient interaction.

Methods

The OAU Health Centre provides both primary and secondary care to students, staff and dependants. The university community has a total population of 50 000, of which 22 000 are students. About 92% of this population is literate, compared to about a 60% literacy rate in the Nigerian population. The study was a cross-sectional descriptive survey of 300 consecutive consenting literate patients, 18 years and older, who had consulted a doctor in the facility. A pretested, self-administered structured questionnaire adapted from the Medical Interview Satisfaction Scale (MISS-21)[24] and consisting of statements describing patients' feelings about their doctor, to which patients indicated their level of agreement on a five-point Likert scale of responses (see appendix), was used. The MISS-21 had been used in similar studies, but we have no evidence of its use in Africa.[25–28] The original MISS-21 was pretested and the items were subsequently modified by using more locally appropriate expressions conveying the same message and by reducing the seven-point Likert scale to a five-point scale. Twenty questions explored the four aspects of physician-patient interaction, namely information provision (four questions), the doctor's communication skills (nine questions), consulting time (one question) and the patient's confidence in the doctor (six questions). One question explored the adherence intent of the patient, the immediate outcome of the consultation. Scores 1–5 were assigned to the responses, such that higher scores indicated more positive responses. Thus, for favourably worded items, we used strongly agree = 5; agree = 4; uncertain = 3; disagree = 2; and strongly disagree =1, while for unfavourably worded items, we used strongly agree = 1; agree = 2; uncertain = 3; disagree = 4; and strongly disagree = 5. The respondents' overall and subscale scores were added together and the mean subscale scores were determined.

In addition to the MISS-21, the respondents were asked to indicate their overall levels of satisfaction on an ordinal scale of highly satisfied, satisfied, uncertain, dissatisfied and highly dissatisfied, as well as to assign a score to their level of satisfaction on a scale of one (very poor) to 10 (excellent) for physician-patient interaction. These were correlated with the MISS-21 scores.

The information was fed into a personal computer, using SPSS software version 11.0. Simple descriptive and inferential statistics were performed to demonstrate the factors associated with patient satisfaction and adherence intent in relation to physician-patient interaction. Logistic regression was performed to identify the significant predictors of both parameters. A p-value < 0.05 was adopted for statistical significance.

Results

The majority of the 300 respondents were Christian (80.0%), single (83.3%), men (80.0%), students (78.3%) and below 25 years of age (66.3%).

As shown in Figure 1, 63.3% of all respondents were satisfied with their physician-patient interaction. Table I shows that mean satisfaction scores were significantly higher among students and unmarried respondents compared with non-students and married respondents. Other sociodemographic parameters of age, gender, religion and educational level did not significantly influence patient satisfaction scores. Higher mean subscale scores were associated with higher levels of satisfaction, as shown in Figure 2; this was statistically significant for all subscales ($p < 0.001$), suggesting that these aspects of doctor-patient interaction affected patients' satisfaction. In Table II, multivariate analysis shows that the patient's confidence in the doctor, the patient's perception about the doctor's communication skills and the patient's perception about information provision by the doctor predicted the respondent's satisfaction in relation to physician-patient interaction.

Figure 1: Proportion of respondents by level of satisfaction

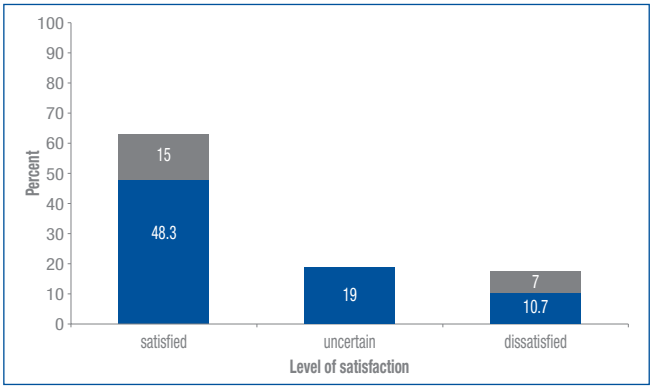

Figure 2: Mean subscale scores by respondents' satisfaction

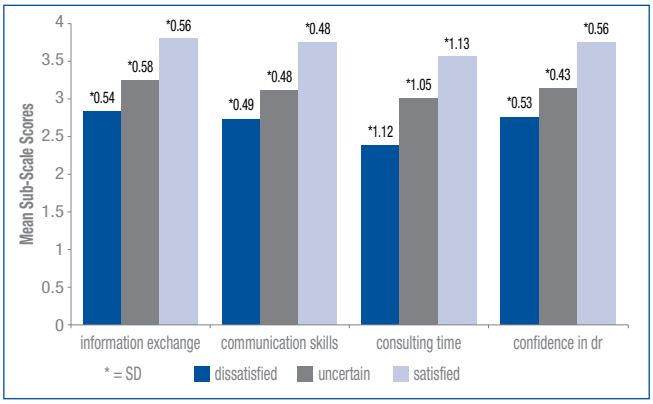

Table I: Mean satisfaction score by student and marital status

	Satisfaction score			T	P
	n	mean	SD		
Student status					
Student	235	6.4	2.25	4.63	0.032
Non-student	65	5.7	2.19		
Marital status					
Single	239	6.4	2.29	5.6	0.019
Married	58	5.5	2.06		

Table II: Predictors of patient satisfaction in the study population

Doctor-patient interaction subscale	OR	95.0% CI	Comment
Doctor's communication skills	5.097	2.159–12.034	Significant
Patient's confidence in doctor	2.591	1.273–5.272	Significant
Information provision by doctor	2.478	1.289–4.766	Significant
Consulting time	1.285	0.929–1.778	Not significant

CI = Confidence interval OR = Odds ratio

Table III: Distribution of respondents by adherence intent within levels of satisfaction

Adherence intent	Level of satisfaction							
	Dissatisfied		Uncertain		Satisfied		Total	
	Freq	%	Freq	%	Freq	%	Freq	%
No intent	13	24.5	2	3.5	3	1.6	18	6.0
Uncertain	10	18.9	16	28.1	8	4.2	34	11.3
Intent	30	56.6	39	68.4	179	94.2	248	82.7
Total	53	100.0	57	100.0	190	100.0	300	100

$X^2 = 71.17$ df = 4 P < 0.001

Figure 3: Mean adherence intent score by respondents' satisfaction

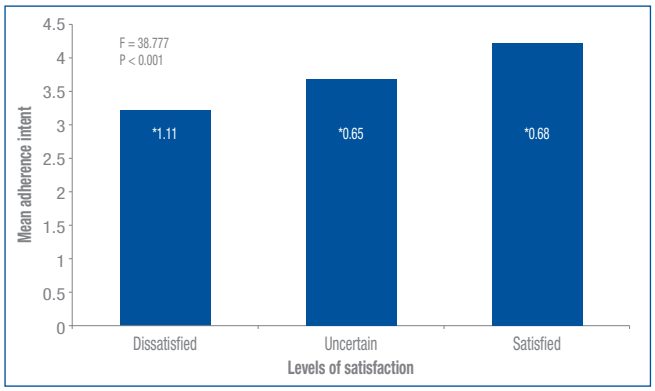

Figure 4: Mean MISS scores by subscale and respondents' adherence intent

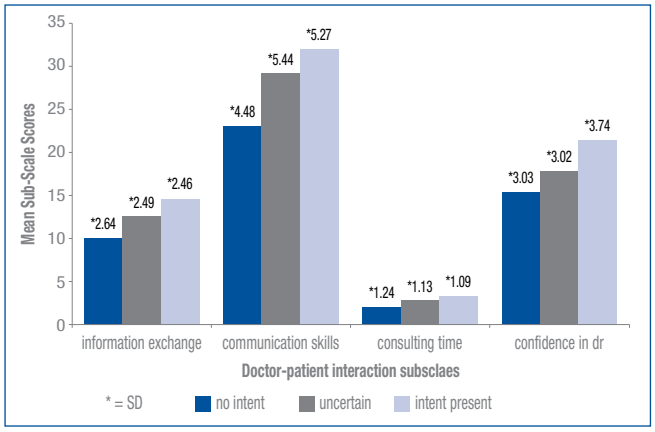

Table IV: Predictors of patient adherence intent in the study population

Doctor-patient interaction subscale	OR	95.0% CI	Comment
Patient's confidence in doctor	5.003	2.278–10.988	Sig.
Information provision by doctor	2.646	1.329–5.270	Sig.
Doctor's communication skills	0.674	0.283–1.605	Not sig.
Consulting time	0.989	0.694–1.411	Not sig.

CI = Confidence interval
OR = Odds ratio

Figure 3 shows that satisfied patients had the highest mean score for adherence intent while dissatisfied patients had the lowest scores. This was shown to be statistically significant ($p < 0.0004$), indicating that satisfied patients were more likely to adhere to the doctor's advice. Table III also shows that 56.6% of dissatisfied patients compared with 94.2% of satisfied patients intended to follow the doctor's advice. This was statistically highly significant ($p < 0.001$). Figure 4 also shows that the highest mean MISS scores for each subscale were consistently found in respondents who intended to follow the physician's advice ($p < 0.0004$). In Table IV, multivariate analysis also shows that the patient's confidence in the doctor and the patient's perception about the doctor's information provision were the two main predictors of adherence intent in relation to physician-patient interaction.

Discussion

In this study, 63.3% of our respondents were generally satisfied with their physician-patient interaction. This finding is consistent with the physician-patient interaction satisfaction rates of 74% reported by Singh et al among patients attending primary health care facilities in Trinidad and Tobago,[29] and 81% by Van Uden et al among after-hours primary health care clients in the Netherlands.[30] Nineteen per cent of our respondents were uncertain of their level of satisfaction. An improvement in the quality of doctor-patient interaction is likely to move this group across to the satisfied group of patients.

In this study, the age, gender, level of education and religion of our respondents were found to have made no significant contribution to patients' level of satisfaction. This is in agreement with the findings of Nazim Turhal et al at Marmora University, Turkey, in 2002.[31] Shilling et al, however, reported that patient satisfaction with physician-patient interaction was positively associated with the patient's age in the United Kingdom.[32] In the present study, marital status and student status significantly influenced patients' satisfaction level, students and single subjects being more satisfied with their physician-patient interaction compared with non-students and married respondents respectively. It is, however, noted that students constituted 78% of our study population and that the majority of students were single.

Four subscales of physician-patient interaction that were considered in this study, namely the doctor's communication skills, the patient's confidence in the doctor, provision of information by the doctor and consulting time, positively and significantly contributed to patients' level of satisfaction ($p < 0.001$). These findings are in agreement with those of previous studies.[33] In a study done by Schattner in Israel, patience, attentiveness and information provision were among the top five qualities desired by patients in a physician.[34] In a Mexican study, Cornstock et al. reported a significant positive relationship between information provision by the doctor and patient satisfaction.[35] Williams and Calnan, in a retrospective United Kingdom study, found that information provision and the patient's perception that enough time was spent with the doctor significantly and positively influenced patient satisfaction.[36] Studies have shown that a friendly pattern of physician communication was associated with high levels of satisfaction.[37–39] These findings corroborate the findings of this study. In our study, patients who felt that they had had enough time with the doctor were found to be more satisfied. This agrees with the findings of Williams and Calnan[36] that patient satisfaction is positively related to time spent on health education, information clarification, physical examination and discussion of treatment effects.[36,40] A very important finding in this study was that the patient's confidence in the doctor significantly contributed to overall satisfaction levels, which is consistent with the findings of Williams et al.[33] Our findings that information provision, the patient's confidence in the doctor and the doctor's communication skills predicted patient satisfaction and, to a large extent, patients' adherence emphasise, among other things, that good interpersonal/communication skills are essential to gain a patient's trust, in agreement with the findings of other researchers.[15,41–43] Our findings that information provision, the patient's confidence in the doctor and the doctor's communication skills predicted patient satisfaction and, to a large extent, patients' adherence emphasise, among other things, that good interpersonal/communication skills are essential to gain a patient's trust, in agreement with the findings of other researchers.15,41–43

In the present study, a very strong direct relationship has been established between patients' experience in the physician-patient encounter, patients' satisfaction levels and patients' intent to follow medical advice as satisfied patients were more likely to adhere to the doctor's advice and patients with adherence intent had higher satisfaction levels. These findings have been corroborated by other workers.[13,25,29,44]

Conclusions

About two-thirds of patients attending the OAU Health Centre OPD were generally satisfied with their physician-patient interaction.

In this study, the patient's confidence in the doctor, information provision by the doctor and the doctor's communication skills predicted patient satisfaction and adherence. This shows the importance of the doctor's role in influencing patient satisfaction, a direct determinant of patient adherence to the physician's advice and, consequently, favourable health outcomes. Doctors have the means, namely effective physician-patient interaction, to influence the outcome of the medical consultation. Thus doctors need to be aware of the importance of good interpersonal skills in the application of medical knowledge and expertise in the provision of health care.

Ethical issues

Free and informed consent was obtained from patients included in this study.

Competing interests

The authors have no conflicts of interest concerning the work reported in this paper.

APPENDIX 1

SATISFACTION WITH DOCTOR PATIENT INTERACTION AT OAU HEALTH CENTRE

We are conducting a project to determine the level of satisfaction of patients who attend this health centre with the interaction between themselves and the doctors they saw. Please feel free, be assured that none of your responses can be traced back to you.

SECTION A

Fill in your responses.

1. Age _____ 2. Sex _____ 3. Religion _____

4. Marital status _____ 4. Occupation _____ 5. Level of Education _____

SECTION B

The following are some things people say about the doctor. Please read each one carefully, keeping in mind your experience with the doctor who attended to you. We are interested in your feelings, good and bad, about the interaction you had.

How strongly do you **AGREE** or **DISAGREE** with each of the following statements? Circle **one** number on each line.

	STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE
I understand my illness better after seeing the doctor. (IP)	5	4	3	2	1
I had enough time with the doctor. (CT)	5	4	3	2	1
The doctor was good at explaining the reason for my ill health. (CS)	5	4	3	2	1
The doctor spoke politely to me. (CS)	5	4	3	2	1
The doctor gave me all the information I was expecting to receive about my health. (IP)	5	4	3	2	1
The doctor gave me a chance to say or ask all I wanted to. (CS)	5	4	3	2	1
I did not understand what the doctor asked me to do. (IP)	1	2	3	4	5
The doctor seemed interested in me as a person and not just my illness. (CS)	5	4	3	2	1
The doctor told me how to care for my condition. (IP)	5	4	3	2	1
The doctor greeted me before addressing my complaints. (CS)	5	4	3	2	1
I felt comfortable talking to the doctor. (PC)	5	4	3	2	1
The doctor did not use any words that I did not understand. (CS)	5	4	3	2	1
I could freely talk to the doctor about my private issues. (PC)	5	4	3	2	1
The doctor ignored some of the things I said. (CS)	1	2	3	4	5
I think the doctor's advice is appropriate for my situation. (PC)	5	4	3	2	1
The doctor was not friendly to me. (CS)	1	2	3	4	5
The doctor seemed to know what to do for my problem. (PC)	5	4	3	2	1
The doctor paid enough attention to my privacy. (PC)	5	4	3	2	1
The doctor listened patiently to me. (CS)	5	4	3	2	1
I intend to follow the doctor's advice. (CI)	5	4	3	2	1
The doctor did not relieve my worries about my illness. (PC)	1	2	3	4	5
All things considered, I am satisfied with the interaction between me and the doctor.	5	4	3	2	1

Score on a scale of 1 – 10 (1 = very poor, 10 = excellent) your level of satisfaction with the interaction between you and your doctor. _____

Thank you for participating.

IP = Information Provision by the Doctor; CT = Consulting Time; CS = Doctor's Communication Skills; PC = Patient's Confidence in the Doctor; CI = Compliance Intent.

References

1. Zola IK. Pathways to the doctor – from person to patient. Soc Sci Med 1973;7:677–89.
2. Blaxter M. Self-definition of health status and consulting rates in primary care. Q J Soc Affairs 1985;2:131–71.
3. Ingham JG, Muller PM. Self-referral to primary care: symptoms and social factors. J Psychosom Res 1986;1:49–56.
4. Egan KJ, Beaton R. Response to symptoms in healthy, low utilizers of the health care system. J Psychosom Res 1987;31:11–21.
5. Pendleton D. Doctor-patient communication – a review. In: Pendleton D, Hasler J eds. Doctor-patient communication. London: Academic Press Inc; 1983:5–53.
6. Pascoe GC. Patient satisfaction in primary health care: a literature review and analysis. Eval Program Plann 1983;6:185–210.
7. Ong LM, De Haes JC, Hoos AM, Lammers FB. Doctor-patient communication: a review of the literature. Soc Sci Med 1995;40:903–18.
8. Joos SK, Hickam DH, Gordon GH, Baker LH. Effect of physician communication intervention on patient care outcome. J Gen Intern Med 1996;11:147–55.
9. Wooley FR, Kane RL, Hughes CC, Wright DD. The effects of doctor-patient communication on satisfaction and outcome of care. Soc Sci Med 1978;12:123–28.
10. DiMatteo MR, Hays RD, Prince LM. Relationship of physicians' nonverbal communication skills to patient satisfaction, appointment, non-compliance and physician workload. Health Psychology 1986;5:581–94.
11. Lee SJ, Back AL, Block SD, Stewart SK. Enhancing physician-patient communication. Hematology Am Soc Hematol Educ Program 2002:464-83.2002.
12. Loblaw DA, Bezjak A, Bunston T. Development and testing of a visit-specific patient satisfaction questionnaire; the Princess Margaret Hospital satisfaction with doctor questionnaire. J Clin Oncol 1999;17:1931–8.
13. Covinsky KE, Bates CK, Davis RB, et al. Physicians' attitudes toward using patient reports to assess quality of care. Acad Med 1996;71:1353–6.
14. Costa R, Divina F. Doctor-patient relation. Available from www.cs.vu.nl/¬divina/ (Accessed 2003).
15. Steine S, Finset A, Laerum E. A new, brief questionnaire (PEQ) developed in primary health care for measuring patients' experience of interaction, emotion, and consultation outcome. Fam Pract 2001;18:410–8.
16. Beckman HB, Markakis KM, Suchman AL, Frankel RM. The doctor-patient relationship and malpractice: lessons from plaintiff depositions. Arch Intern Med 1994;154:1365–70.
17. Levinson W, Roter DL, Mullooly JP, Dull VT, Frankel RM. Physician-patient communication – the relationship with malpractice claims among primary care physicians and surgeons. JAMA 1997;227:553–9.
18. Barker DA, Shergill SS, Higginson I, et al. Patients' view towards care received from psychiatrists. Br J Psychiatry 1996;168:641–6.
19. Doyle BJ, Ware JE Jr. Physician conduct and other factors that affect consumer satisfaction with medical care. J Med Educ 1997;52:793–801.
20. Zeev BS. The structure of a hospital's image. Med Care 21 1983;21:943–54.
21. Kineey J, Bradshaw P, Ley P. Patient satisfaction and reported acceptance of advice in general practice. J R Coll Gen Pract 1975;25:558–66.
22. Ley P, Whitworth MA, Skillbeck CE, et al. Improving doctor-patient communication in general practice. J R Coll Gen Pract 1976;26:720–4.
23. Fitzpatrick R, Hopkins A. Patient's satisfaction with communication in neurological outpatient's clinics. J Psychosom Res 1981;25:329–34.
24. Meakin R, Weinman J. The 'Medical Interview Satisfaction Scale' (MISS – 21) adapted for British general practice. Fam Pract 2002;19(3):257–63.
25. Treadway J. Patient satisfaction and the context of general practice consultations. J R Coll Gen Pract 1983;33:769–71.
26. Kinnersley P, Stott N, Peters TJ, Harvey I. The patient centeredness of consultations and outcomes in primary care. Br J Gen Pract 1999;49:711–6.
27. Meakin RP. Patient satisfaction with the consultation in general practice: can a hermeneutic model of the consultation help us? MSc Dissertation, University of London, London, 1992.
28. Williams S, Weinman J, Dale J, Newman S. Patients' expectations: what do primary care patients want from the GP and how far does meeting expectations affect patient satisfaction? Pam Pract 1995;12:193–201.
29. Singh H, Haqq ED, Mustapha N. Patients' perception of and satisfaction with health care professionals at primary health care facilities in Trinidad and Tobago. Bull World Health Organ 1999;77(4):356–60.
30. Van Uden CJT, Ament AJHA, Hobma SO, Zwietering PJ, Crebolder HFJM. Patient satisfaction with out-of-hours primary care in Netherlands. BMC Health Serv Res 2005;5:6.
31. Nazim Turhal, Basak Efe, Mahmut Gumus, Mehmet Aliustaoglu, Ayla Karamanoglu, Meric Sengoz. Patient satisfaction in the outpatients' chemotherapy unit of Mamara University, Istanbul, Turkey: a staff survey. BMC Cancer 2002;2:30.
32. Shilling V, Jenkins V, Fallowfield L. Factors affecting patient and clinician satisfaction with the clinical consultation: can communication skill training for physicians improve satisfaction? Psychooncology 2003;12(6):599–611.
33. Williams S, Weinmen J, Dale J. Doctor-patient communication and patient satisfaction: a review. Fam Pract 1998;15:480–92.
34. Schattner A, Rudin D, Jellin N. Good physicians from the perspective of their patients. BMC Health Serv Res 2004;4:26.
35. Cornstock LM, Hooper EM, Goodwin JM, Goodwin JS. Physician behaviours that correlate with patient satisfaction. J Med Educ 1982;57:105–12.
36. Williams S, Calnan M. Key determinants of consumer satisfaction with general practice. Fam Pract 1991;8:237–42.
37. Cornstock LM, Williams RC. The way we teach students to care for patients. Med Teacher 1980;2:168–70.
38. Korsch B, Gozzi E, Francis V. Gaps in doctor-patient communication. Paediatrics 1968;42:855–71.
39. Wasserman RC, Inui TS, Barriatua RD, et al. Paediatric clinicians' support for parents makes a difference: an outcome based analysis of clinician parent interaction. J Paed 1984;74:1047.
40. Parker P, Baile W, De Moor C, Lenzi R, Kudelka A, Cohen L. Breaking bad news about cancer: patients' preferences for communication. J Clin Oncol 2001;19(7):2049–56.
41. DiMatteo MR, Taranta A, Friedman HS, Prince LM. Predicting patient satisfaction from physicians' nonverbal communication skills. Med Care 1980;18(4):376–87.
42. Bensing J, Kerssens JJ, Van der Pasch MAA. Patient-directed gaze as a tool for discovering and handling psychosocial problems in general practice. J Nonverbal Behav 1995;19(4):223–42.
43. Quirt C, MacKillop W, Ginsberg AD, et al. Do doctors know when their patients don't? A survey of doctor patient communication in lung cancer. Lung Cancer 1997;18:1–20.
44. Levenstein JA, McCracken EC, McWhinney IR, Stewart MA, Brown JB. The patient-centred clinical method 1: a model for doctor-patient interaction in family medicine. Fam Pract 1986;3:24–30.