Family Practice Vol. 20, No. 3 © Oxford University Press 2003, all rights reserved. Printed in Great Britain
Doi: 10.1093/fampra/cmg308, available online at www.fampra.oupjournals.org

Doctor–patient communication: a comparison of the USA and Japan

Sachiko Ohtaki, Toshio Ohtaki[a] and Michael D Fetters[b]

Ohtaki S, Ohtaki T and Fetters MD. Doctor–patient communication: a comparison of the USA and Japan. *Family Practice* 2003; **20:** 276–282.

Background. Little is known about the differences and similarities between doctor–patient communication patterns in different cultures.

Objectives. The aim of this study was to examine communication patterns of doctor–patient consultations in two different cultures, namely the USA and Japan, and to elucidate linguistic differences and similarities in communication.

Methods. This cross-sectional study used quantitative discourse analysis from linguistics to compare 40 doctor–patient consultations: 20 out-patient consultations of five physicians in the USA and 20 out-patient consultations of four physicians in Japan. The main outcomes measured were time spent in each phase of the encounter, number of categorized speech acts, distribution of question types and frequencies of back-channel responses and interruptions.

Results. The average length of doctor–patient encounters was 668.7 s in the USA and 505 s in Japan. US physicians spent relatively more time on treatment and follow-up talk (31%) and social talk (12%), whereas the Japanese had longer physical examinations (28%) and diagnosis or consideration talk (15%). Japanese doctor–patient conversations included more silence (30%) than those in the USA (8.2%). The doctor–patient ratios of total speech acts were similar (USA 55% versus 45%; Japan 59% versus 41%). Physicians in both countries controlled communication during encounters by asking more questions than the patients (75% in the USA; 78% in Japan). The Japanese physicians and patients used back-channel responses and interruptions more often than those in the USA.

Conclusions. While doctor–patient communication differed between the USA and Japan in the proportion of time spent in each phase of the encounter, length of pauses and the use of back-channel responses and interruptions, physician versus patient ratios of questions and other speech acts were similar. The variations may reflect cultural differences, whereas the similarities may reflect professional specificity stemming from the shared needs to fill the information gap between physician and patient. Adequate awareness of these differences and similarities could be used to educate clinicians about the best approaches to patients from particular cultural backgrounds.

Keywords. Ambulatory care, cross-cultural comparison, doctor–patient communication, linguistics, primary health care.

Introduction

Communication between doctor and patient plays an important role in developing a trusting doctor–patient relationship, and the patient's trust in the physician is one of the leading correlates of important outcomes of care.[1] Communication that achieves information exchange and negotiation of mutual expectations, reassures patients and demonstrates positive affect from the practitioner increases patient adherence.[2] Communication during history taking or discussion of the management plan has a significant association with patient outcomes.[3,4] Specific communication behaviours are associated with fewer malpractice claims,[5] and communication patterns have been shown to correlate with patients' and physicians' satisfaction with medical visits.[6] Thus, clinical training for patient-oriented communication skills has been explored as a part of medical education necessary to produce effective practitioners.[7–10]

Received 9 May 2002; Revised 9 December 2002; Accepted 13 January 2003.

Department of English Language, Kanazawa Medical University, 1-1 Daigaku Uchinada-machi, Kahoku-gun, Ishikawa-ken 920-0293, [a]Department of German Linguistics, Kanazawa University, Kakuma-machi, Kanazawa-shi 920-1192, Japan and [b]Department of Family Medicine, University of Michigan Health System, 1018 Fuller Street, Ann Arbor, MI 48109-0708, USA. Correspondence to Sachiko Ohtaki; Email: s-ohtaki@kanazawa-med.ac.jp

Non-physician academics such as socio-linguists who are interested in how social factors or values come into play have also been concerned with doctor–patient communication.[11–13] Much of the existing research has centred on patient autonomy and medical paternalism, referring to 'asymmetric' doctors' interactions with patients or their unbalanced control of communication.[14] Non-physicians may identify with patients and instinctively take their side, wishing to 'modify' the conventional behaviour of medical practitioners.[15] Investigators have also examined concerns with health care in a multiethnic society[16] and the doctor–patient interaction in one culture,[12] and have conducted comparative studies on communication in general in Japan.[17–19]

While these studies from medical and socio-linguistic perspectives contribute to our understanding of doctor–patient communication and the necessary elements of a trusting doctor–patient relationship, there are no known studies that were designed to examine empirically doctor–patient consultations in different cultures. Based on previous USA–Japan cross-cultural research in non-medical settings, we anticipated that doctor–patient communication in Japan would reflect high context style and frequent back-channel interactions.[17–19]

Research has shown communication difficulties already arise due to differences in the medical subculture of the doctor and illness subculture of the patient.[20] One might expect that these problems would be exacerbated further if the doctor and patient do not share a common ethnic and/or cultural background. Given the growing cultural diversity among physicians and patients, and the demand for intercultural communication between doctors and patients, research is needed on the degree to which patterns of doctor–patient communication vary between cultures of two countries.

To examine communication patterns of doctor–patient consultations in two different cultures, namely the USA and Japan, and elucidate linguistic differences and similarities in communication, we conducted a comparative quantitative analysis of doctor–patient communication.

Methods

This cross-sectional study used a quantitative discourse analysis from linguistics to compare doctor–patient consultations in the USA and Japan. The setting of data collection included one community each in the USA and Japan that were selected on relative similarity in size (approximate population: USA 6000; Japan 20 000), rural setting, affiliation with a university medical centre and most common occupations of community residents (farming, small-scale manufacturing and white collar jobs). Data collection occurred from June to July 2000 in Japan and in September 2000 in the USA.

Eligibility requirements called for the physician participants to be clinically active, male physicians (Caucasian, family physicians in the USA and internal medicine trained physicians in Japan) who had completed their residency training at least 10 years prior to the study. Patient participants were required to be older than 20 years of age, known to have had at least one previous appointment with a participating physician and scheduled for an acute visit or follow-up visit. Patients scheduled for a general physical examination or who had dementia or cognitive impairment were excluded. All the contacted physicians participated; only one of all the approached patients declined, citing his history of stroke and partial aphasia. All participants provided written informed consent.

The five physicians in the USA were affiliated to a university department of family medicine. The four physicians in Japan included a general internist, a gastroenterologist and two cardiologists working in the outpatient clinic of a university hospital. As the system of family medicine is not widely diffused in Japan, we could not strictly match on specialty. While not obvious to the Western reader, universal health insurance in Japan does not restrict patients from presenting to any doctor of their choice for consultation. Consequently, the type of medical problems seen by university hospital-based 'specialists' would fall under the definition of primary care problems.

Physicians meeting eligibility requirements were recruited first. On a day selected by consenting physicians, patients were recruited consecutively until five patients per physician (total 20 patient consultations) in Japan, and four patients per physician in the USA (total 20 patient consultations) were enrolled. The doctor–patient communication during the consultation was audio-recorded and patients completed an instrument about demographic information at the end of the encounter. The audiotapes were transcribed verbatim, and the transcriptions reviewed for accuracy and corrected by the investigators.

For the analysis, we first examined the total time of the encounter and the time spent during each phase of the encounter according to the modified phase model.[15,21] This model describes the logical sequence of events of routine doctor–patient encounters and includes: (i) greeting; (ii) discovering the reason for the visit; (iii) verbal examination; (iv) physical examination (includes time spent in verbal exchanges during the physical examination); (v) diagnosis or consideration talk; (vi) detailing treatment or further investigation; and (vii) termination. A phase for non-problem-focused casual talk was categorized as (viii) social talk.

Secondly, to examine the ratio of physician to patient speech, the total numbers of speech acts by physicians and patients were counted and compared between the USA and Japan. Speech acts are verbal processes that achieve an action. Each speech act by either physician or patient was also categorized[22] and counted according to the modified category model.[23] Categorized speech acts

include: explanatory statements, questions, directives and other speech acts. Other speech acts include greetings such as "How are you?", news-receipts and news-marks such as "Do they?", and certain forms of acknowledgement such as an explicit "Yes". Further categorization was made of question types, and the distribution of question types (open-ended, closed and other) was then compared.

Thirdly, the frequency of back-channel responses and interruptions uttered by doctors and patients were counted and compared to examine differences in the interaction properties of doctor–patient encounters. Back-channel responses are verbal markers of continued attention uttered by the listener: examples from English include such verbal acts as "hmm", "OK" and "right". These serve as verbal indicators of sustained attention and encouragement emitted by the person who does not hold the speaking floor.[24] They are intended to keep up communication flow by confirming or reacting to a preceding statement, and can be regarded as an encouragement for turn-taking maintenance.[18] Speech interruptions occur when one speaker anticipates what the first speaker will say and interrupts the speech act. The effect of this conversation device is intended to show rapport and that there is no need for the speaker to complete the sentence. Interruptions almost always have negative implications in English but, linguistically, interruptions can have positive or negative effects in communication. Seven types of interruptions include: turn interruptions; facilitative interruptions; interruptions confirming speaking partner information; interruptions to voice an opposite opinion; interruptions to ask a question about spoken information; interruptions that make humour/jokes about the speaking partner's information; and interruptions to monitor (confirm) spoken information.[25,26]

The study was approved by the Institutional Review Board of the University of Michigan Health System and by the Ethics Committee of Kanazawa Medical University.

TABLE 1 *Demographic characteristics of participants*

Characteristics	USA	Japan
Patient	(n = 20)	(n = 20)
Age (mean)	55	56.7
range	39–52	40–59
Male	11	11
Female	9	9
Married	14	18
Single or widowed	6	2
Years of schooling (mean)	14	14.2
range	10–21	12–16
Employment status		
Working	13	14
Retired	5	6
Disabled	2	0
Job type		
Office staff	2	5
Manager	5	5
Teacher	3	1
Housewife	2	7
Other	8	2
Diagnosis		
Diabetes	4	6
Stomach/bowel disease	2	7
Heart disease	2	9
High blood pressure	5	2
Other	6	3
None	8	0
Physician	(n = 5)	(n = 4)
Age (mean)	45	49.8
range	39–52	45–54
Department		
Family medicine	5	0
Cardiology	0	2
General medicine	0	1
Gastroenterology	0	1

Results

Table 1 summarizes the socio-demographic characteristics of the 40 patient and nine doctor participants. All the US patients and physicians were Caucasian. A slight majority of participants in Japan and the USA were male, 11 out of 20 patients at both sites. The patients' mean years in age and of schooling were similar, and the majority were married and living with their spouse. The patients had a variety of diagnoses, and there was a slightly greater preponderance of chronic diseases in the Japanese sample. The mean age of the physicians was 45 years in the USA and 49.8 years in Japan.

Time distribution analysis

There were considerable differences in the total encounter length, length of pause time and the proportion of time spent in each phase between the USA and Japan. The average length of the doctor–patient encounters was 668.7 s in the USA (range 310-1418 s) and 505 s in Japan (range 150–738 s). The Japanese encounters included more pauses (~30% of the whole visit) than those in the USA (8.2%). The longest phases of the US physician–patient encounters were the treatment and follow-up phase (31%), followed by the verbal examination phase (26%) (Fig. 1). The social talk and physical examination phases both accounted for 12% of the visit. In contrast, the longest phases of the Japanese physician–patient encounters were the physical examination phase (29%), followed by the verbal examination phase (26%). In Japan, very little time was spent on discovering the reason for the visit, 0.09% (only one Japanese visit spent time on it), while in the US encounters it was 5%.

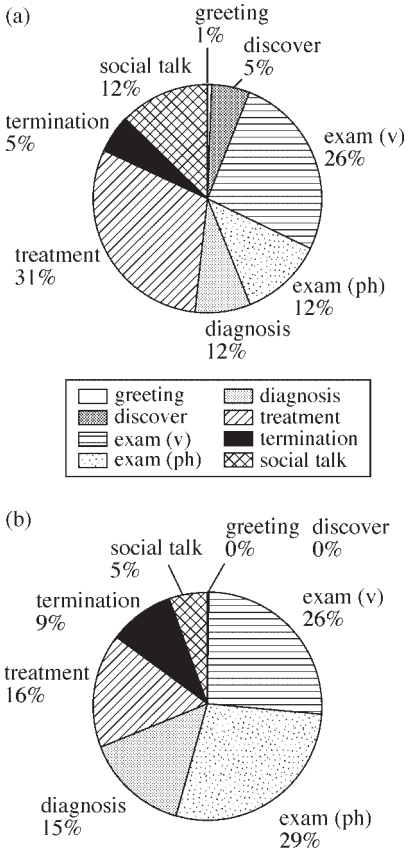

FIGURE 1 *Phase distribution of time in doctor–patient encounters in the USA (a) and Japan (b)*

Speech acts distribution

We compared the total numbers and the physician versus patient ratios of total speech acts, questions, explanatory statements, directives and other speech acts. Despite a difference in the average numbers of speech acts in the two countries, the physician versus patient ratios of total speech acts and each speech act type were found to be similar (Table 2). The proportions of physician versus patient total speech acts were 55 and 45%, respectively, in the USA and 59 and 41% in Japan. The doctors asked more questions than the patients did in both countries: 75% of all questions asked in the USA and 78% of those in Japan came from doctors.

Comparative analysis of the question types used by the physicians showed that open-ended questions, closed questions and other questions were similar in the two countries. Explanatory statements were distributed fairly equally between doctors and patients in both countries, whereas in both countries directive statements had a physician versus patient ratio of 19:1. Other speech acts were dominated by patients, who produced approximately two-thirds of such utterances in both countries.

Other interaction properties

We found more back-channel responses used by both the physicians and the patients in Japan (doctors 24.7; patients 32) than in the USA (doctors 22.4; patients 21.1, Fig. 2). However, as shown by the time distribution analysis, the average length of visits was longer in the USA than in Japan. As shown in Figure 2, the mean frequency of interruptions was much higher in Japan (doctors 15.05; patients 6.01) than in the USA (doctors 1.9; patients 1.1). Facilitative interruptions encourage a partner to speak or confirm the partner's information, and served as the most common type of interruption in Japan and the USA. Facilitative interruptions during the 20 visits in Japan by doctors totalled 157 (53% of total interruptions by physicians), while such interruptions by patients totalled 52 (43% of total interruptions by patients). Facilitative interruptions during the 20 visits in the USA by doctors totalled only 25 (66% of total interruptions by physicians). While similar in percentage to the doctors, the number of facilitative interruptions by US patients totalled 14 (63% of total interruptions by patients).

Discussion

This is the first known investigation to identify specific linguistic differences and similarities in doctor–patient communication behaviours in these two countries, and provides compelling evidence that culture actually influences patterns of doctor–patient communication. Our data strongly suggest that doctor–patient communication is different between the USA and Japan in length of total time, length of pauses, the proportion of time spent in each phase of encounters and the use of back-channel

TABLE 2 *Distribution of aggregate speech acts in doctor–patient encounters in the USA and Japan*

	Statement		Question		Directive		Others		Total	
	Doctor	Patient	Doctor	Patient	Doctor	Patient	Doctor	Patient	Doctor	Patient
USA (total time 668.7 s)	26.85 (49%)	27.9 (51%)	17.7 (75%)	5.85 (25%)	3.5 (95%)	0.2 (5%)	3.7 (32%)	7.85 (68%)	51.75 (55%)	41.8 (45%)
Japan (total time: 505 s.)	13.65 (52%)	12.3 (48%)	13.7 (78%)	3.85 (22%)	4.4 (95%)	0.25 (5%)	5.5 (36%)	9.7 (66%)	37.25 (59%)	26.1 (41%)

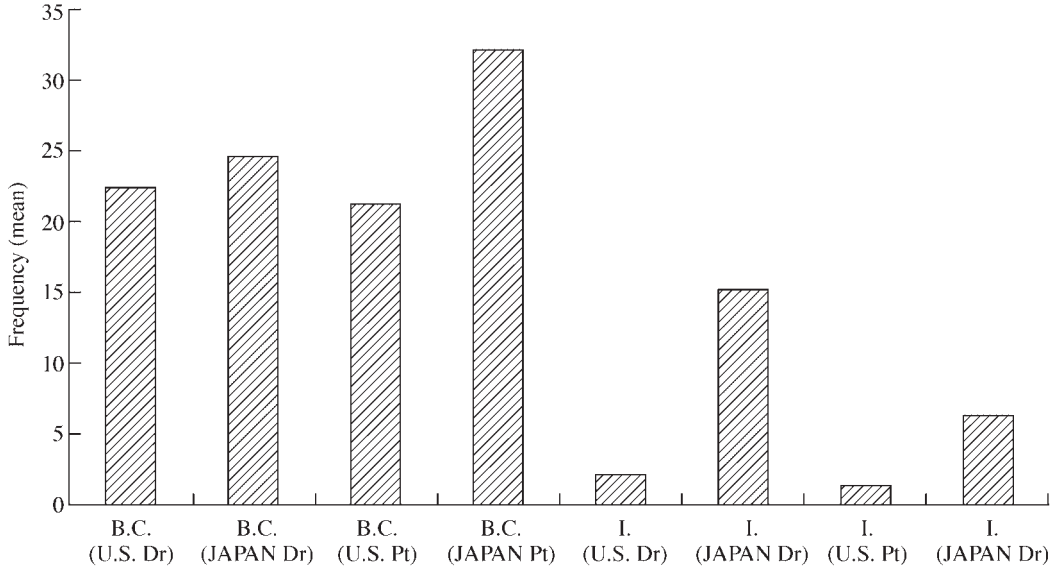

FIGURE 2 *Frequencies of back-channel responses and interruptions in doctor–patient encounters in the USA and Japan*

responses and interruptions. Doctor–patient communication in these two countries appears similar in the physician versus patient ratios of questions or other speech acts.

Given the intense pressures for greater productivity, we were not surprised to find that the average length of US doctor–patient encounters was relatively shorter than noted in previous studies,[27,28] although it was still longer than that in Japan. This USA and Japan difference of total time might stem partly from the different medical and health insurance systems in the two nations. While Japanese patients typically are expected to visit their physicians at the first sign of acute illness and every 2–4 weeks for chronic medical problems, patients in the USA, particularly those perceived to have a self-limited illness, are encouraged to self-treat and to schedule with a doctor only if not improved, and every 1–6 months for chronic problems. Given these circumstances, individual visits in the USA would probably require more time for adequate communication.

There were several notable cultural differences. The longer silences/pauses during Japanese encounters may reflect high-context[29] communication where most of the information is internalized in the person with very little in the explicit part of the message. High-context communication requires more time for a listener to consider the speaker's feelings and thoughts. In American low-context communication, where the vast majority of information is vested in explicit language, messages would feature more detailed information and quick turn-taking.

There were notable cultural differences in the relative time distribution of the doctor–patient encounters. More time spent for treatment and follow-up in the US (USA 31% versus Japan 16%) encounters suggests a style of persuasion characterized by detailed talk.[30] The lower percentage of time spent on social talk in Japan (USA 12% versus Japan 5%) may reflect high-context culture, or simply that its importance may be valued less in Japan. Greater time spent in social talk in the USA appears to serve an affective function to build and maintain rapport. In Japanese medical encounters, the longer time spent on physical examination (USA 12% versus Japan 29%) might result from Japanese styles of behaviour concordant with societal norms or rules.[31] Alternatively, this reflects a specialty-related phenomenon, namely that the Japanese internists may be spending more time on the physical examination than family physicians. The aforementioned Japanese system of regular medical visits may allow for more cumulative discussion of the diagnosis and explain the lack of time spent in discovering the reason for the visit.

In contrast to these differences in time distribution, the physician versus patient ratios of speech acts in both countries were similar. Physicians in both countries controlled communication by asking far more questions than patients. However, the similar doctor versus patient ratios of total speech acts and explanatory statements in both countries implies that physicians and patients participate almost equally in exchanging information. Hence, there is little cultural difference in the physician–patient patterns of controlling or participating in communication. In both countries, the doctor seems to be more in charge of the 'how' as well as the 'what', allowing the patient to participate in the talk primarily by invitation. On one hand, it can be argued that the physician needs to ask more questions in order to acquire the knowledge necessary to make a judgement about the nature of the patient's illness and the appropriate treatment. On the other hand, it can be argued that the doctor's greater number of speech acts reflects physician dominance of the interaction and may hinder the patient's participation in his/her care. This question of whether the pattern of

more question asking is a dominating or non-dominating approach could best be answered in future research using a qualitative conversation analysis design.

The higher frequency of back-channel responses and interruptions in Japan fits with an earlier USA–Japan comparative study on counsellor and client interactions during radio talk shows.[25] Other comparative studies also point to the greater frequency of *aizuchi* (literally mutual hammering) or back-channels in Japanese conversation than in American conversation.[32,33] A high frequency of back-channel responses in US medical encounters is believed to be characteristic of female as compared with male speech.[34] The US male physicians and their patients in our study, however, emitted back-channel responses unexpectedly frequently, more frequently than the counsellors and clients on the radio, suggesting that a private medical setting allows for more involvement and display of empathy than does the mass media.

Unlike back-channel responses, the interpretation of interruptions, an important turn-taking mechanism, depends on a complex of factors.[35] Interruptions in US medical visits have been related differently to satisfaction, depending on the participants' gender.[36] For women interacting together, more interruptions have been positively related to satisfaction, whereas interruptions have been negatively related to satisfaction for all gender combinations involving a man. In our study, the interruptions were nearly eight times greater among Japanese physicians than US physicians, and five times greater among Japanese patients than US patients. Facilitative interruptions were the most common type of interruption, but these numbered over six times greater for Japanese physicians and nearly four times greater by Japanese patients than US patients. We believe that interruptions in Japanese communication have a connotation that indicates positive involvement, not conflict or dominance. Here, back-channel responses and interruptions convey a listening, facilitative attitude, and can be used to express interest and positive regard, to show willingness to work as partners or to demonstrate empathy. The frequent use of back-channels and interruptions, effectively used in Japanese succinct communication and illustrating a marked contrast to quick turn-taking in US detailed communication, may function as a creator of a co-operative mood for sharing communication between physicians and patients in Japan.

This study has several limitations, primarily due to feasibility issues. We were able to recruit only a small number of physicians and patients in both countries, though the number of participants is not unusual for a detailed, highly complex and time-consuming linguistic analysis. The training of the participating physicians differed between the USA and Japan, and this may have influenced specific issues such as 'social talk' since doctor–patient communication skills are heavily emphasized in Family Medicine training in the USA. The homogeneity of physicians and patients alike on demographic variables such as age, gender, race and setting, as well as physician length of practice, non-surgical training and patient occupations, leave many questions unanswered.

In summary, doctor–patient communication differed between the USA and Japan in the proportion of time spent in each phase of the encounter, length of pauses and the use of back-channel responses and interruptions, though physician versus patient ratios of questions and other speech acts were similar. The variations may reflect cultural differences, whereas the similarities may reflect professional specificity stemming from the shared need to fill the information gap between physician and patient. Given these cultural differences in doctor–patient communication, a US clinician adept at the communication skills empirically found to be effective with US patients of a similar cultural background might possibly fall short with a Japanese patient. Adequate awareness of these differences and similarities could be used to educate clinicians about the best approaches to patients from particular cultural backgrounds. For example, more social talk by Japanese physicians could make their communication more effective with patients from a low-context culture such as the USA. Moreover, increased attention to back-channels or the potentially constructive role of interruptions by US physicians for patients from a high-context culture such as Japan may similarly yield improved communication. That being said, there is no research documenting that high-context communication in Japan or low-context communication in the USA leads to better clinical outcomes.

The current state of research on the optimal communication styles from a perspective of improved clinical outcomes remains in its infancy. Professions and institutions are not culturally neutral; further investigation of the similarities and differences of this study's findings in other professions and institutions are needed to determine the robustness of the findings. Further quantitative and qualitative studies to confirm or refute these results and to examine potentially influential variables such as gender, age, race, medical or surgical specialty, institutional affiliation, organizational setting and rural versus suburban setting are needed. Greater awareness and investigation of cultural differences and similarities could reap benefits for optimal cross-cultural communication in doctor–patient encounters.[37]

Acknowledgements

The authors gratefully acknowledge the patients and physicians whose participation made this research possible.

References

[1] Safran DG, Taira DA, Rogers WH, Kosinski M, Ware JE, Tarlov AR. Linking primary care performance to outcomes of care. *J Fam Pract* 1998; **47:** 213–219.

[2] Stewart M, Brown JB, Boon H, Galajda J, Meredith L, Sangster M. Evidence on patient–doctor communication. *Cancer Prevent Control* 1999; **3:** 25–30.

[3] Stewart MA. Effective physician–patient communication and health outcomes: a review. *Can Med Assoc J* 1995; **152:** 1423–1430.

[4] Bass MJ, Buck C, Turner L, Dickie G, Pratt G, Robinson HC. The physician's action and the outcome of illness in family practice. *J Fam Pract* 1986; **23:** 43–47.

[5] Levinson W, Roter DL, Mullooly JP, Dull VT, Frankel RM. Physician–patient communication: the relationship with malpractice claims among primary case physicians and surgeons. *J Am Med Assoc* 1997; **277:** 553–559.

[6] Roter DL, Stewart M, Putnam SM, Lipkin M Jr, Stiles W, Inui TS. Communication patterns of primary care physicians. *J Am Med Assoc* 1997; **277:** 350–355.

[7] Cassell EJ. *Talking with Patients*. Cambridge (MA): MIT Press, 1985.

[8] Levinson W, Roter D. The effects of two continuing medical education programs on communication skills of practicing primary care physicians. *J Gen Intern Med* 1993; **8:** 318–324.

[9] Roter DL, Hall JA, Kern DE, Barker LR, Cole KA, Roca RP. Improving physicians' interviewing skills and reducing patients' emotional distress. *Arch Intern Med* 1995; **155:** 1877–1883.

[10] Roter D, Rosenbaum J, Negri B, Renaud D, Diprete-Brown L, Hernandez O. The effects of a continuing medical education programme in interpersonal communication skills on doctor practice and patient satisfaction in Trinidad and Tobago. *Med Educ* 1998; **32:** 182–189.

[11] Todd AD, Fisher S (eds). *The Social Organization of Doctor–Patient Communication*. Norwood (NJ): Ablex Publishing, 1993.

[12] von Raffler-Engel W (ed). *Doctor–Patient Interaction*. Amsterdam, The Netherlands: John Benjamins, 1989.

[13] Chenail RJ. *Medical Discourse and Systemic Frames of Comprehension*. Norwood (NJ): Ablex Publishing, 1991.

[14] Chimombo M, Roseberry R (eds). *The Power of Discourse*. Mahwah (NJ): Lawrence Erlbaum Associates, 1998.

[15] Heath C. The delivery and reception of diagnosis in the general-practice consultation. In Drew P, Heritage J (eds). *Talk at Work*. Cambridge: Cambridge University Press, 1992: 235–267.

[16] Galanti GA. *Caring for Patients from Different Cultures*. Philadelphia (PA): University of Pennsylvania Press, 1997.

[17] Tannen D. *Conversational Style*. Norwood (NJ): Ablex Publishing, 1984.

[18] Clyne M. *Intercultural Communication at Work*. Cambridge: Cambridge University Press, 1994: 110.

[19] Yamada H. *American and Japanese Business Discourse*. Norwood (NJ): Ablex Publishing, 1992.

[20] Stein HF. *American Medicine as Culture*. Boulder (CO): Westview Press, 1990.

[21] Byne PS, Long BES. *Doctors Talking to Patients*. London: RCGP, 1989.

[22] Searle J. *Speech Acts: An Essay in the Philosophy of Language*. London: Cambridge University Press, 1969.

[23] Todd AD. A diagnosis of doctor–patient discourse in the prescription of contraception. In Todd AD, Fisher S (eds). *The Social Organization of Doctor–Patient Communication*. Norwood (NJ): Ablex Publishing, 1993: 183–209.

[24] Duncan S Jr. Some signals and rules for taking speaking turns in conversations. *J Pers Social Psychol* 1972; **23:** 283.

[25] Ohtaki T. Ein Vergleichder sprachlichen Handlungen des Beratungsgesprächs in Radiosendungen in Japan, Deutschland und U.S.A. In: E-Internet//www.kclc.or.jp/hunboldt//. 1996 [German].

[26] Ohtaki T. Ishi-Kanja kan no kaiwa bunseki nichibei hikaku: 'Jinsei soudan' tekusuto–sukima tono hikaku ni oite (A comparative analysis of doctor–patient conversation in Japan and the United States: comparison with an 'Advice for living' text scheme. *Kanazawa Daigaku Bungakubu Ronshuu* (Kanazawa Faculty of Letters) 2002; **22 (March):** 1–21 [Japanese].

[27] Roter D. Sex differences in patients' and physicians' communication during primary care medical visits. *Med Care* 1991; **29:** 1087.

[28] Mechanic D. Are patients' office visits with physicians getting shorter? *N Engl J Med* 2001; **344:** 198–204.

[29] Hall ET. *Beyond Culture*. New York: Doubleday, 1976: 85–103.

[30] Stewart EC, Stewart B. *American Cultural Patterns*. Yarmouth (ME): Intercultural Press, 1991: 153–61.

[31] March RM. *The Japanese Negotiator*. Tokyo: Kodansha International, 1989: 127.

[32] Maynard SK. *Japanese Conversation*. Norwood (NJ): Ablex Publishing, 1989: 159–177.

[33] White S. Back-channels across cultures: a study of Americans and Japanese. *Lang Soc* 1989; **18:** 59–76.

[34] Hall JA, Irish JT, Roter DL, Ehrlich CM, Miller LH. Satisfaction, gender, and communication in medical visits. *Med Care* 1994; **32:** 1216–1231.

[35] Stubbs M. *Discourse Analysis*. Chicago (IL): University of Chicago Press, 1983: 186.

[36] Hall JA, Irish JT, Roter DL, Ehrlich CM, Miller LH. Gender in medical encounters: an analysis of physician and patient communication in a primary care setting. *Health Psychol* 1994; **13:** 384–392.

[37] Tannen D. *Discourse Analysis in Society* (Handbook of Discourse Analysis vol. 4). London: Academic Press, 1985: 203–213.