

PREDICTORS OF PATIENT SATISFACTION

Iftikhar Ahmad, Allah Nawaz, Shadiullah Khan, Habibullah Khan, Muhammad Adnan Rashid,
Muhammad Hussain Khan

Department of Community Medicine & Medicine, Gomal Medical College and
Department of Public Administration, Gomal University, D.I.Khan, Pakistan

ABSTRACT

Background: Patient satisfaction is a multi-factorial concept. Diverse variables are used to analyze patient attitude, positive or negative, about the hospital services. Patient satisfaction is basically a match of expectations with experiences of the patient during a treatment process. The main objective of this study was to determine the satisfaction of the admitted patients about care in public sector hospitals.

Material & Methods: This study measures the changes brought in the patient satisfaction of admitted patients in different wards in public sector hospital in district D.I.Khan. Primary data was collected through survey approach with systematic random sampling from 176 patients. A structured questionnaire was extracted from the literature.

Results: Males were 55 and females 121. Twenty-eight patients were younger than 20 years whereas 21-40 years and 41 years or more were 82 and 66 respectively. Urbans were 73 and Rural 103. The results show that Patient satisfaction is determined by the predictors; Satisfaction from staff ($p < 0.001$), Patient awareness ($p = 0.039$) and Satisfaction from management ($p = 0.047$) whereas there is no role of Satisfaction from treatment process and Satisfaction from environment

Conclusion: Satisfaction from treatment process and environment are the problem points. It is recommended that the attributes falling under these two variables should be addressed.

KEY WORDS: Patient satisfaction, Patient awareness, Hospital.

INTRODUCTION

Patient satisfaction is a set of attitudes and perceptions of patients towards health services.¹ It is the degree to which an individual regards health-care as useful, effective and beneficial.^{2,3} In other words it is the judgment of the patients about their needs and expectations met by the care provided,⁴⁻¹⁰ or an evaluation based on the fulfillment of expectations of the user.¹¹ It is actually determined by the interplay of two factors i.e. patient expectations and experience of the real services. If the performance falls short of expectations, he is dissatisfied and if it matches the expectations, then vice versa.¹² Patient satisfaction is therefore a match of expectations with experiences of the patient during a treatment process.¹³

There are multiple reasons to study the concept of patient satisfaction. It is considered as an important outcome of the quality of healthcare.^{10,14} Getting views of the patients on the care services is a much realistic tool to evaluate and improve the health care services¹¹ since it is based on direct experiences of the users.¹⁵⁻¹⁸ The rising strength of consumerism and quality consciousness in the

society with a shift from doctor-to-patient relationship to modern provider-client attitude has highlighted the importance of recording patient views on healthcare delivery.^{13,19}

Patient satisfaction results in enhanced compliance of the patients to the medical regimens, appropriate use of medical resources and quick recovery from illness.²⁰ Besides, evaluation by the patients makes medical staff aware about their shortcomings. The employees understand that they will be held accountable to the patients as well as administration. As a result care providers tend to acknowledge patient rights and involve them in treatment decisions.^{10,21} Patients' suggestions also help policy makers and planners to identify bottlenecks in the system, thereby introducing customized improvements in the services.²²⁻²⁵

Patient satisfaction has been an area of special interest for researchers involved in health system research for almost half a century. Countless number of studies on this important topic has been published since then.¹⁸ Its importance increases further as contemporary consumers are more aware due to advancements in information tech-

nology. Their expectations from health organizations have increased and priorities changed.²⁶ However, today's doctor being more dependent on technology is losing the skill of understanding the emotions and perceptions of his patients. This is creating a gap between what patients want and what doctors perceive as important.²⁷ It is imperative as well as quite rational to periodically undertake surveys in healthcare facilities, as often as possible.²⁸⁻³⁰

Patient perceptions are influenced by socio-cultural background of patients, their beliefs, attitudes and level of understanding.^{31,32} Successful outcome depends on how far the doctor understands these expectations and social context of his or her illness.²² Research findings from developed world simply don't apply in the setup of developing countries including Pakistan.^{16, 27,30,31,33-36-40}

Patient satisfaction research in advanced as well as developing countries has many common and some unique variables and attributes. Besides a huge body of research involving both the qualitative⁴¹⁻⁴⁷ as well as quantitative⁴⁸ tools & techniques is going on all over the world. Research in Pakistan context is mostly about tackling primary & basic level issues of health service delivery.³⁵ While in advanced countries, the delicacies and sophistications of health care delivery are under discussion.

In Pakistan majority of patient satisfaction studies in public sector hospitals focus on casualty or out-patient departments (OPD) with little work on admitted patients.^{33,49-52} Studies from other parts of the country cannot be used as reference in this district due to the wide-ranging cultural context.⁵³

The main objective of this study was to determine the satisfaction of the admitted patients about care in public sector hospitals.

MATERIAL AND METHODS

Survey approach, being the excellent vehicle for measuring attitudes and orientations in a large population,⁵³⁻⁵⁵ was adopted in this study. Literature review was undertaken using different databases, to develop questions in the structured questionnaire keeping in view the study objectives. An initial version of the questionnaire was created, which was evaluated in a pilot study and an amended questionnaire was prepared. The final questionnaire included 40 questions belonging to six domains: Satisfaction from Staff, Satisfaction from Treatment process, Satisfaction from Environment, Satisfaction from Management, Patient Awareness and Overall Satisfaction. Seven questions were related to demographic information of

the respondents. The 5-point Likert scale was used to measure the responses. The mean scores for each domain were calculated by adding the answers to all the items and dividing them by the number of questions in that particular domain.

Pilot study was done to determine the sample size as well as to define the population of interest since limited local data is available on the topic in this area. The population of this study consisted of all the admitted patients of DHQ Teaching Hospital D.I.Khan. Systematic random sampling was carried out till the required sample size of 176 respondents was completed. District Head Quarter Teaching Hospital is a tertiary care teaching hospital with 350 beds, operated by health department, providing clinical teaching and training facilities to undergraduate medical students, nursing and other allied faculties. Sampling frame included all admitted patients during the time of data collection i.e. March 1, 2011 to May 31, 2011. Structured questionnaire was administered by the trained interviewer who was a local resident and not an employee of any medical institution to minimize the bias. Study design was cross-sectional. Inclusion criteria was all the adult admitted patients of both sexes, admitted for at least two days. Exclusion criteria was all those who were not able to give their views due to seriousness of their condition or other reasons. Verbal informed consent was taken from the study participants. Assurance regarding confidentiality was provided.

Validity of instrument and data (Questionnaire) was checked through a statistical procedure, Chronbach Alpha. The alpha score of 33 items was 0.89 which was far beyond the required threshold of 0.70 in social sciences.

Following is the theoretical construction of the facts related to patient satisfaction study. Fig. 1

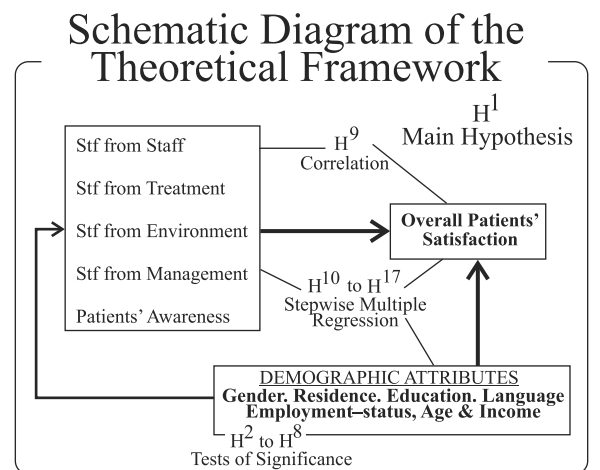


Fig 1: Schematic diagram of Theoretical framework.

Table 1: Descriptive Data on Research Variables.

Variables	Number	Minimum score	Maximum score	Mean	Standard Deviation
Satisfaction from staff	176	3.00	5.00	4.19	0.41
Satisfaction from treatment process	176	2.50	4.33	3.62	0.26
Satisfaction from environment	175	3.40	4.80	3.99	0.16
Satisfaction from management	176	3.20	4.60	3.96	0.24
Patient awareness	176	2.67	4.67	3.98	0.24
Overall satisfaction	175	3.57	4.86	4.0237	0.19

RESULTS

The primary results of this study include the descriptive statistics on research variables and results of multiple regression analysis.

Stepwise regression has produced three models where third one is the 'Best Fit' as it explains 28.5% ($R^2=0.285$) of the variation in the dependent variable. The results show that Patient satisfaction is determined by the predictors SFS ($p<0.001$), PA ($p=0.039$) and SFM ($p=0.047$) whereas there is no role of SFT and SFE in the regression model hence excluded.

DISCUSSION

The literature reveals opposing patient views on the variables of patient satisfaction. The variables explored in our research are discussed as follows: The different attributes of patient satisfaction from the staff are; attitude, communication skills, technical skills and responsiveness to patient needs. The results of our study showed that satisfaction from staff was the most significant determinant of overall satisfaction. According to some studies, the majority of patients were satisfied with the attitude and communication skills of the care providers.^{21,31} Good doctor-patient relationship was important for the patient satisfaction.²² Respect & politeness, communication skills and technical competence were strong predictors of patient satisfaction.¹¹ Whereas on the contrary the study by Khan³⁵ showed that most patients did not like the behavior of nurses and had negative experience as they observed the nurses were not attentive to their needs. In other similar studies patients were complaining about the lack of courtesy by the staff.^{26,36} The results of our study are in line with the former studies, since satisfaction with the staff emerges as the most significant determinant of the overall satisfaction.

The different attributes of patient satisfaction from treatment process are; privacy, waiting time, consultation time, continuity of care, medicines

and investigations. The results of our study showed that this variable had got almost negligible role in overall satisfaction. According to some studies, satisfaction with the provider's respect for privacy, waiting time and consultation time were strong determinants of patient satisfaction.³¹ Majority of the patients were satisfied with the continuity of care provided and drugs prescribed.^{21,26,56} Whereas other studies showed opposite results such as patients complaining of long waiting time, short consultation time, lack of privacy, non-availability of prescribed drugs and laboratory investigations.^{15,57} The results of this study are in line with the latter group of studies, as the variable satisfaction with the treatment process has got almost negligible role in overall satisfaction.

The different attributes of satisfaction from environment are: comfortable environment, cleanliness, facilities & services, building and convenient location of the hospital. According to some studies, the patients were satisfied with the cleanliness of the hospital²¹ and waiting area conditions.⁵⁷ Whereas on the contrary other studies showed that the worst aspect was cleanliness of the wards.¹³ The results of the present study are in support of the former viewpoints as satisfaction from environment emerges as the determinant.

The different attributes of satisfaction from management are; discipline, cost of treatment, availability of doctors, duration of service hours and location of wards. According to some studies, the patients had good experience from availability of doctors in wards and good convenience from duration of service hours.^{13,24,57,58} Whereas other studies showed opposite results regarding the same attributes.^{25,27} Inconvenient timings were responsible for more preference for private clinics over public hospitals⁵⁹ and high cost was a problem, where majority of the patients expected to pay less.^{15,49} Our study supports the former group of studies as the variable 'Satisfaction from management' has emerged as the predictor.

The different attributes of the variable patient awareness are previous experience of the hospitals, information about diseases and awareness about the rights as a patient. According to some studies, there was association between previous experience and satisfaction⁵⁸ and majority of patients were aware of their rights.²⁶ Whereas contrary results were given by other studies; most of the patients were unaware of their diagnosis, causes of their disease, number of medications they were taking, lack of knowledge about their prescribed medication, why they were taking those medications and were incapable of understanding their test results.³⁶ The results of my research support the former view as patient awareness has emerged as the predictor.

Overall satisfaction was high in this study; a result which is in line with studies conducted by different authors who show higher levels of overall patient satisfaction.^{21,27,33,60}

CONCLUSION

Satisfaction from staff, patient awareness and satisfaction from management are the predictors of patient satisfaction. The role of satisfaction from treatment process and satisfaction from environment is either below nominal performance or totally missing from all the models of regression. Hence both are the problem points.

It is recommended that the attributes falling under satisfaction from treatment process like waiting time, consultation time, privacy, continuity of care, medicines and investigations should be addressed. Similarly the attributes falling under satisfaction from environment like comfortable environment, facilities and services, building, convenient location of the hospital and cleanliness should also be addressed.

REFERENCES

1. Hulka BS, Zyzanski JC, Thompson S. Scale for the measurement of attitudes toward physicians and medical care. *Medical Care* 1970;8: 429-35.
2. Lebow JL. Similarities and differences between mental health and health care evaluation studies assessing consumer satisfaction. *Eval Program Plann* 1983; 6:237-45.
3. Pascoe GC. Patient satisfaction in primary health care: A literature review and analysis. *Eval Program Plann* 1983;6:185-210.
4. Baker R, Streatfield J. What type of general practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *Br J Gen Pract* 1995;45:654-9.
5. Kane RL, Maciejewski M. The relationship of patient satisfaction with care and clinical outcomes. *Medical Care* 1997;35:714-30.
6. Williams B, Coyle J, Healy D. The meaning of patient satisfaction: An explanation of high reported levels. *Social Science & Medicine* 1998; 47:1351-9.
7. Merkouris A, Lanara V, Lemonidou C. Patient satisfaction: a key concept for evaluating and improving nursing services. *Journal of Nursing Management* 1999;7:19-28.
8. Jackson JL, Chamberlin J, Kroenke K. Predictors of patient satisfaction. *Social Science and Medicine* 2001;5:609-20.
9. McKinley RK, Roberts C. Patient satisfaction with out of hours primary medical care. *Quality in Health Care* 2001;32:538-42.
10. Al-Eisa IS, Al-Mutar MS, Radwan MM, Al-Terkit AM. Patients' satisfaction with primary health care services at capital health region, Kuwait. *Middle East Journal of Family Medicine* 2005;3:10-16.
11. DeSilva N, Abeyasekera S, Mendis K, Ramanayake J. Patient satisfaction with consultations in ambulatory care settings in Sri Lanka. *Medicine Today* 2006;4:125.
12. Tarantino D. How should we measure patient satisfaction? *Physician Executive* 2004;30: 60-1.
13. Danish KF, Khan UA, Chaudhry T, Naseer M. Patient satisfaction; An experience at IIMC-T railway hospital. *Rawal Med J* 2008;33:245-8.
14. Rao GN. How can we improve patient care? *Journal of Community Eye Health* 2002;15:1-3.
15. Al-Mahtab M, Choudhury N, Murshed KMM, Barua UK, Rehman MM, Hossain KMS et al. Patient expectation vs satisfaction: A study from Bangladesh. *Middle East Journal of Family Medicine* 2007;5:52-4.
16. Al-mujali AA, Alshehy AH, Ahmed A, Ismail MFS. Assessment of enablement effect of consultation on patients attending primary health centers in Qatar. *Middle East Journal of Family Medicine* 2009;7(7):3-6.
17. Ganova-Iolovska M, Kalinov K, Geraedts M. Satisfaction of inpatients with acute coronary syndrome in Bulgaria. *Health and Quality of Life Outcomes* 2008;6:50.
18. Al-Dousari H, Al Mutawa A, Al Mithen N. Patient satisfaction according to type of primary healthcare practitioner in the capital health region, Kuwait. *Kuwait Medical Journal* 2008;40:31-8.
19. Liffle S, Wilcock J, Manthorpe J, Moriarty J, Cornes M, Clough R et al. Can clinicians benefit

- from patient satisfaction surveys? Evaluating the NSF for older people, 2005–2006. *J R Soc Med* 2008; 101:598–604.
20. Al-azri MH, Neal RD. The association between satisfaction with services provided in primary care and outcomes in type 2 diabetes mellitus. *Diabetic Med* 2003;20:486-91.
 21. Baba, I. Experiences in quality assurance at Bawku hospital eye department, Ghana. *J Comm Eye Health* 2004;17:31.
 22. Farooqi JH. Patient expectation of general practitioner care, focus group discussion and questionnaire survey in an urban primary health centre, Abu Dhabi-UAE (A pilot study). *Middle East J Family Med* 2005;3:6-9.
 23. Al-azmi SF, Mohammed AM, Hanafi MI. Patients' satisfaction with primary health care in Kuwait after electronic medical record implementation. *J Egypt Public Health Assoc* 2006; 81:277-300.
 24. Al-Qatari GM, Haran D. Determinants of satisfaction with primary health care settings and services among patients visiting primary health care centres in Qateef, eastern Saudi Arabia. *Middle East Journal of Family Medicine* 2008;6:3-7.
 25. Jawaid M, Ahmed N, Alam SN, Rizvi, BH, Razzak HA. Patients experiences and satisfaction from surgical out patient department of a tertiary care teaching hospital. *Pak J Med Sciences* 2009; 25:439-42.
 26. Yousaf RM, Fauzi ARM, How SH, Akter SFU, Shah A. Hospitalised patients' awareness of their rights: a cross-sectional survey from a tertiary care hospital on the east coast of Peninsular Malaysia. *Singapore Med J* 2009;50:494.
 27. Kumari R, Idris MZ, Bhushan V, Khanna A, Agarwal M, Singh SK. Study on patient satisfaction in the government allopathic health facilities of Lucknow district, India. *Indian journal of Community Medicine* 2009;34:35-42.
 28. Al-Emadi N, Falamarzi S, Al-Kuwari MG, Al-Ansari A. Patients' satisfaction with primary health care services in Qatar. *Middle East Journal of Family Medicine* 2009;7:4-9.
 29. Prasanna KS, Bashith MA, Sucharitha S. Consumer satisfaction about hospital services: A study from the outpatient department of a private medical college hospital at Mangalore. *Indian J Comm Med* 2009;34:156-9.
 30. Tasneem A, Shaukat S, Amin F, Mahmood KT. Patient satisfaction: A comparative study at teaching versus DHQ level hospital in Lahore, Pakistan. *J Pharm Sci Res* 2010;2:767-74.
 31. Aldana JM, Piechulek H, Al-Sabir A. Client satisfaction and quality of health care in rural Bangladesh. *Bulletin of the World Health Organization, J Comm Eye Health* 2001;79: 512-7.
 32. Perron NJ, Secretan F, Vannotti M, Pecoud A, & Favrat B. *Oxford Journals Med Family Prac* 2003;20:428-33.
 33. Huda SA, Samani ZAA, Qidwai W. Perceptions about family Physicians: Result of a survey of patients visiting specialist clinic. *J Pak Med Assoc* 2004;54:589.
 34. Batool Z, Afzal A, Hussain S. Perceptions of the beneficiaries of basic health units in rural areas. *J. Agri Soc Sci* 2005;1:62-3.
 35. Khan MH. Patient satisfaction with nursing care. *Rawal Medical Journal* 2007;32:27-9.
 36. Alam MZ, Aman R, Hafizullah M. Patient awareness survey in a tertiary care hospital. *JPMI* 2008; 22:266-9.
 37. Margolis SA, Al-Marzouqi S, Revel T, Reed RL. *International J Quality Health Care.* 2003;15: 241-9.
 38. Fan VS, Burman M, McDonell MB, Fihn SD. Continuity of care and other determinants of patient satisfaction with primary care. *J GEN INTERN MED* 2005;20:226–33.
 39. Ercan I, Özkaya G, Alper Z, Ediz B, Bayman EO, Kan I et al. Algorithm for increasing patient satisfaction related with non technical dimension of services in Turkey. *Eur J Gen Med* 2006; 3:73-7.
 40. Madhok R. Satisfaction with health services among the Pakistani population in Middle-sbrough, England. *J Pub health Oxford* 2010;
 41. Kumar A. The role of patient counsellors in increasing the uptake of cataract surgeries and IOLs. *J Comm Eye Health* 1998;11:8-9.
 42. Coyle J. Exploring the meaning of 'dissatisfaction' with health care: the importance of 'personal identity threat'. *Sociology of Health & Illness* 1999;21: 95–124.
 43. Higgs ZR, Bayne T, Murphy D. Health care access: A consumer perspective. *Public Health Nursing* 2001;18: 3–12.
 44. Asadi-Lari M, Tamburini M, Gray D. Patients' needs, satisfaction, and health related quality of life: Towards a comprehensive model. *Health and Quality of Life Outcomes* 2004;2:32.
 45. Methews SK, Secret J, Muirhead L. The interaction model of client health behavior: A model for advanced practice nurses. *Journal of the American Academy of nurse Practitioners* 2007;20:415-22.
 46. Fathers CP & Stevans S. Improving the patient's experience. *Community Eye Health Journal* 2008;21:55-7.

47. Mpinga EK. Patient satisfaction studies and the monitoring of the right to health: Some thoughts based on a review of the literature. *Global Journal of Health Science* 2011;3:64-9.
48. Halder D, Sarkar AP, Bisoi S, Mondal P. Assessment of client's perception in terms of satisfaction and service utilization in the central government health scheme dispensary at Kolkata. *Indian journal of Community Medicine* 2008;33:121-3.
49. Qidwai W, Ali SS, Baqir M, Ayub S. Patient expectations from an emergency medical service. *J Ayub Med Coll Abbottabad* 2005;17:1-4.
50. Shaikh BT. Quality of health care: an absolute necessity for patient satisfaction. *J Pak Med Assoc* 2005;55:515-6.
51. Imam SZ. Patients' satisfaction and opinions of their experiences during admission in a tertiary care hospital in Pakistan – a cross sectional study. *Biomed central* 2007;1-8.
52. Khandekar R, Al-Harby S. Knowledge and attitude for eye diseases and satisfaction for services among urban citizens of Oman: A pilot study. *Oman Journal of Ophthalmology* 2008;1:13-7.
53. Babbie, E. *The practice of Social Research*. 7th ed. Wordsworth Publishing Co 1993;
54. Sekaran U. *Research methods for business: A skill-building approach*. 3rd ed. John Wiley & Sons 1999;
55. Yin R. *Case study research: Design and methods* (2nd ed.). Beverly Hills, CA: Sage Publishing 1994;
56. Hajifathali A, Ainy E, Jafari H, Moghadam NM, Kohyar E, Hajikaram S. In-patient satisfaction and its related factors in Taleghani university hospital, Tehran, Iran. *Pak J Med Sci* 2008;24:274-7.
57. Gadallah M, Zaki B, Rady M, Anwer W, Sallam I. Patient satisfaction with primary health care services in two districts in lower and upper Egypt. *Eastern Mediterranean Health Journal* 2003; 9:422-30.
58. Mandokhel AK, Keiwkarnka B, Ramasoota P. Patient satisfaction towards out patient department (OPD) services of medicine department in Banphaeo community hospital Samut Sakhon Province, Thailand. *Journal of Public Health and Development* 2007;5:97-105.
59. Patro BK, Kumar R, Goswami A, Nongkynrih B, Pandav CS. Community perception and client satisfaction about the primary health care services in an urban resettlement colony of New Delhi. *Indian journal of Community Medicine* 2008;33: 250-4.
60. Chaka, B. *Adult patient satisfaction with nursing care*. (thesis). 2005;

Corresponding author:

Dr. Iftikhar Ahmad
Department of Community Medicine
Gomal Medical College
D.I.Khan, Pakistan
E-mail: Iftikharahmadgandapur@yahoo.com