SOCIO-DEMOGRAPHIC INFLUENCERS ON PATIENT PROVIDER INTERACTIONS AND OUTCOMES: EMERGING ECONOMY PERSPECTIVES

Payal Mehra
Indian Institute of Management Lucknow
Prabandh nagar Off Sitapur Road
Lucknow 13
Uttar Pradesh INDIA
payal@iiml.ac.in

Abstract

There has been relatively little research on perceptions of patients regarding physicians in India. This institutionally sponsored study examines the socio-demographic influencers that impact on the patient provider interactions in an urban city of India (Lucknow, Uttar Pradesh).The findings of the research, which is currently in the pilot study phase, reveals that patients are greatly influenced by the quality of medical facilities and Infrastructure, attention; empathy and knowledge and expertise of the physicians in general. While patients regard empathy, comforting words, communicating clearly and lucidly, guiding decisions, advising and listening ability as important communication behaviors of the physicians, yet a positive in-clinic experience is linked to the technical expertise and greater consultation time rather than perceived empathy and informal talks shared by the physician with the patients. The patients however record only moderate satisfaction in overall In-clinic experience. Physicians are valued more for technical expertise rather than empathy (perhaps the physicians prefer it this way). The research concludes that 'empathy' is not much an expected behavior from physicians (although it is preferred) but expertise is; it recommends that physicians need to communicate more for better outcomes (positive in clinic experience, in this case) to reach global standards of medical care.

Key Words: *Physician-Patient Interaction, In-clinic experience, Emerging economy*

JEL Classification: 110

1. INTRODUCTION

Effective communication between patients and physician has always characterized a mutually beneficial physician-patient relationship, contributing to improved clinical outcomes and high rates of patient and physician satisfaction. There is a wealth of information that reflects the efforts of the government and other

agencies to monitor and improve the quality of health care in developed nations. However in most developing nations, such as India, thematic research on the subject has been rather low and unsystematic A Report by Boston Analytics on the Indian healthcare system (2009) states that emergency care is still in a very nascent stage all across India, while specialist medical care is markedly better for the urban, middle-and upper- class Indians than for their less wealthy counterparts (both rural and urban).

1.1. Objectives. The aim of this study is to explore the patients' experiences and perceptions of their encounters with (providers) physicians in an urban city of India (Lucknow, Uttar Pradesh). This research examines the socio-demographic influencers that impact on the patient provider interactions. The research seeks to understand the relationship between perceptions involved in the physicians' diagnostic and prognostic behavior and the impact on patients' experience with the physicians.

1.2. Methods. The author conducted structured interviews with 100 patients immediately after the consultation in an in-clinic environment as part of a pilot study. The dependent variable is the positive experience with the physician as perceived by the patient; the independent variables comprise socio-demographic factors including the quality of communication. The moderating variables were age, gender, prior experience with the provider, time spent with the physician, education and income level of the patient. Data was collated using the SPSS software, VERSION 16. The alpha reliability coefficient is 0.84 for 35 items, indicating that the questionnaire is reliable.

2.0. LITERATURE REVIEW

A systematic and exhaustive literature review was conducted to understand the background of the research. Research by Levinson, W., & Chaumeton, N. (1999) demonstrates that effective communication enhances patient recall of information, compliance, satisfaction, psychological well-being, and biomedical outcomes. Research studies show that the way patients perceive their connection with their physician significantly influences their sense of satisfaction and level of concern about their health (Zoppi K, Epstein, 2002) and also that physicians do not communicate with their patients as well as they should (Maguire, P., & Pitceathly, C., 2002).

Studies also reveal that patient's perceptions, physician empathy, communication style (Patricia LB. Lockyear) , active listening by both the parties and truly

informed consent on the part of patients improve in-clinic experience of the patients (Hausman, A. 2001, Zachariae R, Pedersen CG, Jensen AB, Ehrnrooth E, Rossen PB, von der Maase H., 2003) Studies also point out that inadequate and hurried consultation after a mean time of only 18-23 seconds resulted in missed opportunities (Marvel MK, Epstein RM, Flowers K, Beckman HB,1999).who report that the frequency with which experienced physicians solicited the patient's complete agenda to be quite low (28%). Fossum and Arborelius(2004) identified flexibility, faster pace and frequent movement back and forth between discussion topics and communication tasks as components of patient-centered consultations which result in patient satisfaction Kim SS, Kaplowitz S and Johnston MV (2004) discuss the effects of two types of empathy-cognitive empathy and affective empathy and conclude that the latter had greater effect on patient satisfaction and a positive effect on compliance. The patients in the study by rated the importance of physicians' ability to listen and communicate on par with their ability to respond to emotional needs. They showed that patient distress was negatively correlated with physician attentiveness and empathy, and patient self-efficacy was positively correlated with attentiveness and empathy.

Hypothesis 1: Greater consultation time given by the provider impacts positively on the In-clinic experience of the patient

Hypothesis 2: Empathy shown by the provider impacts positively on the In-clinic experience of the patient

Smith CK, Polis E, Hadac RR, (1982) conclude what is intuitively understood about physician-patient relationships - that the length of relationship increases trust and communication effectiveness, supported by Parchman et al. Engaging in social talk contributed to a perception of being understood, according to a study by Takayama and Yamazaki.(2004). Patients perceived open-ended questions and a "partnership-building approach" as contributing to their sense of mutual participation. Roter, D. (2000) linked communication to models of therapeutic relationships. In a similar study, Stewart, M., Brown, J. B., Donner, A., McWhinney, I. R., Oates, J., Weston, W. W. & Jordan, J. (2000) concluded that Patient-centered communication influences patients' health through perceptions that their visit was patient centered, and especially through perceptions that common ground was achieved with the physician.

Hypothesis 3: Providers who engage in informal talks with the patients create a positive In-clinic experience for the patient

Thom, D. H., & Stanford (2001) conclude that caring and comfort, technical competency, and communication are the physician behaviors most strongly associated with patient trust. In their paper Frosch, D. L., & Kaplan, R. M. (1999) report that there is considerable evidence that patients want to be consulted about the impact of treatment and that shared decision making is more acceptable to younger and better-educated patients. The authors conclude that shared medical decision making is an important development in health care a view shared by Charles, C., Gafni, A., & Whelan, T. (1999)

Hypothesis 4: Patients are highly influenced by the technical expertise of the provider which in turn results in a positive In-clinic experience for the patient
Hypothesis 5: Patients are highly influenced by the assistance in decision making offered by the provider which in turn results in a positive In-clinic experience for the patient

3.0. FINDINGS

Patient and physician responses to questionnaires were summarized by frequency tables for categorical responses. The baseline characteristics of the study sample are as follows: The 100 participating patients averaged between 31-40 years of age; 16 percent were visiting the provider for this ailment for the first time, 19 percent were visiting for the second time. About 16% did not know the provider before; and in all 65 % had been referred to the provider by a third person.40% were men; 14% represented the rural areas and the rest represented the urban population. About 35 percent visited for acute medical attention; 58 percent for chronic cases and 7 percent for Emergency care. About 21% of the patient sample reported that the waiting time was delayed beyond acceptable limits. About 65% reported that the provider spent time with them up to 15 minutes only. Most of the sample was in the middle income group (71%); 10% were in the low income group and 19 percent were in the high income group. 84% were literate and the rest were illiterate (read/write).

A global measure was used to measure overall experience with the physician (on a 5-point scale). Experience with the physician was also measured on sociological factors. Overall, patients reported only moderate experience with the doctor (2.84; .45). Areas where experience was unsatisfactory were Query resolution on phone

(2.84; .60); Physicians engaging in emotional and supportive talk (2.32; .57); Interruption by physicians (2.61; .66) Comforting words used by the doctor to reduce fear (1.48; .57) and making informal remarks (2.09; .56)Areas where patients reported a highly satisfactory experience were Query resolution in person (3.75; .55); feeling of cure and relief (3.94; .97); response to queries (3.94; .23); the physician understood the conversation (3.92; .26) and spoke simple and jargon free language (3.75; .78)

Patients were asked about how deeply the physician influenced them on certain parameters measured on a 5-point scale. Patients in this sample were highly influenced by the expertise of the physician (4.84); by knowledge of the physician (3.59) and by the manner in which he physician paid close attention to what the patient was saying (3.65). Influence by sensitivity and empathy, email competency, seating space and infrastructure as well as quoting expert sources remained rather low. A factor analysis revealed five communication behaviors deemed to be most important in Patient-provider interactions as perceived by the patients in their experience (1) comforting words; (2) communicating clearly and lucidly; (3) guiding decisions; (4) advising and (5) listening ability

Table 3.1: Factor Analysis for Most important communication behaviors as experienced by Patients

		Component				
Sn No.	**COMMUNICATION FACTORS**	**1**	**2**	**3**	**4**	**5**
1	Engaged in emotional talk	.453	-.174	-.075	.630	-.339
2	Rarely Interrupted	.088	.054	-.230	-.019	.698
3	Made eye contact	-.076	.239	.378	-.350	-.225
4	Asked probing questions	.153	.122	.739	.227	.065
5	Responded to query	-.754	-.045	.017	.016	-.118
6	Clarified doubts	-.183	.584	.234	-.073	-.542
7	Made informal remarks	.782	.038	.022	.130	.047
8	Involved in decision-making	-.058	-.180	.888	.019	-.063
9	Understood conversation	-.360	153	.102	.311	.733.
10	Paraphrased concern	-.052	-.826	.257	.054	.066
11	Reduced fear	.597	-.383	.037	.158	-.248
12	Brought out ethical issue	.000	.026	.204	.648	.424

13	Recommended medication	-.137	.021	.296	.128	.401
14	Advised for the future	.051	.117	.104	.826	.010
15	Used Simple Language	.454	.635	.274	-.048	.007

Explained variance of 67.566, the model significant at 0 .887 Kaiser-Meyer-Olkin Measure of Sampling Adequacy

A factor analysis revealed four most important influencers (1) Medical facilities and Infrastructure; (2) Attention; (3) Empathy and 4) Knowledge and Expertise (see Table 3.2)

With an (See table 3.2 below)

Table 3.2: Factor Analysis for Most important influencers in physician -patient interactions as perceived by patients

S. No.	Influencers	Component			
		1	2	3	4
1	Expertise	.095	-.012	.307	.802
2	Reputation standing	.271	-.019	.452	.149
3	Knowledge	.370	.194	-.068	.796
4	Sensitivity and empathy	.072	.239	.755	.041
5	Medical facilities	.522	.436	.060	.308
6	Email competency	.847	.065	.082	.163
7	Flexible approach	.825	.010	.215	-.002
8	Show interest	.052	.813	.142	.246
9	Seating and infrastructure	.771	.208	.044	-.249
10	Giving attention	-.066	.619	.342	.438
11	Inspiring words	.333	.438	.515	.237
12	Expert sources	.305	.238	.286	.550

Explained variance of 69.663 the model significant at 0 .786 Kaiser-Meyer-Olkin Measure of Sampling Adequacy

Hypothesis testing results: Demographic Analysis

We used the one way ANOVA to determine if there was a significant difference in the responses with respect to the experience with the providers across age groups. The analysis revealed that on the whole there was no significant difference in responses. However with respect to the following variables a difference in response was seen:

Table 3.3: ANOVA- Age of the Patients and experience with the physician

S.No	**Variable**	**Significance level**	**Interpretation**
1	Reduce fear	.054	older patients expressed dissatisfaction
2	Tech savvy	.048	younger patients expressed dissatisfaction here
3	Email competency	.013	younger patients expressed dissatisfaction here
4	Flexible approach	.024	younger patients said that they were greatly influenced

We used the one way ANOVA to determine if there was a significant difference in the responses with respect to the experience with the providers based on whether they **knew the provider before.** A difference in response was seen with respect to the following variables:

Table 3.4: ANOVA- Patients knowing the provider before and experience with the physician

S.No.	**Variable**	**significance level**	**Interpretation**
1	Quality time	.098	first timers expressed dissatisfaction here
2	Decisions	.006	first timers expressed dissatisfaction here
3	Query phone	.061	first timers expressed dissatisfaction here
4	Emotional talk	.084	first timers expressed dissatisfaction here
5	Sensitivity and empathy	.078	old timers expressed dissatisfaction here

The one way ANOVA was used to determine if there was a significant difference in the responses with respect to the experience with the providers based on whether the patients had visited the provider before.

Table 3.5: ANOVA- Visit of the Patients for this particular problem and experience with the physician at 90% confidence level

S.No.	**Variable**	**significance level**	**Interpretation**
1	Experience_doc	.100	old timers expressed more satisfaction here
2	Query person	.017	old timers expressed more satisfaction here
3	Emotional talk	.062	old timers expressed dissatisfaction here
4	Probing questions	.009	old timers expressed dissatisfaction here
5	Reduce fear	.092	old timers expressed dissatisfaction here
6	Advice future	.046	old timers expressed dissatisfaction here
7	Techno savvy	.011	first timers expressed dissatisfaction here
8	Reputation standing	.026	first timers said they were greatly influenced
9	Flexible approach	.078	old timers said they were greatly influenced
10	Expert sources	.070	first timers said they were greatly influenced

We used the one way ANOVA to determine if there was a significant difference in the responses with respect to the experience with the providers based on the education level of the patient.

Table 3.6: ANOVA- Patient literacy and experience with the doctor

S.No.	**Variable**	**significance level**	**Interpretation**
1	Emotional talk	.020	literate patients expressed dissatisfaction
2	Clarify doubts	.053	literate patients expressed dissatisfaction
3	Knowledge	.030	literate patients expressed dissatisfaction
4	Email competency	.041	literate patients expressed dissatisfaction
5	Expert sources	.006	literate patients said that they were highly influenced

Was there a significant difference between high middle and low income groups' responses towards experience with the providers on communication dimensions? Was the middle to high income group less satisfied on certain dimensions? A difference in response was seen with respect to the following variables:

Table 3.7: ANOVA- Income level of the patients and experience with the doctor

S.No.	**Variable**	**Sig.**	**Interpretation**
1	Quality time	.008	high-middle income expressed dissatisfaction
2	Query person	.043	middle income expressed dissatisfaction
3	Emotional talk	.009	middle income expressed dissatisfaction
4	Paraphrase concern	.033	high-middle income expressed dissatisfaction
5	Reduce fear	.006	high-middle income expressed dissatisfaction
6	Simple Lang	.020	high-middle income expressed dissatisfaction
7	Tech-savvy	.036	high-middle income expressed dissatisfaction
8	Knowledge	.014	high-middle income said that they were highly influenced
9	Email competency	.000	high-middle income said that they were highly influenced
10	Flexible approach	.087	high-middle income said that they were highly influenced
11	Expert sources	.000	high-middle income said that they were highly influenced

Were the patients belonging to the rural areas less satisfied than their urban counterparts? On what factors? A difference in response was seen with respect to the following variables:

Table 3.8: ANOVA- Patient type (rural-urban) and experience with the doctor

S.No.	**Variable**	**Sig.**	**Interpretation**
1	Reduce fear	.096	urban patients less satisfied
2	Knowledge	.074	urban patients less satisfied
3	Email competency	.011	urban patients less satisfied
4	Expert sources	.009	urban patients less satisfied

What was the impact of the duration of consultation on patient perceptions? Were those patients more satisfied than those on which the provider spent less time? A difference in response was seen with respect to the following variables:

Table 3.9: ANOVA- Time the doctor spent with the patients and experience with the doctor

S.No.	Variable	Sig. level	Interpretation
1	Query phone	.101	patients who spent greater time with the doctor were more satisfied
2	Informal remarks	.084	patients who spent greater time with the doctor were more satisfied
3	Reduce fear	.010	patients who spent greater time with the doctor were more satisfied
4	Flexible approach	.031	patients who spent greater time with the doctor were more influenced
	Expert sources	.028	patients who spent greater time with the doctor were more influenced

We used the Chi-Square tests to test the hypotheses (the table is self explanatory)

Table 3.10: Chi Square Testing Hypothesis: Sociological variables

Sn.	Hypothesis	Pearson Chi Square between	p-value	Status
1	Hypothesis 2: Empathy shown by the provider impacts positively on the In-clinic experience of the patient	Experience with the Provider and empathy shown by the provider	.412.	Rejected
2	Hypothesis 1: Greater consultation time given by the provider impacts positively on the In-clinic experience of the patient	Experience with the Provider and greater consultation time given by the provider	.000	Accepted
3	Hypothesis 3: Providers who engage in informal talks with the patients create a positive In-clinic experience for the patient	Experience with the Provider and Informal remarks by the provider	.532	Rejected
4	Hypothesis 5: Patients are highly influenced by the assistance in decision making offered by the provider which in turn results in a positive In-clinic experience for the patient	Experience with the Provider and assistance with decision making by the provider	.214	Rejected
5	Hypothesis 4: Patients are highly influenced by the technical expertise of the provider which in turn results in a positive In-clinic experience for the patient	Experience with the Provider and the perception of technical expertise of the provider	.005	Accepted

3. CONCLUSION

Relationship-building conversations can get lost in the pressure to perform. The pressure to keep up with latest medical approaches can overshadow the need to practice and improve communication skills. Patients benefit when physicians apply good communication skills. Effective communication results in improved patient compliance and enhanced clinical outcomes. Listening, empathy, answering queries and giving a patient hearing towards the concern of patients results in better diagnosis and care. Patients also report satisfaction in in-clinic experiences when their needs are addressed. This holds true when the patients have certain agenda which remains unvoiced unless there is sufficient encouragement from the doctor.

In this survey we could observe that physicians were more professional than personal in their approach. With only an average of about 10 minutes consultation time accorded to each patient , worries about possible diagnosis and what the future holds; patients' ideas about what is wrong; unresolved anxiety about side effects resulted in poor in-clinic experiences. This suggests that patients and their needs are to be fully articulated in the consultation. Surprisingly the rural, low-income and the illiterate mass of the sample appeared to be more satisfied than the middle-high income group, the literate and the urban. This could be attributed to the ‘unmet expectations’ of the latter. Urban patients are more aware and technology savvy now and expect that the physicians respond to their queries and concerns with compassion and care. Though value for expertise rather than empathy appears as a primary influencer, yet effective communication has the potential reduce poor diagnosis, delay in the medicine to take effect and recovery.

In this survey we could see that patients do not want informal talk or ‘chat’ but would definitely like the physician to engage in effective prognostic and diagnostic inquiry. Like most concerns in an emerging economy we have two distinct ‘India’s' –the not so rich (in material terms), rural and illiterate population in stark contrast to the well off, urban and the literate. Physicians’ approach appears to vary with respect to the two. While the former easily adapts to the non-communicative but professional approach of the physician, the latter is seeking a more personalized approach to medical care.

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