Original Article

Dynamics of doctor–patient relationship: A cross-sectional study on concordance, trust, and patient enablement

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ABSTRACT

Background: The rapid pace of medical advances coupled with specialization and super-specialization, is eroding the traditional doctor–patient relationship. **Objective:** (a) To study the determinants of core dimensions, such as, concordance, trust, and enablement in a doctor–patient relationship; (b) to explore associations, if any, among these core dimensions. **Materials and Methods:** A cross–sectional study design with both quantitative and qualitative methods was employed. One hundred and ninety-eight outdoor patients were interviewed as part of the quantitative study. Three dimensions of the doctor–patient relationship, that is, physician patient concordance, trust in physician, and patient enablement were assessed using validated tools. Focus group interviews using an open-ended format among few physicians was carried out as part of the qualitative study. **Results:** In the quantitative analysis most of the sociocultural factors did not show any significant association with the doctor–patient relationship. However, gender was significantly and strongly associated with trust in the physician. Female patients showed a much lower trust in the physician (50%) as compared to male patients (75%) (OR = 0.33, 95% CI 0.17 – 0.64, Chi Sq = 12.86, P = 0.0003). A qualitative study revealed language and culture, alternative medicines, commercialization of medicine, and crowding at specialist and super-specialist clinics as barriers to a good doctor–patient relationship. Better concordance was associated with improved trust in the doctor (OR = 5.30, 95% CI 2.06 – 13.98, Chi Sq = 14.46, P = 0.0001), which in turn was associated with improved patient enablement (OR = 3.89, 95% CI = 1.60 - 9.64, Chi Sq = 10.15, P = 0.001). **Conclusion:** Good doctor–patient concordance (agreement) leads to better trust in the physician, which in turn leads to better patient enablement, irrespective of the sociocultural determinants.

Key words: Concordance, doctor, enablement, patient, trust

INTRODUCTION

Doctors and patients, even if they come from the same social and cultural background, view ill health in very different ways.[1] The challenge is how to ensure some *communication* between them in day-to-day patient care. Rapid advances in medical technology pose further challenges. There has been a shift in recent years in how doctors collect information about underlying disease processes.[2] The traditional method was by listening to the patients' symptoms and then searching for objective physical

signs. Increasingly, however, modern medicine has come to rely on a battery of tests to come to a diagnosis. The underlying pathological processes are now firmly identified by blood tests, X rays, scans, and other investigations carried out in specialized laboratories or clinics.

As Kleinman *et al.* put it, the modern doctor's view of clinical reality 'assumes that biological concerns are more basic, 'real', clinically significant, and more interesting than psychological and sociocultural issues'.[3]

Cassel uses the word 'illness' to stand for 'what the patient feels when he goes to the doctor', and 'disease' for 'what he has on the way home from the doctor's office'. He concludes: 'Disease, then, is something an organ has, and illness is something man has'.[4]

Specialization and super-specialization is producing a breed of doctors whose professional aim is to know more and more about less and less, and paradoxically, they enjoy a

higher status than the generalists. They also act as role models for medical students to emulate.

These developments are putting a further strain on the fragile doctor–patient relationship, as evidenced by the increasing trend in medical litigations.

With rapid social changes on one hand and advances in medical technology on the other hand, studies on the changing doctor–patient relationship, particularly in developing countries, are indicated. Most developing countries comprise of many social and cultural entities, with diverse languages, customs, religion, and so on, which provide ample opportunity to study how these sociocultural factors affect the doctor–patient relationship.

The findings of such studies will provide some inputs for improving the communication between the patient and doctor. This in turn will have a positive impact on patient care and management and hopefully reverse the rising trend of medical litigations.

However, conceptualization of various dimensions of the doctor–patient relationship for an objective study poses certain difficulties. As the doctor–patient interaction does not take place in a vacuum, but in different social and cultural environment, it may be influenced by sociocultural factors. Besides, there is no consensus about the importance of various dimensions of the doctor–patient relationship. For example, the role of doctor–patient '*concordance,*' which has been used to denote an '*agreement*' between physician and patient[5] is hotly debated.[6-8] A comprehensive review by Vermiere *et al.*,[9] which spans three decades of research on patient adherence to treatment, while conceding that the concordance model points to the importance of patient's agreement and harmony in the doctor–patient relationship, revealed lack of consensus on the measurement of compliance and definition of adherence. These limitations preclude assuming that concordance leads to compliance or adherence. The backbone of the concordance model, according to Vermiere *et al.*,[9] has the patient as a decision-maker and a cornerstone in professional empathy — however, as concordance is not the same as compliance or adherence, more high-quality studies are needed to assess the determinants of non-compliance. Bissell *et al.*[10] state that the concept known as *concordance* is attracting increasing interest in health services research. In a qualitative study among diabetics they have found that patients sought greater understanding and appreciation by health professionals of the subjective aspects of living with diabetics.

Adler[11] goes a step further when he discusses the sociophysiology of caring in the doctor–patient relationship.

He infers that besides the justification of a caring doctor patient–relationship on humane grounds, it can also be justified as a direct physiological investment. He speculates that caring as a sociophysiological engagement may provide a unitary concept for understanding the health consequences of social support and the doctor–patient relationship for both doctor and patient.

In the present study our research question is, what are the sociocultural determinants of three dimensions (concordance, trust, and patient enablement) of the doctor–patient relationship and also what are the inter-relations between these three? We defined doctor–patient concordance as an agreement measured by a set of questions suggested by Kerse *et al.*[5] Similarly, trust was measured in the manner suggested by Anderson and Dedrick.[12] We measured patient enablement (empowerment) by the Enablement Index suggested by Howie *et al.*[13]

MATERIALS AND METHODS

Study site and context
The study was carried out in a medical college teaching hospital among outdoor patients. The college was situated in the Industrial Township of Pimpri, Pune, India (Total population about 17 lacs). Due to rapid industrialization leading to rural–urban migration, the outpatients were comprised of a large number of migrant populations from rural areas. The timeframe to complete the data collection and entry was two months. Forty days was set aside for data collection, and 20 days for data entry. The study was conducted during May – June, 2010. A cross-sectional study design was used. Both quantitative and qualitative methods were employed.

A pilot study was carried out, before the main study, to ascertain the number of patients who could be interviewed properly in a day. Based on the findings of the pilot study the final sample size and methods of sampling were decided. For example, it was found that in a day, five patients could be interviewed properly, so given the 40 days for data collection, a sample size of 200 subjects was planned.

During the data collection period of 40 consecutive working days, five consecutive patients were approached daily in the waiting room of the Outpatient Department (OPD) of the medical college hospital. They were explained the purpose of the study and then invited to give a written informed consent to participate in the study. The respondents were interviewed using the survey instruments immediately after their consultation with the doctor. Ethical clearance was obtained from the Institutional Ethical Committee of the Medical College.

Quantitative methods

Three dimensions of the doctor–patient relationship were examined, that is, physician–patient concordance (agreement), trust, and patient enablement. Measurement techniques for these aspects are given below.

Study instruments

Part I of the survey instrument elicited health, demographic, and sociocultural information. Sociocultural factors such as age, sex, socioeconomic status, urban–rural background, gender, belief in home / alterative remedies, religion, literacy, and mother tongue were also recorded in part 1 of the survey instrument.

Part II of the survey instrument assessed various aspects of the doctor–patient relationship, such as:

Patient-Physician concordance[5]

The agreement between doctor and patient was assessed with the following questions:
- "To what extent do you think the doctor understands why you came in today?"
- "How well do you think the doctor understood you today?"
- "To what extent did you and the doctor agree about the main problem or need today?"
- "To what extent did you and the doctor agree on what to do about the problem or need?"
- "To what extent do you and the doctor agree on what part you play in making decisions about your health?"
- "To what extent do you and the doctor agree on who is responsible for the different aspects of care?"

The response to each question were recorded on a Likert Scale ranging from 0 (none) to 4 (completely). Results for all the six questions were then summed to give a cumulative score between 0 and 6, with higher scores indicating greater concordance. In the present study those scoring 5 and 6 were taken as having complete agreement or concordance and the rest as partial concordance.

Trust in physician

Trust in the doctor was measured by the Trust in Physician Scale,[12] which yielded a score ranging from lowest to highest on the Likert Scale, with the higher scores indicating more trust. In the present study, the highest two possible values were taken as complete trust in the physician and the rest of the scores were categorized as partial trust.

Patient enablement

This was measured by using the Enablement Index.[13] This index assessed whether the doctor enabled the patient toward self-care. This index, validated in primary care against patient satisfaction, asked whether the patients were more or less able to cope with life, understood and coped with their illness, and helped themselves as a result of the consultation with the physician. The responses were scored from 1 to 4, with higher scores meaning more enablement. Here also, the highest two possible scores were taken as complete enablement, and the rest as partial enablement.

Data entry and statistical analysis

Data entry and statistical analysis were carried out on EPI Info software (developed by WHO and CDC Atlanta). Associations were explored using the Chi square and ODDS ratio with Cornfields 95% confidence intervals for the categorical data.

Qualitative methods

The following qualitative methods were used:

Participant observation

Besides interviewing the patients, the patients were also observed unobtrusively, while they interacted among themselves in the waiting rooms of the Outpatient Departments, or while standing in queue for registration. Some were also observed during consultation with the doctor.

Focus group discussion

Twelve senior physicians, with at least 20 years experience in clinical practice, were approached to take part in a session of focus group discussion. Out of these, 10 physicians agreed to participate in the focus group discussion on doctor–patient relationship. The senior investigator acted as a moderator during this focus group discussion and the second investigator took notes regarding the main themes that emerged during the discussion.

RESULTS

Response rate

Out of the 200 subjects approached, 198 agreed to participate in the study, giving a response rate of 99%.

Demographic profile

A total of 198 outdoor patients were surveyed. The mean age of the respondents was 29.43 years with an SD of 17.23 years. Out of the 198 participants in the study, 110 (55.6%) were females, and 88 (44.4%) were males. One hundred and seven (54%) did not have an education beyond school level, 71 (35.9%) had completed graduation, and 20 (10.1%) were postgraduates. The majority of 141 (71.21%) subjects belonged to the socioeconomic status 4 and 5 (Kuppuswamy scale); 82.82% were Hindus, 11.11% were Muslims, and the rest belonged to other religions. Most, 72.73%, hailed from urban areas and the rest had a rural background.

Physician patient concordance

Out of the total respondents, 169 (85.35%) had complete concordance or agreement, with their physician. The

remaining 14.65% had varying degrees of disagreement with their doctors regarding their medical and health problems.

Trust in physician

This was less than the physician–patient agreement. Out of the total of 198 respondents, 121 (61.11%) had complete trust in their physicians; the rest (38.89%) had varying degrees of reservations regarding complete trust in their treating doctors.

Patient enablement

This measured the ability of the patient to cope with his illness after consultation with the doctor. In spite of a slightly low score on the overall trust in a physician, a larger proportion, 84.85%, reported that they were completely able to cope with their illness after medical consultation.

Association of the sociocultural factors with physician–patient concordance

This is shown in Table 1. Males tended to have a better concordance with their doctors (88.64%) compared to females (82.73%). Higher socioeconomic status was related to better concordance. Urban residents had better concordance than rural residents. Surprisingly, those who believed in alternative medicine had more concordance than those who did not. People with higher education also showed better agreement with their doctors. Another surprising finding was that having the same mother tongue as the doctor, did not show better concordance. However, none of these differences were statistically significant at $P < 0.05$.

Sociocultural factors and trust in physician

This is shown in Table 2. It will be seen that females had significantly less trust in their physicians compared to males ($P = 0.003$; Odds Ratio = 0.33 with 95% CI 0.17 – 0.64). Patients from the lower socioeconomic status had higher trust (63.12%) compared to patients from the higher socioeconomic status (56.14%). Urban residents had higher trust (63.80%) compared to rural residents (53.70%). People who shared a common mother tongue with the doctor had a higher trust (62.25%) than those who did not (57.44%). However, apart from gender, association with other determinants did not reach statistical significance [Table 2].

Impact of sociocultural factors on patient enablement

This is shown in Table 3. After consultations with the physician, the males were more enabled (88.64%) compared to the females (81.82%). Patients from the lower socioeconomic group were more benefited from the doctor–patient interaction (88.65%) compared to those in higher socioeconomic group (75.44%) — this difference was statistically significant ($P = 0.03$, Odds Ratio = 0.39, 95% CI 0.17 – 0.94). Other sociocultural factors were only marginally related to trust in the physician.

Whether good physician–Patient concordance leads to better trust in physician?

The answer to this question is explored in Table 4. It will be seen from the Table that complete Physician Patient Concordance is associated with complete trust in the

Table 1: Association of the sociocultural determinants with doctor–patient concordance

Determinants	Full concordance (%)	Partial concordance (%)	Total (%)	Odds ratio	95% C I	*P* value (Chi Sq)
Gender						
Female	91 (82.73)	19 (17.27)	110 (100%)	0.61	0.25 – 1.49	0.24
Male	78 (88.64)	10 (11.36)	88 (100)			
Socioeconomic status						
High (I, II, III)	50 (87.72)	7 (12.28)	57 (100)	1.32	0.49 – 3.65	0.7
Low (IV, V)	119 (84.4)	22 (15.6)	141 (100			
Residence						
Urban	126 (87.5)	18 (12.5)	144 (100)	1.79	0.72 – 4.39	0.16
Rural	43 (79.63)	11 (20.37)	54 (100)			
Belief in alternative medicine						
Yes	53 (91.38)	5 (8.62)	58 (100)			0.27
No	63 (84)	12 (16)	75 (100)			
Partly	53 (81.54)	12 (18.46)	65 (100)			
Religion						
Hindu	142 (86.59)	22 (13.41)	164 (100)			0.41
Muslim	17 (77.27)	5 (22.73)	22 (100)			(Fisher
Others	10 (83.33)	2 (16.67)	12 (100)			exact)
Education						
School or none	88 (81.48)	20 (18.52)	108 (100)	0.49	0.19 – 1.21	0.13
College	81 (90)	9 (10)	90 (100)			(Yates)
Mother tongue						
Same as doctor	127 (84.11)	24 (15.89)	151 (100)	0.63	0.29 – 1.89	0.51
Different	42 (89.36)	5 (10.64)	47 (100)			

Table 2: Association of some sociocultural determinants with trust in physician

Determinants	Full trust (%)	Partial trust (%)	Total (%)	Odds ratio	95% CI	P value (Chi Sq)
Gender						
Female	55 (50.00)	55 (50.00)	110	0.33	0.17 – 0.64	0.0003
Male	66 (75.00)	22 (25.00)	(100%)			
			88 (100)			
Socioeconomic status						
High (I, II, III)	32 (56.14)	25 (43.86)	57 (100)	1.32	0.49 – 3.65	0.36
Low (IV, V)	89 (63.12)	52 (36.88)	141 (100			
Residence						
Urban	92 (63.89)	52 (36.11)	144 (100)	1.53	0.77 – 3.02	0.19
Rural	29 (53.70)	25 (46.30)	54 (100)			
Belief in alternative medicine						
Yes	34 (58.62)	24 (41.38)	58 (100)			0.89
No	47 (62.67)	28 (37.33)	75 (100)			
Partly	40 (61.54)	25 (38.46)	65 (100)			
Religion						
Hindu	102 (62.20)	62 (37.80)	164 (100)			0.50
Muslim	11 (50.00)	11 (50.00)	22 (100)			
Others	8 (66.67)	4 (33.33)	12 (100)			
Education						
School or none	67 (62.04)	41 (37.96)	108 (100)	1.09	0.59 – 2.01	0.76
College	54 (60)	36 (40)	90 (100)			
Mother tongue						
Same as doctor	94 (62.25)	57 (37.75)	151 (100)	1.22	0.60 – 2.50	0.55
Different	27 (57.44)	20 (42.56)	47 (1000)			

Table 3: Association of some sociocultural determinants with patient enablement

Determinants	Full enablement (%)	Partial enablement (%)	Total (%)	Odds Ratio	95% C I	P value (Chi Sq)
Gender						
Female	90 (81.82)	20 (18.18)	110 (100%)	0.5	0.24 – 1.39	0.18
Male	78 (88.64)	10 (11.36)	88 (100)			
Socioeconomic status						
High (I, II, III)	43 (75.44)	14 (24.56)	57 (100)	0.39	0.17 – 0.94	0.03
Low (IV, V)	125 (88.65)	16 (11.35)	141 (100)			
Residence						
Urban	122 (84.72)	22 (15.28)	144 (100)	0.96	0.36 – 2.49	0.93
Rural	46 (85.19)	8 (14.81)	54 (100)			
Belief in alternative med						
Yes	47 (81.03)	11(18.97)	58 (100)			0.37
No	67 (89.33)	8 (10.67)	75 (100)			
Partly	54 (83.08)	11 (16.92)	65 (100)			
Religion						
Hindu	139 (84.76)	25 (15.24)	164 (100)			0.96
Muslim	19 (86.36)	3 (13.64)	22 (100)			
Others	10 (83.33)	2 (16.67)	12 (100)			
Education						
School or none	90 (83.33)	18 (16.67)	108 (100)	0.77	0.32 – 1.81	0.51
College	78 (86.67)	12 (13.33)	90 (100)			
Mother tongue						
Same as doctor	125 (82.78)	26 (17.22)	151 (100)	0.57	0.18 – 1.70	0.27
Different	42 (89.36)	5 (10.64)	47 (100)			

Physician. The association is strong (ODDS ratio 5.30) and statistically highly significant ($P = 0.0001$).

Whether complete trust in the physician in turn leads to better patient enablement?

The answer to this question is given in Table 5. It will be seen that better trust in the physician was related to better patient enablement. Again the association is strong (ODDS ratio 3.89) and statistically highly significant ($P = 0.001$).

Results of the qualitative study
Participant observation

Some of the salient points noted during participant

Table 4: Association between physician–patient concordance and trust in physician

Concordance	Complete trust (%)	Partial trust (%)	Total (%)
Complete	113 (66.86)	56 (33.14)	169 (100)
Partial	8(27.59)	21 (72.41)	29 (100)
Total	121 (61.11)	77 (38.89)	198 (100)

Chi Square = 14.46, P = 0.0001, OR = 5.30, Cornfield's 95%; Confidence Limits 2.06 < OR < 13.98

Table 5: Association between trust in physician and patient enablement

Trust in physician	Complete enablement (%)	Partial enablement (%)	Total (%)
Complete	111 (91.74)	10 (8.26)	121 (100)
Partial	57 (74.03)	20 (25.97)	77 (100)
Total	168 (84.85)	30 (15.15)	198 (100)

Chi Square = 10.15, P = 0.001, OR = 3.89, Cornfield's 95%; Confidence Limits 1.60 < OR < 9.64

observations were as follows:
- Patients from urban areas, who also tended to have more numbers of schooling than their rural counterparts, appeared more at ease in the intimidating surroundings of a large teaching hospital.
- Patients from rural background found themselves out of their depth in the alien environment of a teaching hospital. They particularly found the referrals to different departments for investigations or consultations very confusing. This was obvious from the discussion that they had among themselves and their queries to the hospital staff.
- It was also observed during the doctor–patient consultations that people from the lower socioeconomic status and those from rural backgrounds were more passive compared to those from urban areas, with a better education. Male patients were more communicative with their doctors, who mostly happened to be males, compared to female patients.

Focus group discussion
- Some of the points that emerged during the focus group discussions were as follows:
- Little faith in the general physician: Doctors felt that patients, particularly from the urban areas, had little faith in the general physician. Even for minor ailments they sought specialist and super-specialist consultation. This led to crowding of specialist and super-specialist services. Moreover, due to their busy schedule, specialist doctors could not devote enough time in eliciting the personal and social history of the patients, which prevented building up a rapport and trust with the patient.
- Language and cultural barriers: In few cases, the doctors felt handicapped by language and cultural barriers in communicating with the patient.
- Alternative therapies: Doctors felt that those with a firm belief in alternative therapies did not have full faith in modern medicine and their practitioners.

- Increasing commercialization of medical practice: Some doctors voiced the concern that increased commercialization of medical practice was eroding the faith and trust of the common man in the medical profession.

DISCUSSION

Both patients and doctors differ in their beliefs, attitudes, and hopes. The art of medicine depends on the ability to acknowledge and respect these differences and treat every patient as an individual. The challenge for the doctor is to provide the patient with correct and sometimes complex information, and discuss management options with him/her or the caretaker; at the end of which appropriate and ethical decisions are undertaken, which are within the available resources.

In our study, although physician–patient concordance and patient enablement were both around 85%, trust in the physician, which was just above 60%, was the weakest link. Males had better concordance, trust, and enablement compared to females. Patients from a higher socioeconomic status showed better concordance and trust. Women patients tended to have significantly lower trust (50%) in their physicians than male patients (75%). This may have been due to their being more reticent with the doctor during the consultation, as was observed during participant observation. Gender biases in doctor–patient relationship have also been noted by other investigators.[14-16] Street *et al.*[17] have also found that physicians tended to use more partnership building with male patients.

The lack of trust in the physician, by almost 40% of the patients, has implications for the management of many illnesses, which require long-term treatment. An important example in developing countries is tuberculosis, where one of the major reasons for treatment failure and emergence of drug-resistant bacterial strains is poor compliance on

the part of the patient and treatment dropouts. Efforts should be made to ensure better trust in doctor–patient encounters. Although we should be cautious in assuming that concordance and trust means better compliance,[6-8] there is empirical evidence that patients reporting a higher level of trust in physicians are more likely to report continuity of care and compliance with medications.[5] Zolneirek and DiMatteo[18] in a meta-analysis found that communication in medical care was highly correlated with better patient adherence, and training physicians who communicated better, enhanced their patients' adherence to treatment. The UK's National Institute for Health and Clinical Excellence (NICE) guidelines states that adherence to treatment presumes an agreement between the prescriber and the patient about the prescriber's recommendations.[19]

An important finding in the present study, which has an implication for practical application, is that better doctor–patient concordance has a strong and highly significant association with trust in the physician, which in turn has a strong and highly significant relationship with patient enablement or empowerment. The key to patient empowerment is through better doctor–patient concordance or agreement.

Portmann, cited by Chin,[20] has compared the doctor–patient relationship to a marriage, where initial high hopes often obscure the possibility of disappointment, where subsequent unmet hopes can lead to a terrible loss of faith. This breakdown in trust has also prompted the suggestion of viewing the relationship purely as a contract sustained by pre-set terms and conditions in order to meet the minimum standards of care. Chin[20] argues that this approach is unfortunate and does not benefit patients, as much of the concerns regarding the weakening of the doctor–patient relationship stems from the threat posed by the rapid change in the healthcare system.

Some of the challenges in improving this concordance, and in turn the trust between doctor and patient, have been brought out in the qualitative inputs from focus group discussions among selected physicians. In brief, they are decreasing the importance of the general and family physician, language, cultural barriers (albeit no association has been revealed quantitatively in the present study), and alternative remedies, and increasing the commercialization of medical practice.

The current medical care environment is complex, including the rise of consumerism, increasing litigations, high-pressure marketing, easy access to medical information via internet, and poor access to reliable healthcare causing overcrowding in many medical centers. The interaction between anxious patients and busy doctors can lead to a lack of concordance and other communication gaps. Exposure to media reports of medical negligence can further erode the public trust in medicine as an institution, a trust that is declining during the last decade.[21]

To conclude, the doctor–patient relationship continues to be more in the realm of art rather than science. No measurement tool can capture every nuance of this complex relationship. Few evidence-based standards exist regarding the doctor–patient relationship. Most descriptions of the core dimensions of the doctor–patient relationship come primarily from conceptual analysis — even in this, consensus is lacking — and not from empirical research. Emanuel and Dubler[22] have suggested that the ideal doctor–patient relationship consists of the six C's: Choice, competence, communication, compassion, continuity, and (no) conflict of interest. However, the challenge is to operationalize as specific measures these six C's.

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