

## REAL-TIME PATIENT SATISFACTION SURVEY IN A TERTIARY CARE HOSPITAL

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### ABSTRACT

**Objective:** To assess and analyze patient satisfaction level in a tertiary care hospital.

**Study Design:** Prospective descriptive study.

**Place and Duration of Study:** This survey was carried out at the Quality Assurance department of CMH Malir Cantonment Karachi.

**Material and Methods:** CMH Malir is QMS/ISO 9001-2008 certified since 2013. The hospital was categorized into five major departments for the purpose of this study. These were outdoor, indoor, pathology (laboratory), radiology and pharmacy. Predesigned proformas with questionnaire specific to each department were used to document patient response while leaving that department. Patient satisfaction level was marked on 1-5 grades Likert scale. 1=very poor, 2=satisfactory, 3=good, 4=very good and 5=excellent. Total 500 proformas were collected from all five departments and were later analyzed on SPSS 20. Minimum satisfaction level was rated at scale 3/5 (60%). Each department was further analyzed and the processes were rated on Likert scale as numerical data, mean and frequency were also calculated.

**Results:** Mean age of the studied participants was  $38.1 \pm 12.3$  years. Male to female ratio was 68:32. Average satisfaction level of the hospital was 3.98 (79.74%) with highest satisfaction level of 4.21 (84.23%) for indoor department and lowest of 3.67 (73.45%) for outdoor department. Radiology, pathology and pharmacy were having average satisfaction level of 4 (80%), 4.11 (82.23%) and 3.94 (78.75%) respectively.

**Conclusion:** We found that in this hospital most of the patients were satisfied with indoor treatment and laboratory facilities. Outdoor clinics were having maximum dissatisfaction index.

**Keywords:** Health care facilities, Patient satisfaction, Quality of health care.

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### INTRODUCTION

Satisfaction of patients is an important indicator of quality of health care services provided by an organization. It is defined as perception of a patient that whether health services provided meet the expectations and needs of end user.

Health care sector has become an extremely competitive and rapidly growing service industry with the patients acting as key evaluators in measuring the standard of service provided by the hospital.

Lately the private hospitals have acclaimed considerable popularity especially in the middle and upper class because of their emphasis on customer satisfaction<sup>1</sup>. On the other hand public

hospitals unfortunately not only have scant resources in terms of man power, medicines and diagnostics but are also least focused towards patient satisfaction. Hospitals must be conversant with their strengths and weaknesses to gain and maintain market share. Hence it is not only important but quite rational to undertake surveys periodically in healthcare facilities<sup>2</sup>.

Patient response is a valuable tool to ascertain patient perception of the overall facilities provided, including the way patient are attended/treated by staff including physicians, level of competency of staff and quality of health care. Moreover areas entailing improvement can be identified earlier which otherwise may be overlooked by the hospital administration.

Although real time surveys have their limitations but still are pertinent as they also serve to provide any organization a level of confidence about its working and objective

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Received: 03 Feb 2017; revised received: 14 Feb 2018; accepted: 28 Mar 2018

documentation. Patients' personal experience and unsolicited opinion always reflects the true picture of the health care facilities provided by an organization.

This study was aimed to have an awareness of the patients perspective on the performance of this organization. Moreover the study includes a factual and comprehensive analysis of the feedback received from the patients alongwith assessment of their satisfaction level against all departments of the hospital.

### **MATERIAL AND METHODS**

This descriptive study was carried out in Quality Assurance Department (QAD) of Combined Military Hospital Malir (CMH). Combined Military Hospital Malir is a 500 hundred bedded tertiary care hospital. It has an average bed occupancy of 65-70% with an approximate outdoor sick report of 1200 patients per day. CMH Malir has a well-established Quality Assurance Department comprising of QMR (Quality Management Representative), DQMR (Deputy Quality Management Representative), DCR (Document Control Representative) and Clerical staff and is QMS ISO 9001-2008 certified since 2013. Before the commencement of the study, permission from the hospital Ethical committee was acquired. This survey was initiated in January 2016 and completed in April 2016. Scope of this survey was all major departments of the hospital. The hospital was broadly categorized in to five major departments labeled as Indoor, Outdoor, Pharmacy, Pathology and Radiology.

A sample size of 500 patients was selected by random systematic sample technique. Target was set to collect minimum 100 feedbacks from each department making a total of 500. No discrimination of class among patients was made and no prior intimation to the concerned department was given before collection of samples. Informed verbal consent was obtained from all the patients and their confidentiality and privacy was maintained. Patients were assured that their opinion will not adversely

affect their treatment rather it will help to improve it. Response was recorded and interviewing of patients was done while they were leaving a specific department.

For indoor department response was collected as per the proportion of admitted patients in various wards. Both genders and patients above 15 years were included.

Indoor department comprises of all the wards in the hospital including intensive care units of both medical and surgical units whereas outdoor department includes all out patient departments including primary referral and specialist clinics. Pathology department refers to all the laboratory facilities while radiology department represents all radiological diagnostics including X-rays, Ultrasound and CT scan. Pharmacy department is related to issuance of medicines, their quality and pertinent information.

We designed and used separate proformas for each department having questionnaire covering pertaining processes, specific to the concerned department. Opinion on all aspects from reception, waiting areas, waiting time, staff behavior, admission process, medicines & treatment and ancillary facilities was sought from patients.

Patients were requested to score all variables on Likertscale 1-5 where 5 is excellent, 4=good, 3=satisfactory, 2=poor and 1 is very poor.

Proformas from each department were collected on random visits by lottery method and it took about three months to collect the desired sample. Each department was further analyzed and processes were rated on Likert scale and their mean, SD, percentage and frequency was also calculated by using SPSS 20. Minimum satisfaction level was rated at scale 3 or 60%. Parameters rated below 3 (60%) were categorized as dissatisfied.

### **RESULTS**

A total of 500 proformas were collected from five departments of the hospital in this real time

survey. Mean age of the studied participants was  $38.1 \pm 12.3$  years. Male to female ratio was 68:32.

In Indoor department we found that average satisfaction index was 4.21 (84.23%). Maximum satisfaction index was marked for subcategory "Daily doctors' round" 4.71 (94.2%) and "Admission process" 4.7 (94%). Minimum satisfaction was found for "Meals" 3.45 (69%), and "Bed linen" 3.55 (71%) (table-I).

Outdoor department had lowest average satisfaction level of 3.67 (73.45%). Maximum

maximum positive response of 4.53 (90.6%) against subcategory "Reception" and 4.52 (90.4%) for "Staff Help". Dissatisfaction of 2.87 (57.4%) was seen for "Time in Collection of Medicines" and "Information about Medicines" 2.92 (58.4%) (table-III).

In Pathology department no parameter was below the cut off satisfaction line of 3. The average satisfaction level was 4.11 (82.29%). Highest satisfaction level was found for subcategory "Reception" 4.53 (90.6%) and "Helping attitude of Staff" 4.52 (90.4%) while

**Table-I: Patient satisfaction index for indoor department.**

Indoor			
Parameters	Mean Likert Scale	SD	Percentage (%)
Admission	4.7	0.90	94
Guidance	3.93	0.92	78.6
Treatment	4.48	1.08	89.6
Time of med	3.96	1.01	79.2
Information	4.2	0.97	84
Round	4.71	1.12	94.2
Comfort	3.98	1.16	79.6
Attendant	4.23	1.28	84.6
Environment	3.92	1.03	78.4
Cleanliness	4.5	1.07	90
Behaviour	4.57	1.04	91.4
Meal	3.45	0.92	69
Linen	3.55	0.95	71
Response on patient complaint	3.97	1.15	79.4
Nursing Care	4.47	1.12	89.4
Bed Allocation Time	4.32	1.35	86.4
Sample collection time	4.42	0.95	88.4
Initial Treatment Time	4.45	1.06	89
TOTAL	75.81		
Average	4.21		84.23

positive response was found for subcategory "General Environment" 3.98 (79.6%) and "Consultation" 3.9 (79%). Patient's dissatisfaction was seen for "Waiting time" 2.96 (59.2%) and "Response to patient complaint" 2.91 (58.2%) each (table-II).

Pharmacy department had an average satisfaction level of 3.94 (78.75%) with

lowest satisfaction level was seen for "Sample waiting Time" 3.2 (64%) (table IV).

Radiology department also had satisfaction index above the cut off line of 3 for all parameters. Average satisfaction level was 4 (80%) with highest satisfaction level of 4.65 (93%) for subcategory "Doctor's Consultation" and "Guidance" 4.59 (91.8%). Lowest satisfaction was

recorded for waiting facilities 3.38 (67.6%) and "Behavior of Paramedics" 3.38 (67.6%) (table-V).

We also found that average satisfaction index of this hospital is 3.98 (79.74%) with a highest satisfaction index of 4.21 (84.23%) for indoor department and lowest satisfaction index of 3.67 (73.45%) for outdoor department (table-VI).

## DISCUSSION

Patients act as key evaluators of healthcare system and their feedback serves as a powerful

the growing push toward accountability among health care providers<sup>8</sup>.

Patient satisfaction is basically a measure of experience meeting with the expectation of a patient during treatment process<sup>2</sup>. Patients nowadays are well aware and better educated with an easy access to information, and high expectations from the health system<sup>9</sup>.

There are many factors that can affect patient satisfaction. These determinants can either be health care-related or patient-related. Few factors related to health providers are, physician's

**Table-II: Patient satisfaction index for outdoor department.**

Outdoor			
Parameters	Mean Liket Scale	SD	Percentage (%)
Hosp Design	3.84	.99	76.8
Parking	3.81	1.07	76.2
Guidance	3.92	1.16	78.4
Registration	3.87	1.17	77.4
Waiting Area	3.78	1.27	75.6
Consultation	3.90	1.38	78
Staff Behavior	3.77	1.25	75.4
Environment	3.98	1.04	79.6
Cleanliness	3.62	1.27	72.4
Xray Facilities	3.93	1.33	78.6
Lab Facilities	3.74	1.18	74.8
Response Complaint	2.91	1.34	58.2
Reg Time	3.19	1.35	63.8
Waiting Time	2.96	1.56	59.2
Consultation Time	3.87	1.48	77.4
Total	55.09		
Average	3.67		73.45

way to develop a patient-centered approach for delivery of quality healthcare services. Moreover his culture and family taboos also has an impact on his judgment of the same. Ahmed *et al*<sup>3</sup> reported that diversity in demographics of the patients also molds their perception about the facilities and services provided by the hospital.

According to Chakraborty<sup>4</sup>, Rezaei<sup>5</sup>, Aniza<sup>6</sup> and Chaaker<sup>7</sup> satisfaction being a psychological concept, can be defined in several different ways. Measurement of patient satisfaction is expected to play an increasingly important role in

competency and communication skills, attitude of hospital staff, access to basic facilities, and infrastructure. Factors related to patients include demographic characteristics of patients, stage of their disease as well as patients' trust and involvement in decisions about their healthcare<sup>10-12</sup>. Patient satisfaction is more important today than ever before to address issues related to service delivery in this context<sup>13</sup>.

Achieving 100% satisfaction of patients in any hospital is inevitable likewise the same is true for military hospitals, as it is virtually to

satisfy all patients at all times is virtually not feasible.

Our study was aimed to delineate the satisfaction level of patients against all departments of the hospital. We categorized the whole hospital in five major departments namely as Indoor, Outdoor, Pharmacy, Radiology and

4.11 (82.29%), Radiology 4 (80%), Pharmacy 3.94 (78.75%) and outdoor department 3.67 (73.45%).

We discovered certain strong areas of this hospital where satisfaction level was found out to be more than 90%, these include admission process 4.7 (94%), daily ward rounds 4.71 (94.2%), Cleanliness 4.5 (90%), Staff behavior 4.57 (91.4%),

**Table-III: Patient satisfaction index for pathology department.**

Pathology			
Parameters	Mean Likert Scale	SD	Percentage (%)
Reception	4.75	1.04	95
Guidance	4.43	1.27	88.6
Waiting Facility	4.56	1.12	91.2
Staff Behavior	4.61	1.01	92.2
Cleanliness	4.45	1.03	89
Response to Patient Complaint	3.89	1.02	77.8
Entry waiting time	3.54	1.10	70.8
Sample waiting time	3.22	0.99	64.4
Report delivery time	3.58	1.26	71.6
Total	37.03		
Average	4.11		82.29

**Table-IV: Patient satisfaction index for pharmacy department.**

PHARMACY			
Parameters	Mean Likert Scale	SD	Percentage (%)
Reception	4.53	0.88	90.6
Waiting Facility	4.48	0.89	89.6
Receiving Med	3.98	1.10	79.6
Staff Behavior	4.33	0.88	86.6
Staff Help	4.52	1.10	90.4
Information of Medicine	2.91	1.02	58.2
Issuance of Med	3.72	0.98	74.4
Cleanliness	3.98	0.93	79.6
Response to Pt Complaint	3.90	0.89	78
Gen Environment	4.45	1.00	89
Signature Time	3.58	0.99	71.6
Time in Collection	2.87	1.14	57.4
Total	47.25		
Average	3.94		78.75

Pathology.

We found out that overall satisfaction index of patients in our hospital is 3.98 (79.74%). Whereas department wise we found out that the level of patient satisfaction for Indoor department of this hospital was the highest which was 4.21 (84.23%) followed by Pathology with an index of

Nursing care 4.57 (90.4%), Reception facilities 4.75 (95%) and Waiting areas 4.56 (91.2%).

We also found dissatisfaction that is below 60% in parameters like Waiting Time 2.96 (59.2%), Issuance of Medicines 2.87 (57.4%), Information about Medicine 2.91 (58.2%) and Response towards Patient Complaint 2.91 (58.2%).

Patient dissatisfaction pertaining to waiting time was associated with increased doctor to patient ratio. Regarding waiting for issuance of medicines it was seen that there is a sudden influx of patients between 1000 to 1200 hours as all patients from outpatient department converge

unsatisfied from indoor facilities and 54% were unhappy about the cleanliness.

The result of our study is also comparable to the one conducted by Khursheed *et al*<sup>15</sup> conducted at one of the leading tertiary care private hospital of Pakistan which shows

**Table-V: Patient satisfaction index for radiology department.**

Radiology			
Parameters	SCALE	SD	Percentage (%)
Reception	4.51	0.63	90.2
Guidance	4.59	0.74	91.8
Waiting Facility	3.38	0.72	67.6
Doc Consultation	4.65	0.71	93
Staff Behavior	3.38	0.87	67.6
Cleanliness	3.90	0.97	78
Patient Comfort	3.78	0.75	75.6
Facilities	3.94	0.76	78.8
Other Facilities	3.72	0.83	74.4
Response to Pt Complaint	3.46	0.82	69.2
Reg Time	4.45	1.11	89
Procedure Time	4.25	0.75	85
Total	48.01		
Average	4.00		80.02

**Table-VI: Average satisfaction index of hospital.**

S. No.	Department	Average Satisfaction Index	Percentage (%)
1	Outdoor	3.67	73.45
2	Indoor	4.21	84.23
3	Pathology	4.11	82.29
5	Pharmacy	3.94	78.75
6	Radiology	4.0	80
		3.98	79.74

to Pharmacy department for collection of medicines.

Many studies similar to ours have been conducted locally and internationally with variable results. Results of our study are far better than the one quoted by Hussain *et al*<sup>14</sup> who also conducted a survey in four major hospitals of Karachi from 2010-2012 and found out that 63.7% patients were satisfied with staff, 65.2 from doctors and only 54% from Hospital environment. In her study 70% patients were

patient satisfaction ratio of 84.6%. However, opposing results were found by Javed *et al*<sup>16</sup> study done at Pakistan Institute of Medical Sciences Islamabad where patient satisfaction with waiting time, accessibility of services, confidentiality and cleanliness of the facility was only 54%. Ahmed *et al*<sup>17</sup> claims satisfaction Index of 85-95% in a Private Hospital of Karachi.

Studies of Hussain *et al*<sup>18</sup> claims satisfaction level of 80%-95% for various facilities provided in Hayatabad Complex Peshawar. Our results surpass even another study which was

conducted in two tertiary care hospitals located in Rawalpindi by Sultana *et al*<sup>19</sup> where only 62% patients were satisfied with the consultation and attitude of doctors. Mukhtar F<sup>20</sup> claims patient satisfaction level of 90-95% against various variables in outpatient department of a tertiary care hospital of Lahore.

Our results are also better than study of Ahsan *et al*<sup>21</sup> in which patient satisfaction was 68% in Medical ward and 77% in Surgical ward. Tasneem A, in her study conducted in Lahore reported patient's satisfaction of 50% towards bed availability and hospital environment and only 14% with the condition of toilets<sup>22</sup>. Another study, similar to that done at Hayatabad Medical Complex, Peshawar showed patients satisfaction level of only 13% towards cleanliness<sup>23</sup>.

Mixed results were revealed in a study carried out by Ahmed *et al*<sup>24</sup> and his team. As per their study (72.7%) patients seemed satisfied with the attitude of doctors except their partiality towards acquaintances (about 96%). A total of 56.4% patients indicated that the behavior of the lower staff was harsh and derogatory. About 72.7% of the patients were not satisfied with the type of treatment in contrast to our study where 91.4% of patients were satisfied with the treatment provided to them.

Results of emergency department of an Iranian hospital claim 86% satisfaction<sup>25</sup>. On the contrary, some international studies have revealed greater dissatisfaction of patients towards availability of medicines and laboratory investigations in comparison to our study<sup>26,27</sup>.

Armed Forces established institutes have their own system of management, monitoring, accountability and discipline. Furthermore as per the instructions of higher headquarters and requirement of QMS ISO 9001:2008 this hospital in particular is regularly collecting and analyzing patients feedback to ascertain their satisfaction level.

However, Farley *et al*<sup>28</sup> has reported that though satisfaction of a patient is an important element of his experience but it should not be

taken as a sole tool in order to measure the quality of treatment.

## CONCLUSION

We found that in this hospital most of the patients are satisfied with indoor treatment and laboratory facilities. Outdoor clinics were having maximum dissatisfaction index.

Patient satisfaction is one of the prime objectives of health care system as it can be aptly used to identify voids in the delivery of health care services and hence leading to their improvement.

## CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

## REFERENCES

1. Yeilada F, Direktör E. Health care service quality: A comparison of public and private hospitals. *Afr J Bus Manage* 2010; 4(6): 962-71.
2. Ahmad I, Nawaz A, Khan S. Predictors of patient satisfaction. *GJMC* 2011; 9(2): 183-88.
3. Ahmad I, Nawaz A, Uddin S. Dynamics of patient satisfaction from health care Services. *Gomel J Med Sci* 2011; 9(1): 37-41.
4. Chakraborty R, Majumdar A. Measuring consumer satisfaction in health care Sector: The applicability of SERVQUAL. *J arts sci commer* 2011; 2(4): 149-60.
5. Rezaei M, Rezaei H, Alipour H, Salehi S. Service quality, client satisfaction and client personality in the public companies. *Aust J Basic & Appl Sci* 2011; 5(3): 483-91.
6. Aniza I, Rizal M, Mardhiyyah M, Helmi I, Syamimi B, Tahar M. Caregivers' Satisfaction of Healthcare Delivery at Pediatric Clinics of University Kebangsaan Malaysia Medical Centre in 2009. *Med J Malaysia* 2011; 66(2): 84-8.
7. Chaker M, Al-Azzab N. Patient satisfaction in qatar orthopedic and sports medicine SS hospital (ASPITAR). *IJBASS* 2011; 2(7): 69-78.
8. Mukhtar F, Anjum A, Bajwa MA, Shahzad S, Hamid S, Masood Z, et al. Patient satisfaction; OPD services in a Tertiary Care Hospital of Lahore. *Professional Med J* 2013; 20(6): 973-80.
9. Alam MZ, Aman R, Hafizullah M. Patient awareness survey in a tertiary care hospital. *J Postgrad Med Inst* 2008; 22: 266-9.
10. Sofaer S, Crofton C, Goldstein E, Hoy E, Crabb J. What do consumers want to know about the quality of care in hospitals? *Health Serve Res* 2005; 40(6.2): 2018-36.
11. Renzi C, Abeni D, Picardi A, Agostini E, Melchi CF, Pasquini P et al. Factors associated with patient satisfaction with care among dermatological outpatients. *Br J Dermatol* 2001; 145(4): 617-23.
12. Schoenfelder T, Klewer J, Kugler J. Determinants of patient satisfaction: A study among 39 hospitals in an in-patient setting in Germany. *Int J Qual Health Care* 2011; 23(5): 503-9.
13. Bamidele AR, Hoque ME, Heever H. Primary satisfaction with the quality of care in a primary health care setting in Botswana. *S Afr Fam Pract* 2011; 53(2): 170-5.

14. Hussain M, Khan S, Ahmed W. Inpatient satisfaction at tertiary care public hospitals of a metropolitan city of Pakistan. *J Pak Med Assoc* 2014; 12(64): 1392-97.
  15. Khurshheed M, Fayyaz J, Zia N, Feroze A, Jamil A. Real-Time patient satisfaction of emergency department services in a tertiary-care hospital in Karachi, Pakistan. *Emergency Med* 4: 188.
  16. Javed A. Patient satisfaction towards outpatient department services in Pakistan Institute of Medical Sciences, Islamabad. (Master's Thesis). Mahidol University, 2005.
  17. Ahmed S, Ahmed I, Tanveer F, Hashmi SK. Patient Satisfaction level in surgical ward of a tertiary Care Hospital Karachi. *Pakistan Oral & Dental J* 2014; 34(2): 253-56.
  18. Hussain I, Akhtar T, Khan A, Ahmed I. Patients satisfaction and perception with health care facilities in hayatabad medical complex. *Ann Pak Inst Med Sci* 2013; 9(3): 114-17.
  19. Sultana A, Riaz R, Rehman A, Sabir SA. Patient satisfaction at two tertiary Care Hospitals of Rawalpindi. *JRMC* 2009; 13: 41-3.
  20. Mukhtar F, Anjum A, Bajwa MA, Shahzad S, Hamid S, Masood Z, et al. Patient satisfaction; OPD services in a Tertiary Care Hospital of Lahore. *Professional Med J* 2013; 20(6): 973-80.
  21. Ahsan N. Assessment of Patients' Satisfaction in Medical and Surgical Wards in a Tertiary Care Hospital. *J Ayub Med Coll Abbottabad* 2012; 24(3-4): 147-50.
  22. Tasneem A, Shaukat S, Amin F. Patient satisfaction: a comparative study at teaching versus DHQ level hospital in Lahore, Pakistan. *J Pharm Sci Res* 2010; 2(11): 767-74.
  23. Sadaf R, Zahid M, Nisa M. Patient satisfaction survey in an obstetrics and gynecology ward of a tertiary care hospital. *J Med Sci* 2012; 20(3): 142-5.
  24. Ahmad N, Mamoona KK, Khanzadi FK, Ullah F, Amanullah K, Mahfooz R, et al. Health conditions: Analysis of patients' social problems at public hospitals in southern region of Khyber Pakhtunkhwa: Gomal Uni J Res 2013; 29(2): 47-54.
  25. Soleimanpour H, Gholipouri C, Salarilak S, Raoufi P, Vahidi RG. Emergency department patient satisfaction survey in Imam Reza Hospital, Tabriz, Iran. *Int J Emerg Med* 2011; 4: 2.
  26. 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 J Fam Med* 2007; 5: 52-4.
  27. 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. *East Mediterr Health J* 2003; 9(3): 422-30.
  28. Heather F, Enrique R, Christian M, Leah H, Anthony M, Thomas B, et al. Patient Satisfaction Surveys and Quality of Care: An Information Paper. *Ann Emerg Med* 2014; 64(4): 351-57.
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