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The practice orientations of physicians and patients: the effect of doctor–patient congruence on satisfaction

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Abstract

This study investigated the extent to which the individual orientations of physicians and patients and the congruence between them are associated with patient satisfaction. A survey was mailed to 400 physicians and 1020 of their patients. All respondents filled out the Patient–Practitioner Orientation Scale, which measures the roles that doctors and patients believe each should play in the course of their interaction. Patients also rated their satisfaction with their doctors. Among patients, we found that females and those who were younger, more educated, and healthier were significantly more patient-centered. However, none of these variables were significantly related to satisfaction. Among physicians, females were more patient-centered, and years in practice was related to satisfaction and orientation in a non-linear fashion. The congruence data indicated that patients were highly satisfied when their physicians either had a matching orientation or were more patient-centered. However, patients whose doctors were not as patient-centered were significantly less satisfied. © 2000 Elsevier Science Ireland Ltd. All rights reserved.

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1. Introduction

The doctor–patient relationship is a product of the attitudes and orientations that the two participants bring to it. In recent years much attention has been directed to studying the varying orientations of

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physicians toward their patients, in particular the distinction between a patient-oriented style versus a disease- or doctor-oriented style of interaction [1–3]. Other researchers, working in parallel, have focused on patients' orientations toward their providers, noting in particular that some patients prefer a more participatory style of interaction [4,5]. Yet, there has been little relationship-focused research that *simultaneously* addresses the orientations, preferences, and styles of both parties. The present research brings these parallel lines of research together by investigating the extent to which patients' satisfaction with their primary care physicians is a function of the patient's orientation, the physician's orientation, and the degree of congruence between the two.

Physicians exhibit differing styles of interaction with their patients from 'doctor-centered' (or 'disease-oriented') at one extreme to 'patient-centered' at the other [6–10]. The former embodies the classic paternalistic doctor–patient relationship in which the physician is relatively dominant, the medical problem is the central concern, and the patient is expected to defer to the physician's judgement. The latter is characterized by the practitioner's desire for a relationship in which the patient is involved in decision making, and the 'person' rather than the 'medical problem' is the focus of treatment.

Patients also differ in their preferences and interaction styles. For instance, many older patients prefer a relationship that is doctor-centered, desiring little information and leaving decision-making to their physicians [11,12]. In contrast, a growing number of patients have adopted a consumerist stance, seeking as much information as possible and using their physicians as consultants or advisors to present them with options from which to select [13,14].

Anecdotal evidence about the congruence or fit between doctor and patient attitudes is plentiful, but little empirical research about congruence and its consequences has been conducted [15–19]. In this study, we have measured the practice orientations of physicians and their patients using the Patient–Practitioner Orientation Scale (PPOS), a paper-and-pencil instrument in which physicians and their patients respond to identical statements about the roles that each should play in medical encounters [20,21]. Because both physician and patient answer identical questions, their scores can be compared directly, and

congruence can be calculated as a discrepancy score. Patient satisfaction can therefore be assessed as a function of the individual orientations of the physician and the patient, but the doctor–patient pair can also be used as the unit of analysis to investigate the role of congruence. This study tests two hypotheses: (1) patients are more satisfied with patient-centered physicians than doctor-centered physicians, and (2) patients are more satisfied with physicians whose orientations are congruent with theirs than those whose are not (regardless of the individual orientations of the physicians or the patients).

2. Methods

The study was conducted in two phases. The goal of the first phase was to identify 60 primary care physicians whose practice attitudes varied from patient-centered to doctor-centered as measured by the PPOS. In the second phase, patients from the practices of these physicians were asked to fill out the PPOS and to indicate their satisfaction with their physicians.

2.1. Phase 1: The physician survey

The study was performed among physicians at Harvard Pilgrim Health Care (HPHC), the largest health maintenance organization in New England. All study physicians had an active practice in adult internal medicine with an HPHC patient load of at least 50 visits over a 3-month period. From this population, a stratified random sample of 400 physicians was selected, drawing 100 physicians from each of the four different delivery systems in the organization (staff model, group practice, joint venture, and independent practice).

Postcards were mailed to the physicians alerting them of the survey and encouraging their participation. The survey instrument and a postage-paid envelope were mailed to their offices along with a letter explaining the purposes of the study and assuring anonymity. A reminder letter was mailed to all non-responders after 7 days, and a second reminder was mailed after another 7 days.

The main component of the physician survey was the PPOS. It contains 18 items in a six-point Likert

(strongly agree-strongly disagree) format. A total score, ranging from patient-centered to doctor-centered, can be calculated in addition to two sub-scores. The first nine-item sub-scale, Sharing, reflects the extent to which the respondent believes that patients desire information and should be part of the decision making process (e.g. 'Patients should be treated as if they were partners with the doctor, equal in power and status'). The second nine-item sub-scale, Caring, reflects the extent to which the respondent sees the patient's expectations, feelings, and life circumstances as critical elements in the treatment process (e.g. 'A treatment plan cannot succeed if it is in conflict with a patient's lifestyle or values.'). (See Appendix A for the entire instrument.) The physician surveys also asked for basic demographic information, practice history, and whether the physicians had taken communications skills courses during or after medical school.

Usable surveys were returned by 177 physicians, a response rate of 44%. Physicians' scores on the PPOS were calculated for all usable surveys, and each was expressed as the mean of all items answered. Although these mean scores did not cover the full range of all those possible (mean scores were generally high – toward the patient-centered end of the scale), their distribution was nonetheless essentially normal. The mean scores for all physicians were ranked and divided into three groups: high (patient-centered, with a mean score of 5.00 or greater), medium (greater than 4.57 but less than 5.00), and low (doctor-centered, mean of 4.57 or less). Within the four delivery system and two gender categories, we attempted to randomly select 20 physicians each from the high, medium, and low group; however males were over-represented among the 60 selected physicians because there were fewer females than males in each delivery system and each PPOS level.

2.2. Phase 2: The patient survey

The HPHC patients sampled were between the ages of 20–80, and had visited their physician within the 4-month period before the drawing of the patient sample. They were excluded if their medical histories indicated particularly sensitive diseases or conditions (e.g. HIV/STDs), or if their visits were for

urgent care or sensitive clinical procedures (e.g. elective abortions).

The sample size was determined based on power calculations to have an 80% probability of detecting a difference between high and low PPOS scorers of 0.25 units on the satisfaction measure. These calculations suggested the need for a minimum sample size of 450 patients (150 in each of the three PPOS patient groups). Therefore, based on an anticipated response rate of approximately 50%, we sampled 1020 HPHC patients, 17 each from the practices of the 60 physicians identified in Phase 1. The sample was stratified by creating six patient categories – three age categories (20–40, 41–64, and 65–80) by two genders. For each physician, we selected three patients at random from each of the six age–sex categories, and then removed one name at random from the 18 initially sampled to reach an n of 17 per physician. The same mailing and reminder procedures as described for physicians were used for patients.

The patient's primary care physician was named at the top of the questionnaire. Patients supplied basic demographic information, and were asked how long they had been seeing this doctor, whether or not they had chosen this doctor, if they had switched doctors at HPHC, and if so, for what reason. The patient instrument contained the PPOS, whose content, format, and instructions are identical to the physician version; and the ten-item American Board of Internal Medicine Patient Satisfaction Questionnaire (PSQ) [22,23]. This instrument asks patients to rate their physicians on a five-point scale from poor to excellent on their humanistic qualities (e.g. greets you warmly, encourages you to ask questions, explains things in plain language).

3. Results

3.1. Characteristics of the samples

Table 1, which presents the characteristics of those physicians ($n = 177$) who provided usable data for Phase 1 and the sub-set of physicians ($n = 60$) whose patients were selected for Phase 2, shows that the 60 physicians chosen were representative of the larger

Table 1
Characteristics of physician respondents

	All physician respondents (%)	60 selected physicians (%)
Gender		
Male	67.6	66.7
Female	32.4	33.3
Delivery system		
Health centers	33.0	40.4
Medical group	22.9	22.8
Joint venture	20.1	22.8
IPA	24.0	14.0
Had training in the medical interview:		
(a) in medical school		
Yes	72.5	70.2
No	27.5	29.8
(b) in continuing medical education		
Yes	53.4	59.6
No	46.6	40.4
Years in primary care practice		
Mean	13.97	16.02
S.D.	9.14	10.34
Mean PPOS score (S.D.)	\bar{x}	\bar{x}
Total	4.802 (0.47)	4.771 (0.48)
Sharing	4.621 (0.63)	4.581 (0.72)
Caring	4.984 (0.47)	4.961 (0.46)

sample of respondents. A total of 670 patients returned their questionnaires (return rate = 67%). Respondents were eliminated if they did not fully answer the PPOS and PSQ measures, if they had not had at least one visit with the physician, or if they did not consider him/her their regular physician. This resulted in a working sample of 453 patients. The patient sample contains a broad cross-section of those served by HPHC. Table 2, which contains the characteristics of the entire responding sample ($n = 670$) and the working sample ($n = 453$), indicates that the smaller sample respondents used for the analyses very closely approximated those of the larger sample returning questionnaires. Although the PPOS scores of the patients were somewhat lower than those of the physicians overall, the distribution of their scores (like the physicians) was also essentially normal. In both the physician and the patient samples, the internal reliability of the scores was satisfactory for Total and Sharing, but lower for Caring (for patients: 0.79, 0.72, and 0.52 respectively for Total, Sharing, and Caring; for physicians: 0.73, 0.67, 0.52).

Three physicians were eliminated because they had no responding patients in the working sample,

resulting in a physician n of 57. Of the remaining 57 physicians, the number of patients per doctor ranged from 1 to 15. We considered the possibility that the response rate per physician might be related to patient satisfaction (i.e. that patients of the most satisfying physicians might be more likely to return their questionnaires), thereby leading the analysis to over-represent the responses of satisfied patients. However, the correlation between the PSQ (Patient Satisfaction Questionnaire) and response rate per physician was found to be small and non-significant ($r = -0.04$). Nevertheless, to account for the cluster effect of patients sharing the same physician, when possible we used logistic regression models with parameter estimation by the Generalized Estimating Equations (GEE) approach.

3.2. PPOS scores and characteristics of doctors and patients

Classifying physicians according to their characteristics, we performed separate t -tests (or one way analyses of variance as appropriate) using PPOS Total scores, Sharing, and Caring as the dependent variables (see Table 3). We found that female

Table 2
Characteristics of patient respondents

		Working sample (%)	All respondents (%)
Gender	Male	45.2	44.7
	Female	54.8	55.3
Ethnicity	White	92.6	92.6
	Hispanic	0.7	0.7
	Black	3.7	3.9
	Asian	2.2	1.8
	Other	0.8	1.0
Age (years)	20–39	18.6	19.8
	40–54	25.4	25.6
	55–70	33.0	32.3
	> 70	22.9	22.3
Health is excellent	Definitely true	15.2	15.0
	Mostly true	62.4	62.4
	Not sure/false	22.4	22.6
Length of plan membership (years)	< 3	31.5	31.3
	3–5	14.9	14.4
	> 5	53.6	54.3
Education	High School or less	35.6	34.3
	Some college	22.7	21.8
	College graduate	21.5	22.4
	Graduate education	20.2	21.4
Length of Relationship with Primary Care Physician	< 1 year	10.0	15.8
	1–3 years	23.6	23.7
	3–5 years	16.7	15.5
	5–7 years	13.6	12.4
	> 7 years	36.1	32.6
Reason for seeing primary care physician	Assigned	13.8	12.5
	Picked from list	28.0	25.2
	Recommended	42.4	39.2
	Other	15.7	23.0
Switched physicians	Yes	24.4	29.4
	No	75.6	70.6
Mean PPOS Score (S.D.)		\bar{x}	\bar{x}
	Total	4.23 (0.76)	4.26 (0.75)
	Sharing	4.25 (0.97)	4.28 (0.97)
	Caring	4.21 (0.71)	4.23 (0.69)

physicians were significantly more patient centered (on Total and Caring scores), as were those physicians who had taken interviewing courses in medical school. While years in practice was significantly related to Total and Sharing scores, physicians with 11–20 years of practice were less patient-centered than their newer and more experienced colleagues.

We classified patients according to their characteristics and performed a parallel set of analyses (see Table 4). As in the physician sample, female patients were significantly more patient centered than males. In addition, younger patients and those with more education were also significantly more patient cen-

tered. Because these three patient characteristics were significantly inter-correlated, we fit several multi-factorial ANOVA models to determine the independent relationship of gender, age, and education to PPOS. We found that each variable retained its significant association after controlling for the others.

3.3. PPOS scores, fit, and satisfaction

We performed a set of preliminary analyses relating Total PPOS, Sharing, and Caring scores to patient satisfaction. In each of these analyses, Shar-

Table 3
Relationship of physician characteristics with orientation and satisfaction

	Total		Sharing		Caring		PSQ	
	\bar{x}	<i>t</i>	\bar{x}	<i>t</i>	\bar{x}	<i>t</i>	% perfect score	χ^2
Gender								
Male	4.75	2.30*	4.56	1.69	4.93	2.31*	34.7	0.95
Female	4.92		4.74		5.10		39.4	
Delivery system								
Health centers	4.94	2.94*	4.79	2.70*	5.08	1.62	38.6	4.57
Medical group	4.79		4.62		4.97		40.4	
Joint Venture	4.74		4.51		4.96		34.2	
IPA	4.68		4.48		4.88		25.8	
Had interview training in school								
Yes	4.87	2.88**	4.71	3.13**	5.01	1.57	36.3	0.03
No	4.64		4.39		4.89		35.5	
Had interview training as CME								
Yes	4.84	0.95	4.69	1.56	4.99	0.16	36.2	0.01
No	4.77		4.54		4.99		35.9	
Years in primary care practice		<i>F</i>		<i>F</i>		<i>F</i>		
10 or less	4.89	4.16*	4.74	4.24*	5.04	1.71	35.7	7.82*
11–20	4.69		4.47		4.91		41.4	
21 or more	4.91		4.76		5.06		25.9	

* $P < 0.05$; ** $P < 0.01$.

ing scores predicted satisfaction considerably better than Caring. Given the lower association of Caring to satisfaction (and therefore its tendency to dilute the relationship of Total score to satisfaction), and its lower internal consistency, we decided to conduct all further analyses of satisfaction using physicians' and patients' Sharing scores only.

The distribution of the patients' satisfaction (PSQ) scores was considerably skewed (mean = 4.34 on a five-point scale), with 35% of the patients giving their physicians a perfect mean score of 5.0. As a result, we decided to treat satisfaction as a dichotomous variable (a perfect score of 5.0 vs. less than 5.0). Table 3 indicates that none of the patient variables, gender, age, education, or patient orientation, was significantly associated with satisfaction. Among the physicians, only years practiced was significantly related to satisfaction; physicians with 11–20 years of practice had higher satisfaction ratings than either their newer or more experienced colleagues.

We tested the main hypotheses concerning the independent and joint effects of doctors' and patients' orientations (using Sharing scores) on satisfaction (using dichotomized PSQ scores) in two ways.

First, we split the doctors' and patients' Sharing scores into thirds according to the patients' distribution, generating nine categories (see Table 5). The diagonal cells (top left to bottom right) represented congruent (i.e. matched) pairs, and the off-diagonal cells represented non-congruent pairs (the upper right cells containing pairs in which the doctors was more patient-centered; the lower left cells containing pairs in which the patients were more patient-centered).

Consistent with the prediction that patient centered physicians would generate high satisfaction, for each row (i.e. at each level of patient Sharing) satisfaction levels were highest for the patient centered physicians. A chi-square test indicated that the most patient-centered physicians were significantly higher in satisfaction than either of the other two groups ($\chi^2 = 6.44$; $P < 0.05$).

Testing the fit hypothesis by comparing the diagonal to the off-diagonal cells, we found that satisfaction was high both on the diagonal and above it (where doctors were more patient centered than their patients). However, satisfaction was significantly lower in the below diagonal cells (where patients

Table 4
Relationships of patient characteristics with orientation and satisfaction

	Total		Sharing		Caring		PSQ	
	\bar{x}	<i>t</i>	\bar{x}	<i>t</i>	\bar{x}	<i>t</i>	% perfect score	χ^2
Gender								
Male	4.11	3.21**	4.14	2.30*	4.08	3.64***	31.4	3.63
Female	4.34		4.35		4.32	4.54	40.0	
Age (years)		<i>F</i>		<i>F</i>		<i>F</i>		
20–39	4.40	19.12***	4.56	21.92***	4.24	10.71***	33.7	5.47
40–54	4.56		4.64		4.49		33.6	
55–70	4.10		4.10		4.10		32.5	
> 70	3.89		3.75		4.01		45.6	
Health is excellent								
Definitely true	4.38	3.63*	4.52	6.50**	4.24	0.60	42.0	1.39
Mostly True	4.25		4.28		4.22		35.3	
Not sure/false	4.08		3.99		4.14		33.7	
Length of plan membership (years)								
< 3	4.15	1.43	4.13	2.55	4.17	0.38	38.3	0.79
3–5	4.24		4.22		4.26		32.4	
> 5	4.29		4.36		4.23		35.0	
Education								
High school or less	3.87	23.97***	3.78	25.62***	3.95	12.26***	37.5	2.21
Some college	4.27		4.27		4.27		41.0	
College graduate	4.52		4.64		4.41		33.0	
Graduate education	4.50		4.63		4.35		32.3	
Reason for seeing current doctor								
Assigned	4.05	1.71	4.06	1.47	4.27	0.14	41.9	5.01
Picked from list	4.31		4.38		4.21		29.2	
Friend recommended	4.14		4.15		4.21		29.9	
Doctor recommended	4.30		4.30		4.18		38.7	
Convenient times	4.26		4.19		4.17		39.4	
Length of relationship (years)								
< 1	4.39	1.02	4.52	1.88	4.27	0.14	41.9	5.01
1–3	4.29		4.36		4.21		29.2	
3–5	4.16		4.12		4.21		29.9	
5–7	4.15		4.11		4.18		38.7	
> 7	4.20		4.22		4.17		39.4	
Switched physicians		<i>t</i>		<i>t</i>		<i>t</i>		
Yes	4.18	2.40*	4.18	2.48*	4.17	1.70	36.2	0.00
No	4.36		4.42		4.30		36.3	

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

were more patient-centered than their doctors) than either the diagonal (well-matched) cells ($\chi^2 = 4.78$; $P < 0.05$) or the above diagonal cells ($\chi^2 = 8.98$; $P < 0.01$).

To take advantage of the continuous nature of PPOS scores and utilize doctor–patient discrepancy scores as a measure of congruence, we fit a series of logistic regression models. Parameters were esti-

mated using Generalized Estimating Equations (GEE) via the SAS version 6.12 GENMOD procedure, specifying an exchangeable correlation matrix in which clusters correspond to doctors. This procedure accounts for within-doctor correlation and ensures that the precision of parameter estimates is not overstated.

Table 6 summarizes the logistic regression find-

Table 5
Percent maximum satisfaction by doctor and patient sharing categories

Patient sharing score	Doctor sharing score		
	Low	Medium	High
Low	42% (24) ^a	33% (67)	44% (73)
Medium	30% (33)	37% (59)	44% (61)
High	23% (30)	22% (50)	36% (58)

^a Numbers in parentheses denote number of doctor–patient pairs in the cell.

ings. In model 1 doctor Sharing score was entered alone. This variable was of borderline statistical significance in predicting patient satisfaction, although the (positive) sign of its parameter estimate indicates that the probability of maximum patient satisfaction was higher when the doctor's Sharing score was higher (i.e. when the doctor was more patient centered). For model 2 in which patient's Sharing score alone was entered, the probability of maximum patient satisfaction is significantly lower as the patient's sharing score is higher, indicating that patients who were less interested in information and decision making input were more satisfied. In model 3, we entered the *difference* between the doctor and patient's Sharing scores, and it was a strong, significant predictor of patient satisfaction. The positive parameter estimate indicates that the patient is more likely to be highly satisfied when the doctor's Sharing score exceeds that of the patient. For instance, the 25th, 50th and 75th percentiles of differences in sharing were -0.44 , -0.32 , and 1.18 , respectively, and the corresponding predicted probabilities of maximum satisfaction are 31.5, 35.3, and 39.8%.

To test explicitly whether satisfaction is deter-

mined by absolute rather than signed (Sharing) difference, we fit another set of GEE logistic models. To allow for the assessment of non-linearity, the first such model included both difference and squared difference as predictors. The results showed that the coefficient for difference was significant (and positive). The coefficient for squared difference was not significant, indicating no inflection (i.e. that the signed difference remained positive and significant).

4. Discussion

This study asks what personal characteristics are related to patient-centeredness among physicians and patients, and then addresses two main questions: (1) Is a patient centered orientation among doctors associated with greater patient satisfaction? and (2) Does congruence of orientations contribute to satisfaction in doctor–patient pairs?

The findings of this study are consistent with the literature on patient-centeredness among patients. Patients who are younger, better educated, and female are likely to value information and want to be actively involved in the treatment process. Among physicians, the finding that females were more patient centered also confirms the findings of others [24,25]. However, our findings concerning years of experience contradict the stereotype that patient centeredness is the exclusive domain of younger physicians socialized under new training models. The data indicate that the mean Sharing scores of the newer and older clinicians were almost identical, and that physicians with an intermediate length of practice (11–20 years) had the highest patient-centered scores.

An unexpected finding was that physicians' orientations toward power and decision making (Sharing scores) were more consistently related to patient satisfaction (and respondent characteristics)

Table 6
Logistic regressions linking satisfaction to doctor and patient orientations

Model	Independent variable	GEE regression coefficient estimate	P values for robust z-statistic
1	Doctor sharing	0.2859	0.095
2	Patient sharing	-0.2039	0.027
3	Difference in sharing (doctor–patient)	0.2103	0.009

than those dealing with the physician attention to emotions and lifestyle (Caring). Using Sharing scores, we did find support for both of our hypotheses. Confirming the first hypothesis about physician orientation and satisfaction, the patients of patient-centered (high Sharing) physicians were more satisfied. As to the second hypothesis concerning fit, satisfaction was high among well matched patient–doctor pairs at each level of physician orientation. Yet, the levels of satisfaction for the two different kinds of mismatches (in which physicians were either more or less patient-centered than their patients) were strongly asymmetric. Averaging satisfaction across the three diagonal cells in Table 5, patients who were paired with a physician whose orientation was congruent gave them the highest possible rating 37.4% of the time. This figure was slightly *higher* (40.3%) for pairs in which the doctor was more patient-centered than the patient, but considerably *lower* (24.6%) when the patient was more patient centered than the doctor. These findings indicate that it is not congruence or its lack that affects satisfaction, but rather the direction of the discrepancy. Patient-centered doctors receive strong satisfaction ratings even when they are treating patients whose orientations are dissimilar. Yet the pairing of a traditional, paternalistic physician with a patient who desires involvement generates lower levels of satisfaction.

There are three possible explanations for these findings. First, it may be that physicians who believe in patient-centeredness exhibit a style that is satisfying because it is open and sharing. Patients, even those who do not agree with its assumptions, may be won over by the interpersonal manner which this orientation generates. A second explanation is that patients who take a doctor centered orientation are easily satisfied, that they respect their doctors so much that they rate them highly regardless of whether they are ‘truly’ satisfied. This interpretation is not supported, however, by the anomalous finding in Table 5 that doctor-centered patients gave intermediate physicians relatively lower scores.

A third interpretation highlights the difference between attitude (physicians’ practice orientation) vs. behavior (physicians’ style). The PPOS measures the way that physicians think about their roles, the way that they ‘automatically’ enact them – all other things equal. We propose that patient centered physi-

cians are more sensitive to the perceived needs of their patients, that they are good at identifying the extent to which their patients want to receive information and to be involved in decision making. According to this interpretation, patient centeredness does not translate into a single satisfying style (as proposed in the first explanation). Rather patient-centered practitioners use a flexible style in which they *adapt* to the needs of their patients (perhaps consciously, perhaps not), thereby satisfying those patients whose basic orientations match or do not match theirs.

5. Practice implications

Although the data collected in this survey do not allow this last explanation to be tested, the implications of this interpretation are important. If patient-centeredness translates to a pleasing style of interaction, a ‘one-size fits all’ approach to patient relations, then the key components of that style ought to be identified, taught, and reinforced among all medical practitioners. If, however, a patient-centered orientation translates into adaptability to patient needs, educators do not need to endorse a specific approach or teach a specific set of behavioral skills. Instead, they need to sensitize practitioners to the value of being attentive to the varying styles, concerns, and values that patients bring with them; and to teach practitioners ways of identifying patient needs and adapting their behaviors to fit those of the people whom they serve.

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Appendix A. Patient–provider orientation scale items (answered by all respondents on a six-point (strongly agree/strongly disagree) scale

- (1) The doctor is the one who should decide what gets talked about during a visit.
- (2) Although health care is less personal these

days, this is a small price to pay for medical advances.

(3) The most important part of the standard medical visit is the physical exam.

(4) It is often best for patients if they do not have a full explanation of their medical condition.

(5) Patients should rely on their doctors' knowledge and not try to find out about their conditions on their own.

(6) When doctors ask a lot of questions about a patient's background, they are prying too much into personal matters.

(7) If doctors are truly good at diagnosis and treatment, the way they relate to patients is not that important.

(8) Many patients continue asking questions even though they are not learning anything new.

(9) Patients should be treated as if they were partners with the doctor, equal in power and status.

(10) Patients generally want reassurance rather than information about their health.

(11) If a doctor's primary tools are being open and warm, the doctor will not have a lot of success.

(12) When patients disagree with their doctor, this is a sign that the doctor does not have the patient's respect and trust.

(13) A treatment plan cannot succeed if it is in conflict with a patient's lifestyle or values.

(14) Most patients want to get in and out of the doctor's office as quickly as possible.

(15) The patient must always be aware that the doctor is in charge.

(16) It is not that important to know a patient's culture and background in order to treat the person's illness.

(17) Humor is a major ingredient in the doctor's treatment of the patient.

(18) When patients look up medical information on their own, this usually confuses more than it helps.

References

- [1] Byrne PS, Long BEL. Doctors talking to patients. London: Her Majesty's Stationery Office, 1976.
- [2] Henbest RJ, Stewart MA. Patient-centeredness in the consultation. 1. A method for measurement. *Fam Pract* 1989;6:249–59.
- [3] Pew-Fetzer Task Force, Tresolini CP. Health professionals education and relationship-centered care. San Francisco, CA: Pew Health Professions Commission, 1994.
- [4] Biesecker AE, Biesecker TD. Using metaphors to characterize doctor–patient relationships: Paternalism versus consumerism. *Health Commun* 1993;5:41–58.
- [5] Kaplan SH, Greenfield S, Gandek B, Rogers WH, Ware Jr. JE. Characteristics of physicians with participatory decision-making styles. *Ann Intern Med* 1996;124:497–504.
- [6] Laine C, Davidoff F. Patient-centered medicine. A professional evolution. *J Am Med Assoc* 1996;275:152–6.
- [7] Stewart M. Effective physician–patient communication and health outcomes: A review. *Can Med Assoc J* 1995;152:1423–33.
- [8] Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR. Patient-centered medicine: transforming the clinical method. Thousand Oaks, CA: Sage, 1995.
- [9] Putnam SM, Lipkin Jr. M. The patient-centered interview: research support. In: Lipkin Jr. M, Putnam SM, editors, *The medical interview*. New York: Springer, 1995, pp. 530–7.
- [10] Levenstein JH, Brown JB, Weston WW, Stewart M, McCracken MC, McWhinney I. Patient-centered clinical interviewing. In: Stewart M, Roter D, editors, *Communicating with medical patients*. Newbury, CA: Sage, 1989, pp. 107–20.
- [11] Irish J. Deciphering the physician–older patient interaction. *Int J Psychiatr Med* 1997;27:251–67.
- [12] Johnson TM, Hardt EJ, Kleinman A. Cultural factors in the medical interview. In: Lipkin Jr. M, Putnam SM, Lazare A, editors, *The medical interview*. New York: Springer, 1995, pp. 153–62.
- [13] Haug MR, Ory ML. Issues in elderly patient–provider relationships. *Res Aging* 1987;9:3–44.
- [14] Hibbard JH, Weeks EC. Consumerism in health care. *Med Care* 1987;25:1019–32.
- [15] Starfield B, Wray C, Hess K, Gross R, Birk PS, D'Lugoff BC. The influence of patient–practitioner agreement on outcome of care. *Am J Public Health* 1981;71:127–31.
- [16] Hall JA, Irish JT, Roter DB, Ehrlich C, Miller LH. Gender in medical encounters: An analysis of physician and patient communication in a primary care setting. *Health Psychol* 1994;13:384–92.
- [17] Goldberg R, Guadagnoli E, Silliman RA, Glicksman A. Cancer patients' concerns: Congruence between patients and primary care physicians. *J Cancer Educ* 1990;5:193–9.
- [18] Friedin RB, Goldman L, Cecil RR. Patient–physician concordance in problem identification in the primary care setting. *Ann Intern Med* 1980;93:490–3.
- [19] Brody DS, Miller SM, Lerman CE, Smith DG, Lazaro CG, Blum MJ. The relationship between patients' satisfaction with their physicians and perceptions about interventions they desired and received. *Med Care* 1989;27:1027–35.
- [20] Krupat E, Putnam SM. Studying the congruence of doctors' and patients' attitudes about medical practice. In: American Academy on Physician and Patient. San Diego, May, 1995, Paper presentation.
- [21] Krupat E, Putnam SM, Yeager C. The fit between doctors and patients: Can it be measured? *J Gen Intern Med* 1996;11:134.

- [22] McLeod PJ, Tamblyn R, Benaroya S, Snell L. Faculty ratings of resident humanism predict patient satisfaction ratings in ambulatory care medical clinics. *J Gen Intern Med* 1994;9:321–6.
- [23] Webster G. Final report on the patient satisfaction questionnaire project. Philadelphia, PA: American Board of Internal Medicine, 1989.
- [24] Weisman CS, Teitelbaum MA. Physician gender and the physician–patient relationship: Recent evidence and relevant questions. *Soc Sci Med* 1985;20:1119–27.
- [25] Roter D, Hall J. Gender effects in medical communication. Unpublished manuscript. Baltimore, MD, 1998.