

COMPARISON OF PATIENT SATISFACTION REGARDING ACCIDENT AND EMERGENCY DEPARTMENT SERVICES BETWEEN PUBLIC AND MILITARY HOSPITALS OF ATTOCK CITY

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ABSTRACT

Objective: To compare the patient satisfaction attending accident and emergency (A&E) departments of the public and military hospitals of district Attock.

Materials and Methods: This comparative study was conducted in the Combined Military Hospital and District Headquarter Hospital of District Attock from December 2019 to April 2020. Sample size of 390 was selected through convenient sampling technique. Data were collected using a self-administered questionnaire, consisting of three parts; demographic, satisfaction level of each service dimension and overall satisfaction regarding A&E. Data were analyzed using SPSS version 22.0.

Results: The mean age of participants was 43.1 ± 14.5 . Male participants were 305 (78.2%) and females were 85 (21.8%). Most of them were having the education up to Matric i.e., 174 (44.6%). Maximum number, 245 (62.8%) belonged to rural areas and government employees were 79 (20.3%). The satisfaction of participants was significantly associated with the education and monthly income of participants ($p < 0.001$). Furthermore, all the participants (100%) were satisfied with the services provided by A&E at CMH and 90% were satisfied with DHQ services.

Conclusion: The satisfaction of participants was significantly associated with the Education and Monthly income of participants and not with the gender of patients, age, background, and occupation of participants. The overall satisfaction was higher in CMH in comparison to the DHQ hospital.

Keywords: Patient Satisfaction, Accident and Emergency department services, Public Hospital

INTRODUCTION

One of the crucial instruments used to satisfy requirements of consumers within organizations is

quality management and assessment.¹ Nevertheless, health-care services are different from the rest of services due to criticality and vitality. The patient (customer) must have to yield his or her cooperation and confidentiality to the health care provider throughout the treatment and after that which is crucial to allow the process to be successful.² Patientcare of an accident & emergency department (A&E) is different in a

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lot of ways from that of hospital wards. Patients enter in need of more or less urgent attention in the A&E, which cause large variations in the flow of patients. Decisions have to be made quickly and the duration of visit to the A&E is often short. Moreover, at an A&E anyone might seek help that implies deviation in exposure to injuries, illness, and state of mind etc.³ Though medical treatments can occasionally be of crucially significance, as in the case of a cardiac arrest or with multi-trauma patients, in the A&E for most patient's trivial medical intervention is adequate⁴. The care received in A&E are not always satisfactory of patients. Just like, treatment and nursing care along with information provided from physicians and nurses are often un-satisfactory, as well as waiting time is often perceived to be irrationally long^{5,6}. Huggins et. al.⁴ when they tried to identify of behaviors of A&E nurses as the patients perceived. The most imperative behaviors of nursing care were the technical nursing behaviors just like "know how to handle equipment". Patients in the emergent group experienced fewer caring behaviors in comparison to the patients who were triaged non urgent. Non urgent group of patients have their specific needs and expectations which has to be paid more attention. A majority of the patients of several A&Es consists of this group and as for the emergent patients, it is just as important for these patients to be satisfied by the quality of care.

A big proportion of people who refer to a hospital are comprised of patients of Emergency and Accident Departments⁷. "The A&E of a hospital is a complex unit where the fight between life and death is always a hair's breadth away, requiring a high degree of coordination and interrelations between human and material elements"⁸. For overall organizational performance the healthcare regulators recently shifted toward a market driven scheme of moving patient satisfaction surveys towards an instrument of quality improvement⁹. For all French hospitals, evaluation of patient satisfaction was compulsory in 1996. In Germany since 2005, gauging satisfaction has been required as a constituent of quality improvement reports^{10,11}. Upon their arrival in the hospital, the accident and emergency department of a hospital is one of the first domains in which the critical patients are brought in.

Healthcare managers in developing countries realized how patient perception of quality derives

their choices among hospitals. Determination of patient satisfaction in emergency department was carried out in DHQ Rawalpindi and Aga Khan Hospital, Karachi respectively; however, no study has even been reported in Pakistan on comparison of A&E department services in relationship to patient's satisfaction and services quality independently. The current study is aimed at cross comparison of two sectors. Moreover, there exists a significant shortage of research data in Pakistan regarding the impact of services quality on patient satisfaction and statistical hypothesis testing to prove the correlation between two variables¹⁰. This shortage of knowledge is accountable for poor healthcare delivery system due to lack of effective planning and vibrant health policy addressing quality dimensions¹².

MATERIALS AND METHODS

This comparative study was conducted at the normal & non-contrived setting with Accident and Emergency department of Military hospital (CMH) and public hospital (DHQ), Attock from December 2019 to April 2020 after seeking approval from review board (Ref #

The sample size of this study was 390 which was calculated by using openepi.com with 95% CI, absolute precision of 5%. Both males and females visiting to accident and emergency department of both the hospitals and consented were included in the study. Ethical permission was acquired from the "Khyber Medical University Peshawar Ethical Committee" and director of A&E department of hospital.

Before the data collection, respondents were passably informed about the study and its importance for the community. The self-administered questionnaire with 5-point Likert scale was used for the data collection.

The data were analyzed using SPSS and MS Excel. The SPSS was used to quantify the results, while MS Excel was used for graph construction. Continuous data was presented as mean and standard deviation, while the categorical data was presented as proportion, frequency, and percentages. For comparative aspects between different categories chi-square test was used, a P value < 0.05 was considered as being significant. The service dimensions for each satisfaction factor were calculated by giving the 5-point Likert scale values to every possible option

of the question. Every services dimension was calculated by taking the mean of selected answers for that dimension.

RESULTS

A sample of 390 patients was selected using convenient sampling technique. Both male and female patients were included in the study who attended the accident & emergency departments of District Headquarter Hospital and Combined Military Hospital of District Attock. The mean age of participants was 43.1 (± 14.5), educational mean was 9.36 (± 3.5), and mean monthly income was 24690 (± 12072) (Table 1).

Table 2 represents the baseline socio demographic data of the study participants. Equal number of participants (n=195) were selected from both the hospitals to avoid biases. Amongst the 390 participants, 78.2% (n=305) were males and 21.8% (n=85) were females, and 62.8% (n=245) belonging to the rural areas.

The scores calculated for each dimension of patient satisfaction in both the hospitals was by using the Likert scale values to every possible option of the question. Every services dimension was calculated by taking the mean of selected answers for that dimension. The data in Table 3, shows that participants of CMH were maximally satisfied with the accessibility to A&E department, followed by health care professionals’ attitude, arrival at the A&E department, information to patients and then physical environment. They were dissatisfied with the perceived services costs of CMH whereas the patients of District Headquarter Hospital (DHQ) Attock were maximally satisfied with the Health Care Professionals Attitude, followed by Perceived Services Costs, Arrival at the A & E Department, Accessibility and then Information to Patient. They were dissatisfied with the Physical Environment of A&E.

Table 1: Means and Standard Deviations of Numerical Variables

Variables	Mean	St. Deviation
Age	43.08	14.472
Education	9.36	3.523
Monthly Income	24689.92	12071.55

Table 2: Socio-Demographic Characteristics of the Study Participants

Hospital	Frequency	Percent (%)
CMH	195	50.0%
DHQ	195	50.0%
Gender		
Male	305	78.2%
Female	85	21.8%
Education		
Illiterate	30	7.7%
Primary	24	6.2%
Middle	63	16.2%
Matric	174	44.6%
Intermediate	59	15.1%
Bachelor	27	6.9%
Master	11	2.8%
Background		
Urban	145	37.2%
Rural	245	62.8%
Occupation		
Army Person	43	11.0%
Farmer	14	3.6%
Government Employee	79	20.3%
Housewife	59	15.1%
Imam Masjid	2	0.5%
Labour	53	13.6%
Private Business	34	8.7%
Private Job	39	10.0%
Retired Army Person	58	14.9%
Retired Government Employee	5	1.3%
Student	4	1.0%

Table 3: Patient Satisfaction Scores

Satisfaction Item	Score (CMH)	Score (DHQ)
Accessibility	3.39	2.96
Arrival at the A & E Department	2.96	2.99
Perceived Services Costs	2.24	3
Physical Environment	2.66	1.7
Health Care Professionals Attitude	3.12	3.03
Information to Patient	2.83	2.86

Table 4: Association of demographic variables with the overall satisfaction of participants

Gender	Yes	No	P-Value
Male	292	13	0.290
Female	79	6	
Age			
18-35	135	8	0.99
36-50	139	11	
51-65	61	0	
66-90	36	0	
Education			
Illiterate	28	2	0.001
Primary	22	2	
Middle	58	5	
Matric	170	4	
Intermediate	57	2	
Bachelor	27	0	
Master	7	4	
Locally			
Urban	135	9	0.604
Rural	234	10	
Monthly Income			
6000-15000	86	9	0.001
16000-30000	173	6	
31000-80000	109	4	
Occupation			
Army Person	43	0	0.089
Farmer	14	0	
Government Employee	71	8	
Housewife	55	4	
Imam Masjid	2	0	
Labour	49	4	
Private Job/ Business	71	2	
Retired Army/ Government Employee	62	1	
Student	4	0	

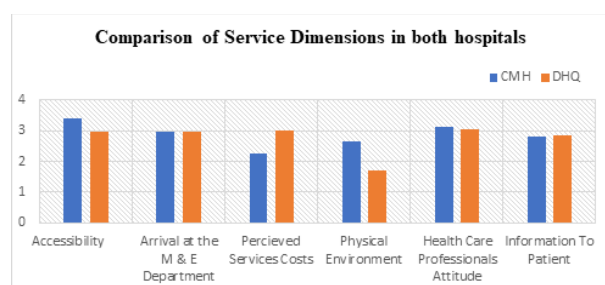


Figure 1: Comparison of Service Dimensions in both hospitals

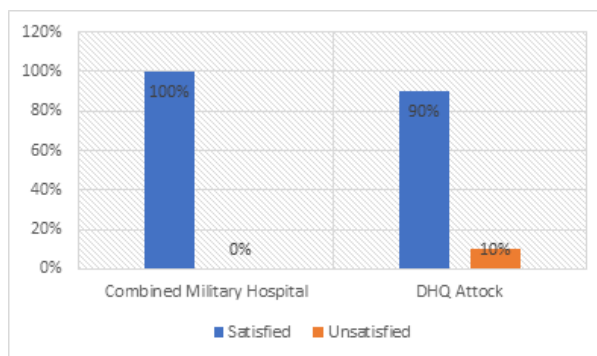


Figure 2: Overall Satisfaction of the Patients

The Comparison of Service Dimensions in both hospitals are shown in Figure 1

The overall satisfaction of the study participants is shown in Figure 2. All the participants (100%) were satisfied with the services provided by A&E department at CMH. However, 90% of the patients of DHQ were satisfied and 10% were dissatisfied.

Table 4 illustrates that satisfaction of patients was not significantly associated with the gender of patients ($P > 0.05$). It was also not significantly associated with the age, background, and occupation of participants ($P > 0.05$). The satisfaction of participants was significantly associated with the Education and Monthly income of participants ($P < 0.05$).

DISCUSSION

This study was conducted to compare the patient satisfaction attending A&E departments of the public and military hospitals of district Attock. A sample of 390 patients was selected using convenient sampling technique. Both male and female patients were included in the study who attended the accident & emergency departments of District Headquarter Hospital and Combined Military Hospital of District Attock.

Information received from medical personnel is determinant of patient satisfaction⁵. Lack of information magnifies patients' sense of uncertainty and increases their psychological distress¹³. In line with the findings of our study, many studies posed that timely information to patients regarding their condition and the entire process of ED care was critical to patient satisfaction¹⁴⁻¹⁷.

The results of this study also indicated that patients had maximum satisfaction with the attitude of healthcare professionals, however, the patients of military hospital were more satisfied than public sector hospital. It implies that the staff of military hospitals is more trained in terms of attitude with their patients. "To increase more patient satisfaction, ED physicians and other care providers might improve their behavior and increase interactions that convey to the patient a serious regard for them and their health problem. This could involve increasing attention to verbal expressions and body language that cue interest and active listening. Conversely, medical personnel should avoid behaviors that might imply anything less than a serious regard for the

patient's condition, insufficient eye contact, lack of sincerity or communication with the patient, talking over the patient's head, appearing not to give undivided attention to the patient, or any other potentially distancing behavior."¹⁸

In this current study, maximum non-satisfaction was with the physical environment of public sector hospital which was also an important index in other studies¹⁹⁻²¹. There are factors contributing to physical environment of the public hospitals but major in this scenario might be due to lack for proper funds, and upgraded equipment and amenities. Another reason might be the more load of patients on public sector hospital that could not be handled with the existing technical and support staff. However, the patients of military hospital were somehow neutral about the physical environment.

Our data showed that, patients visiting military hospital were unsatisfied with cost of services provided at hospital. The main point of concern by the patient was pharmacy and lab facilities within the hospital. This also reflects that as compared to public sector hospitals, the lab and pharmacy costs are much higher in military hospitals. A number of studies have been conducted that describe the importance of laboratory investigations and proper medications which might incur out of pocket expenses²²⁻²⁴.

In our study, the patients visiting public sector hospital were not satisfied with the waiting area and waiting time and facilities for patients/attendants in the accident & emergency department. Care providers have to reduce waiting time and delay in nursing care as it adds to the anxiety and agony of the patients and attendants. Hospitals can't change a severe situation, but they must try to change a patient's perception of the situation and take the attitude that every patient is a welcome guest.

Arrival at the A & E departments of both the public and military hospitals was satisfactory for patients and there was no problem of car parking etc. As far as the accessibility to A&E department is concerned, the military hospital was more accessible to patients and entrance to all parts of hospitals was appropriate and reachable. This might be due to the location of military hospital accessible from all city areas.

The satisfaction of the study participants in terms of services provided was found to be 100% in case

of military hospital while 10% of the participants of public sector hospital were not satisfied with the service provided at A&E department. To the best of our knowledge, no such comparison of military and public sector hospitals has been made till date so the results could not be compared. However, the satisfaction level of public sector hospital is identical to a same kind of study conducted in Rawalpindi, Pakistan²⁵.

Moreover, the satisfaction of participants was significantly associated with the education and monthly income of participants ($p < 0.001$). These results are in-line with the findings of some other studies conducted in India and Iran.^{26,27}

CONCLUSIONS

Based on the findings of our study, the patients visiting accident and emergency department of military hospital were more satisfied as compared to public hospital. However, by focusing on the physical environment, waiting time, and more professional attitude of staff, the public sector hospital can full satisfy patients.

REFERENCES

- Handayani PW, Hidayanto AN, Sandhyaduhita PI, Ayuningtyas D. Strategic hospital services quality analysis in Indonesia. *Expert Systems with Applications*. 2015;42(6):3067-78.
- Pai YP, Chary ST. Dimensions of hospital service quality: a critical review. *International journal of health care quality assurance*. 2013.
- Sheehy SB. *Emergency nursing: principles and practice*: CV Mosby; 1992.
- Huggins K, Gandy W, Kohut C. Emergency department patients' perception of nurse caring behaviors. *Heart & lung: the journal of critical care*. 1993;22(4):356-64.
- Thompson DA, Yarnold PR, Williams DR, Adams SL. Effects of actual waiting time, perceived waiting time, information delivery, and expressive quality on patient satisfaction in the emergency department. *Annals of emergency medicine*. 1996;28(6):657-65.
- Mayer TA, Zimmermann PG. ED customer satisfaction survival skills: one hospital's experience. *Journal of Emergency Nursing*. 1999;25(3):187-91.
- Lau FL. Can communication skills workshops for emergency department doctors improve patient satisfaction? *Emergency Medicine Journal*. 2000;17(4):251-3.
- Yeh J-Y, Lin W-S. Using simulation technique and genetic algorithm to improve the quality care of a hospital emergency department. *Expert Systems with Applications*. 2007;32(4):1073-83.
- Jenkinson C, Coulter A, Bruster S, Richards N, Chandola T. Patients' experiences and satisfaction with health care: results of a questionnaire study of specific aspects of care. *Qual Saf Health Care*. 2002;11(4):335-9.
- Iversen HH, Holmboe O, Bjertnæs ØA. The Cancer Patient Experiences Questionnaire (CPEQ): reliability and construct validity following a national survey to assess hospital cancer care from the patient perspective. *BMJ open*. 2012;2(5):e001437.
- Zineldin M. The quality of health care and patient satisfaction. *International journal of health care quality assurance*. 2006.
- Carlucci D, Renna P, Schiuma G. Evaluating service quality dimensions as antecedents to outpatient satisfaction using back propagation neural network. *Health care management science*. 2013;16(1):37-44.
- Bopp KD. Value-added ambulatory encounters: a conceptual framework. *Marketing Ambulatory Care*. 1995:238.
- Kim SS, Park BK. Patient-perceived communication styles of physicians in rehabilitation: the effect on patient satisfaction and compliance in Korea. *American journal of physical medicine & rehabilitation*. 2008;87(12):998-1005.
- Welch SJ. Twenty years of patient satisfaction research applied to the emergency department: a qualitative review. *American Journal of Medical Quality*. 2010;25(1):64-72.
- Street Jr RL. Information-giving in medical consultations: the influence of patients' communicative styles and personal characteristics. *Social science & medicine*. 1991;32(5):541-8.
- Watson WT, Marshall ES, Fosbinder D. Elderly patients' perceptions of care in the emergency department. *Journal of Emergency Nursing*. 1999;25(2):88-92.
- Aragon SJ, Gesell SB. A patient satisfaction theory and its robustness across gender in emergency departments: a multigroup structural equation modeling investigation. *American Journal of Medical Quality*. 2003;18(6):229-41.
- Boudreaux ED, Mandry CV, Wood K. Patient satisfaction data as a quality indicator: a tale of two emergency departments. *Academic emergency medicine*. 2003;10(3):261-8.
- Miro O, Sanchez M, Espinosa G, Coll-Vinent B, Bragulat E, Milla J. Analysis of patient flow in the emergency department and the effect of an extensive reorganisation. *Emergency Medicine Journal*. 2003;20(2):143-8.
- Taylor C, Bengner JR. Patient satisfaction in emergency medicine. *Emergency medicine journal*.

- 2004;21(5):528-32.
22. Clark K, Normile LB. Delays in implementing admission orders for critical care patients associated with length of stay in emergency departments in six mid-Atlantic states. *Journal of Emergency Nursing*. 2002;28(6):489-95.
 23. Litvak E. Managing variability in patient flow is the key to improving access to care, nursing staffing, quality of care, and reducing its cost. Institute of Medicine. 2004.
 24. Schriver JA, Talmadge R, Chuong R, Hedges JR. Emergency nursing: historical, current, and future roles. *Academic Emergency Medicine*. 2003;10(7):798-804.
 25. Sultana A, Riaz R, Hameed S, Syed Arshad S, Iffat T, Arshia B. Patient satisfaction in emergency department of District Head Quarters Hospital, Rawalpindi. *Rawal Med J*. 2010;35(1):85-90.
 26. Qadri SS, Pathak R, Singh M, Ahluwalia SK, Saini S, Garg PK. An assessment of patients satisfaction with services obtained from a tertiary care hospital in rural Haryana. *International Journal of Collaborative Research on Internal Medicine & Public Health*. 2012;4(8):0-
 27. Zia TS, Mohsen R, Riji HM, Abbas E, Mostafa L. Patient Satisfaction with Care Received from Emergency Department of Ali-Ebne-Abitaleb Hospital, Iran. *Journal of Health Management*. 2011 Mar;13(1):1-4.