



Hospital Characteristics and the Patient Satisfaction in Lahore, Pakistan

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Objective: Organizational set up of a hospital is broadly responsible to the transfer of services, their usefulness, and structural performance in patient outcomes. In current research, we study the relationship between hospital characteristics and several dimensions of patient satisfaction.

Methods: Cross sectional data of 1680 patients admitted in 14 public and private hospitals located in Lahore, Pakistan was collected through a self-administered questionnaire during March, 2015 to August, 2015. Pearson and Spearman correlation techniques were used in SPSS 21 to find the desired relationships.

Results: Patients were significantly ($p < 0.05$) less satisfied in old aged hospitals as compared to the hospitals recently start operating. High income patients were less satisfied with the hospital than the low income patients. In addition, patients with long duration of stay at hospital were more satisfied than the short stay.

Conclusion: Patient satisfaction is a key component in choosing a hospital for receiving services and also for recommending it to others. It indicates the service quality as well as its delivery. A common tool to improve the quality of care in hospital is to conduct a patients' satisfaction survey to explore the factors and areas affecting the satisfaction level and also to find out the reasons for dissatisfaction.

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1. INTRODUCTION

The measurement of quality in services is a topic of great interest to researchers and in recent decades, as an alternative to the supply approach to healthcare services, care quality measurement has been addressed from the patient's perspective [1]. From this point of view, satisfaction is a basic variable in determining quality of healthcare services; patient satisfaction has become an essential element in the design of public healthcare policies and a differentiating element in private healthcare systems [2]. Researchers agree that satisfaction is a multidimensional concept, often described as the subjective experience of the patient while healthcare is provided, and that it is related to different social, demographic and healthcare variables [3,4]. Patient satisfaction has now turned out to be a vital sign of process excellence in hospitals. Even so, the advancement of patient satisfaction has not only tracked from the execution of new incentive schemes and organisational arrangements; it also depends on hospitals' cultures and climates [5].

Islamic republic of Pakistan lies in the Eastern Mediterranean region of World Health Organization and population wise it's the 6th largest nation of this world. Pakistan is a welfare state and the provision of food, shelter, clothing, health and education is the responsibility of state [6]. In 1978, Pakistan's government established an extensive network of primary health care facilities to improved accessibility of the population to the basic health care facilities with a main aim of providing equitably, effective and accessible health care services at a cost that individual can afford [7].

Out of the many causes of underutilization of government health care facility, patient satisfaction is one which has not been explored to greater extent in Pakistan [8]. Patients are more satisfied with the health care services if the health system is responsive in term of respect of dignity, autonomy and prompt attention and meeting their expectations [9,10,11]. The degree of physicians' empathy, which supports a better

exchange of information between physician and patient, proved to be a further important component of a trustful relationship between physician and patient [12]. Positive effects of physician empathy include an increase in compliance, patient satisfaction, diagnostic precision and self-efficacy [13]. Adverse patient events (e.g., mortality, medication errors, patient falls, and nosocomial infections) have an association with hospital characteristics [14,15]. Although it's not a new concept but there is no inclination of incorporation of relation between assorted domains of patient satisfaction and the physiognomies of the hospital.

Table 1. Cronbach's alpha values for satisfaction domains

Satisfaction Domain	No. of Items	Cronbach Alpha
Doctors	23	0.832
Nurses	08	0.839
Physical Facilities	20	0.916
Food Facilities	15	0.871
Hospital Pharmacy/Medicines	6	0.757
Machinery/Tools/Equipment	5	0.806
Overall Satisfaction	9	0.895

2. METHODS

Cross sectional study design was used to collect the data. All hospitals with atleast ten thousand patient visits per month were selected (14 out of 62). About 120 patients from each of the 14 hospitals were selected by using systematic sampling technique where every 25th admitted patient in these hospitals was contacted and requested to participate in the study. If a patient refused to participate or drop the study in some stage then the subsequent numbers were surveyed. Thus totally our sample size was comprised of 1680 patients, to whom data was collected from March, 2015 to August, 2015. A self-administered questionnaire on likert scale was designed to collect information on hospital characteristics and diverse territories of patient satisfaction. All the patients showed interests in

Table 2. Correlations between hospital characteristics domains of patient satisfaction

	Doctor's Treatment	Doctor's Communication	Nurses	Physical Facilities	Environment	Services	Food	Food Staff	Pharmacy	Machinery	Overall
Hospital's Age	-0.344*	-0.151*	-0.246*	-0.226*	-0.184*	-0.259*	-0.113*	-0.118*	-0.115*	-0.181*	-0.214*
Hospital's Area (Acre)	-0.032	0.091*	-0.112*	-0.047	-0.110*	0.014	0.010	0.005	-0.113*	-0.052*	0.033
No of Doctors	0.141*	0.011	-	0.098*	0.131*	0.132*	0.042	0.113*	0.054*	0.140*	0.100*
No. of Nurses	-	-	0.049*	0.038	-0.049*	0.094*	0.041	0.023	0.021	0.041	0.061*
Total Staff	0.148*	0.068*	0.120*	0.093*	0.096*	0.157*	0.051*	0.067*	0.077*	0.116*	0.116*
No. of Wards	0.109*	0.128*	0.067*	0.090*	0.082*	0.151*	0.102*	0.077*	0.025	0.108*	0.170*
No. of Beds	0.206*	0.193*	0.162*	0.245*	0.199*	0.263*	0.078*	0.058*	0.089*	0.206*	0.275*
Patients Visit (per month)	-0.117*	-0.016	-0.190*	-0.159*	-0.189*	-0.121*	-0.026	0.089*	-0.124*	-0.114*	-0.119*
Patient's Age	0.059*	0.038	0.041	0.069*	0.059*	0.080*	0.001	-0.098*	0.098*	0.065*	0.059*
Monthly Income	-0.083*	-0.131*	-0.089*	-0.086*	-0.083*	-0.076*	-0.075*	-0.099*	0.046	-0.065*	-0.130*
Duration of stay (days)	0.194*	0.108*	0.073*	0.158*	0.136*	0.121*	0.172*	0.155*	0.079*	0.141*	0.111*

* $p < 0.05$

participation of the study were included and those who were not ready to participate were excluded from the study. In addition, hospitals with atleast 10000 patients visits per month were included and the rest were excluded. The reliability of the questionnaire was checked by Cronbach's alpha (Table 1) due to its wide applicability [16].

3. RESULTS

The age range of a hospital was from 14 to 80 years with 38.2 ± 23.1 . The minimum and maximum area covered by a hospital was 5 & 105 acres respectively with 38.5 ± 28.6 . Maximum number of doctors in a hospital were 850 (313 ± 245) whereas no. of nurses in any hospital were from 35 to 1850 with 552 ± 517 . Total staff of the hospital excluding doctors & nurses was ranged from 325 to 3253 (1398 ± 895). Minimum wards in a hospital were 4 (34 ± 16) and the no. of beds in a hospital were ranged from 100 to 2300 (1090 ± 669). Majority of the respondents were male (58.2%) and the age range of the respondents was 33.9 ± 16.6 years with their monthly income 23950 ± 40994 . Duration of stay at hospital for treatment was 20 ± 60 days. Also the number of patients visits per month in study hospitals were 13868 ± 13189 .

From Table 2, we observed significant inverse associations between age of hospital and all the domains of satisfaction. Negative significant relations has been observed between area of hospital and environment, pharmacy and diagnostic machinery whereas patients were more satisfied with the doctor's communication in a large space hospital. No of doctors in a hospital had significant positive associations with doctor's treatment, physical facilities, environment, services, food providing staff, diagnostic machinery and pharmacy. Size of the nurses in hospitals was significantly positively related with the satisfaction from nurses and services whereas negatively with the environment at hospital. No. of wards, beds and total staff were positively significantly related with all the domains of patient satisfaction. Hospitals where patients no of visits were higher were less satisfied whereas the duration of their stay was positively related with the satisfaction factors. Lastly, high income patients were less satisfied in all factors with the hospitals.

4. DISCUSSION

Patient satisfaction is a critical health care outcome indicator; the provision of patient

centred care is an important component of a high-quality health care system. Patients who are satisfied with their care are more likely to continue utilizing health care services, maintain a relationship with specific health care providers, and comply with medical recommendations. Conversely, patients who are dissatisfied with their care are more likely to rate their health lower and initiate malpractice litigation. It is essential to measure patient satisfaction as a key sign to how well health care has met patient expectations. These expectations frequently expose what is most related outcome with the patient with respect to treatment result. A well appreciative predictors of patient satisfaction is required if care givers identify individuals at risk for disappointment and improve distribution and quality of care when trying to consider patient satisfaction and its connection with the clinical outcomes, researchers must consider other items that might have an impact over satisfaction, including respondent characteristics and patient expectations. The relations between patient expectations and treatment outcomes are predictive of patient satisfaction where the more preoperative expectations meet outcome, the more likely the patient will be satisfied.

An interesting point in the research we observed was the less satisfaction with the old aged hospitals. A possible reason, might be, the bulk of patients' visit these hospitals daily, patients have to wait for a long time for the treatment process or due to high expectations with the larger and older hospitals. Patients with long duration of disease were less satisfied with the physical facilities and food facilities in the hospital but as their duration of stay increase this dissatisfactions turns into satisfaction. Old aged patients were more satisfied with the doctor's treatment, nurse's care, physical facilities, pharmacy and machinery in the hospital than the younger patients.

Although there is significant room for improvement in all areas of care, several areas need to be paid particular attention. In particular, the waiting time in the emergency before getting a bed in the ward should be decreased by increasing the capacity of the hospital to deal with growing patient numbers. The quality of food needs to be improved, possibly by putting more options on offer. Patients should be provided more privacy during their treatment and nurses and doctors need to improve their communication with the patients. In particular, the health care team should provide more

emotional support to the patient so that they have at least someone in the staff to whom they can share their fears and worries. Surgical teams should make sure that they explain all the risks and benefits to the patients and patiently listen and answer their questions before getting the consent form signed for every procedure.

5. CONCLUSION

Patient satisfaction is a key component in choosing a hospital for receiving services and also for recommending it to others. It indicates the service quality as well as its delivery. Although there is significant room for improvement in all areas of care, several areas need to be paid particular attention. In particular, the waiting time in the emergency before getting a bed in the ward should be decreased by increasing the capacity of the hospital to deal with growing patient numbers. The quality of food needs to be improved, possibly by putting more options on offer. Patients should be provided more privacy during their treatment and nurses and doctors need to improve their communication with the patients. In particular, the health care team should provide more emotional support to the patient so that they have at least someone in the staff with whom they can share their fears and worries.

CONSENT AND ETHICAL APPROVAL

Each hospital's management was contacted by the researcher and after getting their permission the study purpose was explained to the patients enrolled in the hospital and a verbal consent was taken from the patients to participate in the research before collecting the information.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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