



RESEARCH PAPER

Doctor Patient Interaction: Impact on General Satisfaction of Patients

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ABSTRACT

The main objective of this study is to identify the existence of relationship between Doctor Patient Interaction (DPI) and General Satisfaction (GSAT) of hepatitis patients, who visit public sector hospitals of the Punjab for their medical treatment. Role of Doctor Patient Interaction in affecting the General Satisfaction level of patients has been found to be obvious in the earlier studies. Previous studies have examined that effective communication between doctors and their patients, as well as empathic attitude of doctors for their patients increase the satisfaction level of patients on overall healthcare system. This relationship has now been examined and evaluated in the contextual framework of hepatitis patients in the Punjab. Chi-Square, Somers'd and regression has been used to analyze this relationship. Design structure of this cross section study is based on a questionnaire through which data was collected from 720 respondents in six districts of the Punjab. District Headquarter hospitals of these districts were divided into North, Central and South Punjab. Findings revealed the importance of respect, effective communication and empathy in raising the general satisfaction of the patients. The conclusion revealed that effective Doctor Patient Interaction improves general satisfaction level of hepatitis patients.

Keywords: Doctor-Patient Interaction, General Satisfaction, Public Sector Hospitals, Empathy, Healthcare System

Introduction

It has been found in studies that doctors- patient relationship is not based on equality in interaction in public service-providing institutions (Javed *et al.*, 2018). The behavior of doctors in their private clinics is very courteous and they open the door of becoming more professional before their patients. This discrimination in dealing with patients differently has marked their professional integrity and spirits (Borgstrom *et al.*, 2010).

Demographics are an important set of elements to consider, when seeking to grasp and respond to customers. Age, gender and marital status are all factors that might have a substantial impact on respondents' behavior.

Communication skills of medical staff with patients can enhance the beauty of health services. The patient's first encounter in the hospital is with paramedical staff. The courteousness of the medical staff is a sign of a well-managed healthcare system (Agosta *et al.*, 2009). The study discovered a substantial association between nurse-patient caring behavior. As a result, it is possible to conclude that there is a favorable association between medical staff communication and patient satisfaction (Aiken *et al.*, 2021). This study, therefore, investigates the relationship between DPI and general satisfaction among hepatitis patients in public sector hospitals of Punjab.

The primary objective of this study is to examine the relationship between Doctor-Patient Interaction (DPI) and the General Satisfaction (GSAT) of hepatitis patients in public sector hospitals of Punjab. Specifically, the study aims to:

- Assess the quality of DPI in selected hospitals.
- Evaluate patient satisfaction levels with medical consultation and behavior of doctors.
- Test the hypothesis that better DPI leads to greater general satisfaction among patients.

Literature Review

Communication and health-related information are crucial for assisting patients in bearing with their illnesses. Typically, a diagnosis causes anxiety that can be alleviated by knowledge. However, the amount of information desired by individuals varies, and their efforts to obtain it reflect this phenomenon. Patient questioning is not only a technique for obtaining information but also an opportunity for the patient to participate in the medical dialogue (Roter, 1995).

Jannet *et al.* (2018) explained that patient education, and counseling providers need to be pleasant, nice, kind, and approachable. Respect, responsiveness, and individualized attention were all identified as important contributors to patient satisfaction. A few recent studies found that physicians' concern for family and relatives contributed to patient satisfaction. Health information is critical in participatory decision-making; research has shown that providers' information delivery and patient involvement in healthcare procedures increase patient satisfaction across disciplines. Patients were found to be more satisfied when the healthcare professional was willing to share more information and respect to patients' participation in treatment decision-making. The attitude of the health service provider also influences the patient's participation in the treatment process.

Shared decision-making based on doctor-patient interactions and cooperation, effective patient-centered communication, and respect for patients' medical autonomy improves the doctor-patient relationship and patients' health literacy in emergency observation units. Patients can thus help to choose the appropriate treatment plan to attain the desired health results and eventually to improve MDM (Burchard *et al.*, 2019).

The importance of hospitality services in producing beneficial social effects like belongingness and subjective happiness while minimizing negative social outcomes like loneliness and suffering is widely acknowledged (Song *et al.*, 2018; Altinay *et al.*, 2019).

Doctors must sometimes truncate their sessions and may overlook important medical facts, resulting in misaligned doctor-patient expectations around medical decision-making and a low level of MDM. SDM (Shared Decision Making) is an effective communication approach that provides patients with treatment alternatives and healthcare information. SDM places a premium on satisfying patients' actual needs (Hung *et al.*, 2022).

Antecedents are events which occur before the concept's occurrence. Given that patient satisfaction is a developing notion in the healthcare context, it is critical to recognize that a variety of personal and environmental elements influence the incidence of patient satisfaction. According to the current concept analysis, perception in connection to expectation, patient demographics and personality, as well as market competition were recognized as prerequisites of patient satisfaction. An individual's attitude is a psychological predisposition towards a particular event or notion, and it is frequently mirrored in the individual's behavior. Among the corpus of literature considered in this concept analysis, provider attitude was discovered to be a universally mentioned dimension (Bauer *et al.*, 2020).

Medical personnel also play an essential role in patients' future hospital selection decisions. All levels and ranks of health-care employees play significant and vital functions. They should learn about each patient's specific demands and alter their bedside manner accordingly. It has been discovered that patients value communication ease and information accessibility. Establishing a relationship between a patient and a service provider is a mutual (bilateral) process that includes listening to the patient's concerns and telling them about their medical experiences. Doctors and nurses should be encouraged to discuss the patient's medical situation with the patient (Farzin *et al.*, 2021).

A physician's communication and interpersonal skills include ability to interview patients in such a way that aids accurate diagnosis, counsel them beneficially, give them treatment guidelines, and establish trusting relations with them. These are the basic clinical competencies for practicing medicine, with the goals of attaining the best outcomes and patient satisfaction necessary for efficient medical care. To develop and sustain an effective therapeutic doctor-patient interaction which includes shared thoughts and perceptions about the problem's nature, psychological help, and treatment aims. Basic communication capabilities alone are not enough. The three main goals of today's doctor-patient communication are to develop interpersonal interactions, promote information transfer, and involve patients in decision-making (Lee *et al.*, 2021).

Strong communication between patients and their doctors increases the likelihood that they will be satisfied with medical care, especially when patients disclose information required for a precise diagnosis of their problems, listen to advice, and carry out the suggested treatment course. Recovery is closely related to patients' and doctors' understanding of the treatment's nature and the follow-up requirement. Patients are less likely to report formal complaints or start investigations who are comfortable with their doctor. Doctors benefit from satisfied patients because of job satisfaction, less burnout, and less stress. It has been observed that, as medical students progress through their training, their communication abilities diminish, and they lose interest in offering thorough medical care. However, the emotional and physical violence that occurs in medical school, particularly during residency and internship, decreases empathy, replaces discussion with procedures and techniques, and could even make patients mocked (Ha and Longnecker, 2010).

Many outcomes, including emotional health, management of pain, resolution of symptoms, and physiological markers such as blood pressure levels, have been connected to proper communication. Miscommunication can harm clinical care, such as impairing the patient's understanding, expectations of their treatment, planning of treatment, as well as lowering patient satisfaction with their medical care and their levels of optimism.

Patients and doctors must collaborate when making medical decisions and have excellent communication. Patients should actively participate in the process of decision-making as a result of process which includes views and values of a patient as well as, the medical expertise of the physician. Collaboration in decision-making and communication has been linked to higher patient loyalty and satisfaction. The capacity of a doctor to employ a personalized medical care model through empowerment of the patient can be made strong by working from a collaborative framework and by effective communication between physician and patient. Trust in all dimensions of the doctor-patient interaction significantly affects communication between the two parties (Johnson, 2019).

According to a substantial body of existing research, the quality of medical practice and treatment outcomes depend on the doctor-patient relationship. Patients have particular preferences and want for how information is presented; they want to speak, discuss various topics during a visit, and be more involved in making decisions. When doctors and patients exchange information, it's considered effective when both parties understand what's being said. Excellent communication between doctor and patient entails successful relationship-

building, collecting information, comprehending the patient's perspectives, delivering the information, and making decisions wisely. Increased compliance and adherence, adjusted expectations, self-regulation, and coping are all benefits of effective doctor-patient communication.

Early 1980s primary care studies uncovered the issue of clinician variability with doctors giving varying recommendations to patients for various conditions, including diabetes, asthma, and hypertension. To determine the root of this issue, researchers recorded, analyzed, and evaluated interactions between doctor and patient.

After thirty years, general medical care is in crisis and GP retention and recruitment are poor as they choose alternate specialties or abandon clinical practice to pursue management, teaching, or early retirement (Ogden, 2016). A solution appeared in clinical guidelines, decision-making frameworks, evidence-based medicine, and financial benefits to encourage general practitioners to act morally (Martin Roland, 2004). Seven years later, it has grown into a multi-disciplinary, multi-site, and enormously successful enterprise with the goals of coding protocols, examining strategies which are mostly used in treatments and for behaviors, training medical practitioners to choose and use the most effective strategies, and providing resources for everyone to make most effective behavior change (Conner and Norman, 2015).

From the perspective of social psychology, the professional's potential roles include democratic control, training, and therapeutic therapy. However, in actual practice, it is likely possible to identify the communicative behaviors of the physician that are viewed positively by many patients typically as affective behavior (such as inquiring feelings of the patients, being sensitive to their feelings, and replying to them), giving detailed information in a clear, proactive way, and making an effort to comprehend their expectations, perceptions, and psychological concepts. The patient's communication preferences and the doctor's actions must be consistent for communication to be successful (Turabian and Turabian, 2019).

The medical encounter, or visit to the doctor, is crucial to healthcare delivery. In reality, doctor-patient communication is one of the most crucial dynamics in healthcare, influencing how patients are treated and whether they follow treatment recommendations (Matusitz & Spear, 2014). The quality of interaction between physician and patient strongly correlates with patients' self-management practices and health outcomes, particularly when treating patients who are chronically ill and have a bio psychosocial illness model, communication between the patient and the healthcare professionals is crucial. A certain level of agreement between the communication preferences of the patient and the physician's actions is necessary for effective communication. Adding communication-related training for patients to provider training looks to be an important and practical approach, as numerous studies have demonstrated that patient-centered interventions can significantly affect service provider's behavior (Kashavarzi *et al.*, 2022).

This study focuses on commitment of doctors to keep their patients away from various worries, interest level of doctors in their patients as person, paying attention on patients privacy, dealing patients in friendly and courteous manners, explaining to the patients necessary medical terms used during medical examination, telling true picture of disease to their patients and respect giving attitude of doctors for measuring Doctor Patient Interaction. Association between the variables has been examined with the help of following hypothesis through *Chi-Square*, *Somers'd* and *Gama* tests:

Hypotheses

H1: Socio-Demographic factors and General Satisfaction of patients are associated with each other.

H2: Better the Doctor Patient Interaction, greater will be the General Satisfaction.

$$\text{GSAT} = \beta_1 + \beta_2 \text{ DPI} + \varepsilon_t$$

Where:

GSAT : General Satisfaction

β_1 : Intercept

β_2 : Slope

DPI : Doctor Patient Interaction

ε_t : Error Term

Material and Methods

A cross-sectional research design was used for this study. Data were collected from 720 hepatitis patients receiving treatment at public sector hospitals in Punjab. The province was divided into three regions—Central, North, and South Punjab—to ensure regional representation. From each region, two District Headquarter (DHQ) hospitals were selected, totaling six hospitals: Sheikhpura and Nankana (Central Punjab), Multan and Lodhran (South Punjab), and Jhelum and Chakwal (North Punjab). The selection was based on hepatitis prevalence data.

The dependent variable was General Satisfaction (GSAT), while the independent variable was Doctor–Patient Interaction (DPI). Data were analyzed using descriptive and inferential statistics, including Chi-square tests, Somer's d, and Gamma statistics.

Table 1
Operationalization of Concepts/Variables

Variable Name		Type of Variable	Dimensions of Variable
General Satisfaction (GSAT)	Satisfaction	Dependent variable	- I am very satisfied with the consultation I received. - Medical care I receive from doctor is excellent. - Doctor answered all questions in detail. - I am fully satisfied with diagnosis process of doctor - Schedule of appointment is very easy. - Doctor deals patient equality basis. - Non-verbal communication of doctor is satisfactory.
			- Doctor always do their best to keep me away from worrying. - The doctor who treats me have a genuine interest in me as a person.
Doctor Patient Interaction (DPI)		Independent variable	- During medical checkup and consultancy, doctor pays more attention to my privacy. - My doctor treats me in a very friendly and courteous manner. - Doctor is explained to me use medical terms for during checkup. - Doctor give me more respect. - Doctor explain true picture of my disease

Results and Discussion

Table 2
Distribution of Respondents on the basis of Age

Age (in Years)	Frequency	Percent
25-30	210	29.2
31-35	140	19.4
36-40	187	26.0

Greater than 40	183	25.4
Total	720	100.0

Table 2 reveals that hepatitis patients visiting in public sector hospitals for their treatment have been classified into four age groups. Out of 720 respondent patients, 29.2% were of 25-30 years, 19.4% were of 31-35 years. While, 26% of the patients were belonging to age group of 36-40 years and respondent patients belonging to more than 40 years age group were 25.4%. It is evident from the data that maximum percentage of patients and respondents were from the first age group and thus reveals that large number of patients suffering from hepatitis disease are from 25 to 30 years.

Table 3
Distribution of Respondents on the basis of Gender

Gender	Frequency	Percent
Male	412	57.2
Female	308	42.8
Total	720	100.0

Table 3 depicts the classification of hepatitis patients on the basis of their gender. It is revealed that out of 720 patients, 57.2% of the respondents were male and 42.8% were female. Thus, it can be inferred that prevalence of hepatitis disease is more common in male patients as compared to female patients. It may be perhaps due to their exposure to outside environment.

Table 4
Distribution of Respondents on the basis of Marital Status

Marital Status	Frequency	Percent
Married	508	70.6
Unmarried	154	21.4
Divorced	29	4.0
Remarriage	29	4.0
Total	720	100.0

Table 4 describes the distribution of respondents on the basis of their marital status and have been classified into four categories. The results reveal that 70.6% of the hepatitis patients were married and it is very large percentage out of 720 respondents. While,

21.4 % were unmarried. However, very small percentages were belonging to the category of divorced and remarried which were 4.0% and 4.0% respectively. Occurrence of this disease in married patients also signifies the importance of care between husband wife relationships due to infectious nature of this disease. Finding of this study is similar to the findings of Maqsood *et al* (2017).

Table 5
Opinion of the Respondents about Doctor Patient Interaction

Sr.	Attributes	Disagree	Neutral	Agree	Total
A	Doctor always do their best to keep me away from worrying	375	93	252	720
		52.1%	12.9%	35.0%	100%
B	The doctor who treats me have a genuine interest in me as a person	244	114	362	720
		33.9%	15.8%	50.3%	100%
C	During medical checkup and consultancy, doctor pay more attention to my privacy	280	97	343	720
		38.9%	13.5%	47.6%	100%
D	My doctor treats me in a very friendly manner	179	77	464	720
		24.9%	10.7%	64.4%	100%
E	Doctor explained to me the medical terms used during checkup	430	40	250	720
		59.7%	5.6%	34.7%	100%
F	Doctor give me more respect	125	107	488	720
		17.4%	14.9%	67.8%	100%
G	Doctor explain true picture of my disease	262	58	400	720
		36.4%	8.1%	55.6%	100%

Table 5 (a) deals with the interest of doctors in their patients in order to buck up and keep them away from disease related worries. This question is very much important in the behavioral context of the doctors. It has been clearly shown in this table that 35.0% of the respondents were satisfied from or agreed with their doctors and 52.1% respondents were not satisfied from their doctors. Apart from these, 12.9% respondents were found who remained neutral in their opinion. Effective Doctor patient communication is involving process of transmission of information and exchange behavior of two people; it will leave positive effect on health outcomes (Chandara, 2021).

Table 5 (b) describes information about interest of doctors in their patients during treatment, as studies have found that understanding the psychology of the patients and psychotherapy of the patients is very much important in combating the disease. This question is very much relevant to that aspect of their personality. Information revealed by the respondents depicts the situation very lucidly, as it is evident that 50.3% of the respondents were satisfied from their doctors so far as their interest in patients is concerned and 33.9% of the respondents were not agreed or were found to be dissatisfied from their doctor's interest in listening to them. Whereas, 15.8% of the patients were indifferent i.e., they were found to be neither agreed nor disagreed. Patient centered care developed a good interpersonal relationship between physician and patient to improve health outcomes.

Table 5 (c) describes patients' response about their doctor's behavior during medical checkup. It is expected that physical privacy of patients should be maintained during medical checkup by the doctors. Information gathered from patients revealed that 47.6% of the patients were satisfied from their doctors and they were agreed that doctors pay proper attention to their privacy during medical examination. While, 38.9% respondents were not satisfied from their doctors and 13.5% patients remained indifferent on this question.

In table 5(d), the respondents revealed information about behavioral aspect of their doctors i.e., whether they were adopting friendly behavior with their patients or not. It can be examined that out of 720 patients, 464 were satisfied from their doctors' behavior and such patients were 64.4% of the entire sample. Likewise, there were about 24.9% respondents who were not satisfied from the attitude of their doctors, while 10.7% of the respondents were found indifferent i.e., they were neither satisfied nor dissatisfied from their doctors with regard to their friendliness in attitude.

Table 5 (e) provides information about explanation of various medical terms used by the doctors. It has been noted that most of the terms used in medical treatment process are unfamiliar to majority of patients. These terms confuse the patients. Ability and willingness of doctors to explain such terms to their patients has been examined through this question. The results revealed that 34.7% of the patients were agreed to the statement that their doctors explain the medical terms used during medical checkup in order to clear their concept, while 59.7% of the respondents were not satisfied from their doctors. It means that such patients were not agreed to this statement. However, 5.6% patients were found to be neutral in this regard.

Table 5 (f) describes information about the question, whether doctors give due respect to their patients or not? Studies have revealed that dealing of the doctors with their patients in public sector hospitals is very important point to be considered. Response of patients presented in the table revealed that 67.8% of the respondents were agreed to the statement that their doctors give them due respect during medical checkup in public sector hospitals of the Punjab. It means that they were satisfied from their doctors in this regard. However, 17.4% of the respondents were not agreed to this question, which means that they were not satisfied from their doctors dealing from this perspective. Apart from this, there were 14.9% of the respondents too who were found to be neutral in this regard.

Table 5 (g) reveals information about doctors' tendency to explain true picture of the disease to their patients. It can be examined that 55.6% of the patients were agreed to the statement that doctors explain such a picture to them very well, which means that they were satisfied from their doctors from this aspect. While, 36.4% of the patients were not satisfied from their doctor's tendency to explain reality of the disease to their patients. It can also be found that 8.1% of the patients remained neutral i.e., they were neither agreed nor disagreed to this statement.

Table 6
Association between Doctor Patient Interaction and General Satisfaction

		General Satisfaction Level of Hepatitis Patient			
		Low	Medium	High	Total
Doctor Patient Interaction	Unsatisfied	24 13.6%	87 49.2%	66 37.3%	177 100.00%
	Moderately Satisfied	5 3.4%	68 45.61%	76 51%	149 100.00%
	Highly Satisfied	19 4.8%	149 37.8%	226 57.4%	394 100.00%
Total		48 6.7%	304 42.20%	368 51.1%	720 100.00%

Chi-Square = .000 (30.938) Somer's d = .000 (.154)

Gamma = .000 (.272)

Table 6 reveals that when the patients were disagreed from Doctor Patient Interaction (DPI), they were not much satisfied from working and facilities of Public sector hospitals of the Punjab and when opinion of the patients with regard to DPI improved, a substantial number of them i.e., 368 or 51.1% were found to be highly satisfied, indicating that DPI and General Satisfaction of the patients are strongly associated with each other. The results are authenticated by the chi-square value of 30.938 as well, which indicates that while testing association between Doctor Patient Interaction (DPI) and General Satisfaction of Hepatitis patients from public sector hospitals in the Punjab, both are found to be highly associated. P-value of Chi-Square statistic 0.000 has shown that these results are statistically highly significant due to the reason of being less than 0.05. These results are consistent with the study which concluded that Doctor Patient Interaction have significant and positive relation with General Satisfaction of patients. Earlier studies have also found that communication of patients with their doctors and nursing staff has been found to be an important predictor of their satisfaction.

It is also clear from Somer's d that General Satisfaction has been used as dependent variable and Doctor Patient Interaction has been used as an independent variable. 0.154 value of this test indicates that Doctor Patient Interaction helps in improving General Satisfaction level of hepatitis patients in public sector hospitals of the Punjab by 15.4%, which means that by including Doctor Patient Interaction in the cross tabulations of the model, prediction error can be reduced by the same percentage i.e., 15.4%. Good predictability of the model is also evident from the results and the variables are found to be positively associated as well. Moreover, the results are found to be statistically significant, as p Value of 0.000 is less than 0.05 or 5%. Same findings have been reflected by the Gamma value of 0.272 which indicates that positive and significant relationship exists between General Satisfaction and Doctor Patient Interaction.

On the basis of results, hypothesis that "better the Doctor Patient Interaction, greater will be the general satisfaction" among the patients is accepted.

The results of the regression analysis examining the effect of Doctor Patient Interaction (DPI) on General Satisfaction (GSAT) are presented in Table 7.

Table 7
Regression Results

	Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.132	.066	---	32.256	.000
	DPI	.136	.027	.184	5.023	.000

a. Dependent Variable: GSAT

The regression results demonstrate a positive and statistically significant relationship between Doctor Patient Interaction (DPI) and General Satisfaction (GSAT) at the 0.001 level of significance. The unstandardized coefficient ($\beta = 0.136$) indicates that for every one-unit increase in the Doctor Patient Interaction score, the overall satisfaction score increases by 0.136 units, holding all other factors constant. The strength of this relationship is revealed by t-value of 5.023 and p-value which is (0.000). These values have shown that the said results are significant. It means that effective interaction between doctor and their patients play a vital and meaningful role in improving the satisfaction level of the patients. The hypothesis of this study is also supported by the findings which are also supported by the findings of previous studies. Whereby, Ha & Longnecker, (2010) has experienced the importance of doctor-patient empathic relationship as well as better communication in improving the satisfaction level of patients.

Conclusion

Conclusion of this study highlights the importance of Doctor Patient Interaction in improving the General Satisfaction level of hepatitis patients in public sector hospitals settings in the Punjab, Pakistan. It has been experienced that empathic attitude of doctors with their patients, their effective communication and respect for their patients has substantially increased the satisfaction level of the patients. Contrary will be the effect of poor communication and neglecting attitude of doctors. Such practices will reduce the trust level of patients on healthcare providers. The hypothesis that better DPI leads to greater general satisfaction among hepatitis patients is confirmed by the findings and results of this study.

Recommendations

It is recommended that healthcare institutions and policymakers should:

- Implement communication skill training programs for doctors and nurses.
- Encourage empathetic listening and patient-centered consultations.
- Integrate communication assessment indicators into performance evaluations.
- Foster an environment where patients feel comfortable expressing concerns and asking questions.

These practices will lead to better satisfaction level of patients and improved doctor-patient relationship, as well as quality of healthcare system. The study can be further extended to public as well as private hospitals not only in Punjab, but also to other provinces. Moreover, it can be extended to other infectious diseases as well.

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