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A STUDY OF THE WAITING LINE AT THE OPD OF A LARGE MULTI SPECIALITY SERVICE HOSPITAL

Hospital Administration

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ABSTRACT

Background: The satisfaction of the patient is believed to be one of the preferred results of healthcare, and is directly connected with the usage of health services. The study aimed to assess how doctor services, nurses 'services and waiting time predict Patient Satisfaction (PS). **Methods:** The study used exploratory research method, in which 500 participants were selected, and used a random technique in which responses were collected. The samples were further divided into Officers, Junior Commissioned Officers and Other Ranks including dependents. Multiple regression and confirmatory factor were employed to analyze the collected data. The findings showed that doctor services (B=0.232; p=0.01), nurses services (b= 0.256; p=0.01), waiting time (B=0.091; p+0.03) had a positive significant impact on Patient Satisfaction, while registration services (B=0.028; p+0.390) had an insignificant association with Patient Satisfaction. There was a need to address Registration services. **Conclusion:** The study revealed statistically significant differences regarding the overall impression about OPD, Laboratory and Radiology Services, which require attention to achieve consumer delight.

KEYWORDS

Queuing Theory, OPD, Waiting Time, transportation, registration, diagnosis, pharmacy, billing.

INTRODUCTION

Patients' satisfaction is a useful measure to provide an indicator of quality in healthcare and thus needs to be measured frequently. The aim of the study was to analyse and compare the level of satisfaction of patients attending the Outpatient Department.(1)

Patient satisfaction was investigated for several purposes in the healthcare delivery services. First was that the extent of Patient Satisfaction impacts patients seeking services, fulfilling medication requirements and their ongoing usage of services. The satisfaction of patients with the healthcare services is a multi-aspect concept with regards to Quality improvement programmes.

Out Patient Department Services are the most important services provided by the hospital. The utilization of the other services provided by the hospital often depend on how satisfied the patient is with the OPD.

Patient waiting time has been defined as "The length of time when the patient enters the Outpatient Department to the time the patient actually leaves the OPD.

In many cases it is observed that patients at the hospital OPDs have to wait for a long time before they can get medical treatment or consultation by the Professional Health care Worker. This can lead to discontent by the patient. (2)

There are many indicators of quality assurance in hospitals. One of the most important indicators of quality assurance for patients is "Waiting Time".

2. Theory and Hypothesis

a) Doctor Services (DS)

This deals with the patients experience and relationship between Physicians and patients. These handlings require proper communication, guidance and information about patient problems. A very strong and recognized association is noticed between doctors and patients with doctors as key preference to fulfil patient's needs.
Hypothesis 1(H1): The better the doctor services, the higher the patient satisfaction

b) Nurse Services (NS)

Nursing care deals with quality of services offered by nursing staff during the stay in the hospital. The level of involvement of nursing services greatly influenced the Patient Satisfaction.
Hypothesis 2 (H2): The better the nurses services (NS), the higher the patient satisfaction

c) Registration and Administrative Procedures

Hospital Administrative Procedures (HAP) Registration, Admission and Discharge procedures. The administrative delay is considered as an important aspect during the patient's stay in the hospital at different stages. It came to light that unreasonable delays in service provision are the cause of anger and provoke patients to react badly.
Hypothesis 3(H3): The easier the registration and administrative procedures, the higher the patient satisfaction.

d) Waiting Time

The length of time the patient spends in the hospital to receive health services is very important. If accessibility to health services is provided in a timely manner, then the patient clients become less inconvenienced and less angry. Improving the administrative procedures like admission and discharges, waiting time, early dispensation of medicines and reports significantly improve patient satisfaction.
Hypothesis 4(H4): The shorter the waiting time, the higher the patient satisfaction.

e) Doctors Perspective

Many times, patients are unusually demanding and unnecessarily argumentative. While a doctor is seeing one patient, the other patient barges in. Patients not following the token system and crowding around the doctor to get priority. Also, patients not coming at the appointed time, or coming on non OPD days.

Also, patients coming early morning before 0830 or after 1400 hrs and complaining of non-availability of doctor.

Hypothesis 5(H5): The better the patient follows timings, better is service delivery

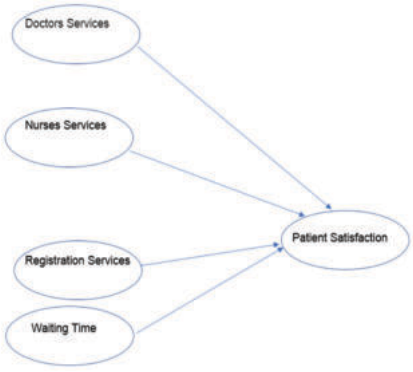


Fig 1. Hypothesized Model

3. Study

Service Hospital is a service Hospital with basic specialties like Medicine, Surgery, Radiology, Pediatrics, ENT, EYE.

Aim

To analyze waiting time in the MI Room and OPD and assess its impact

on Patient Satisfaction.

Objectives
- To determine the average time spent by the patient in the OPD
- To identify the factors responsible for prolonged waiting time in OPD
- To study the causes of the delays and suggest interventions
- To assess the patient Satisfaction with the OPD services provided.

Scope
- The immediate and major cause for increased waiting time can be assessed and rectified
- The scheduling of OPDs can be ascertained to view the peak OPD hours
- Patient satisfaction regarding MIR, OPD and Hospital Services can be measured.

MATERIALS AND METHODS

The present study was conducted at the OPD of a large specialty hospital on OPD days as they are comparatively more busy. Purpose of doing study on two occasions was to confirm the findings of study. The following methodology was adopted for the present study.

1. Interview / Discussions
Discussions were held with the medical and para- medical staff of OPD to obtain the information about work load, OPD days, various activities, timing etc.
2. Study of Relevant Document
Various OPD registers were studied to assess the workload during last one year.
3. Direct Observation
Of the flow of patients, their arrival pattern, queue formation and service pattern.

Research Design: The research design is "Descriptive and Exploratory"

Study Population
All patients who came for OPD visits
Quantitative Method of Study- Observational Time-Motion Study

Application of Management Practices and Techniques:
Queuing theory and appointment system.

Patients on arrival at the OPD were handed over slips with time of arrival. On reaching their turn for registration, the slip was handed over to Nursing Assistant sitting at registration counter who wrote the time on receiving the slip. When patient was called inside consultation chamber time was noted on the slip and finally when patient came out time was recorded. These slips were then collected for subsequent analysis as per the following format.(3)

The details of the patients, time of his/her entry, time taken by the patient to move through various departments, till the exit of the patient was noted and recorded.

Qualitative Method of Study
The Patient Experience Feedback questionnaire was administered to the OPD patients. (Questionnaire given as Appendix)

The study was conducted at a Service Hospital in a military cant. The study population consisted of personnel of the Indian Armed Forces and their dependents. The questionnaire was bi lingual which was used as a study instrument

The Questionnaire was Sub Divided into Two Parts:
The first part was the socio demographic profile of patients and the second part included various aspects related to patient care. Each question had multiple aspects related to patient care. Mean score of each question was calculated and converted into percentage of the highest score for that question using Kruskal-Walli's test to understand the statistical significance of difference of satisfaction level of the various groups. The survey was conducted after getting waiting time data. The feedback was used to assess the impact the waiting time had on the patient satisfaction.(4)

Before data collection, all eligible respondents were informed about aims of the study, voluntary participation, the right to withdraw at any time without giving reason, and were assured of confidentiality of the information to be collected. Statistical analysis of the data was carried out using Minitab Version 16.0 software and conclusions drawn.

Sample
A quantitative study was designed to research the level of patient satisfaction with doctor services, nurses' services, and waiting time. The study was conducted from Mar to Apr 21 on all working days in the MI Room, OPDs (Medical, Surgical, Pediatrics), Lab and Radiology department.

The questionnaire included feedback regarding quality of medical services, nurses' services, registration services, hospital environment, waiting time, lab and Radiology services. 500 participants were invited and response rate was 85%.

Instruments
The questionnaire for the present study contained five factors. The sample for PS was," I have easy access to a specialist when I need". Doctor services (DS) included 7 items and Nurses services (NS) included 8 items. The sample items were," The doctor was very friendly and courteous". The sample for nurses was, "The nurses seemed to understand my situation". Registration services (RS) consisted of 4 items and Waiting Time (WT) contained 04 items. A sample item for RS and WT were," Medical procedures were performed correctly the first time "and, "Getting Appointment is not easy". (5)

The feedback from doctors and nurses and staff included, "Did the patient wait his turn or barge in "Did the patient come at appointed time.

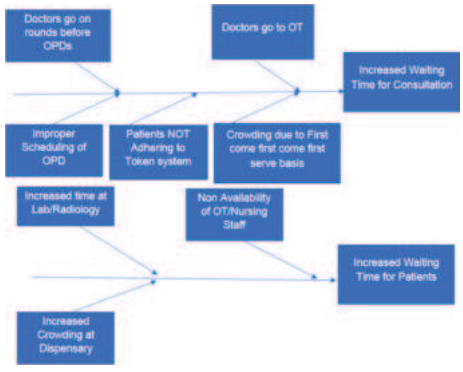
Inclusion Criteria
- Willingness to participate

Exclusion Criteria
- Un willing Patients

Observation and Analyses
By analyzing the OPD count of one month, the patient state was noted.

Average Waiting Time

Root Cause Analysis
1. Cause and Effect Diagram: First bottle neck
2. Increased waiting time at Reception
3. Second Bottle Neck



DISCUSSION

The dispensing of satisfactory healthcare services is an outcome of a series of factors that reflect patients' expectancy and experiences. The findings of the study confirmed that services provided by doctors and nurses emerged to be significant factors that influence patient satisfaction with healthcare service delivery. The study revealed that doctor services are the significant determinant of service delivery for

outpatient satisfaction. (6)

KANO MODEL IN OPD

Basic:

1. Patient Privacy
2. Parking
3. Easy Access
4. Proper Signage
5. Wheel Chairs and Trolleys at entrance
6. Quick response of staff
7. Staff to be courteous
8. Availability of doctors in OPD
9. Availability of all medicines in Pharmacy

Satisfiers

1. Less waiting time
2. Clean toilets
3. Waiting rooms to be comfortable
4. CSR within OPD complex
5. Efficient patient call system
6. Clean linen on patient beds
7. Proper lighting
8. Comfortable environmental .
9. Patient education/Counselling by councillors
10. Proper explaining of patient's condition by doctor.
11. Proper explaining of medication and side effects.

Delighters

1. Patient information fed in computers. So, patient does not have to tell the case history with every visit.
2. All inv facilities in same complex eg; cardiology OPD to have ECG, Echo, TMT facilities in same complex.
3. Availability of facilities for snacks in OPD.

Perception Gap: Gap between patients' perceptions of care and their needs and expectations. Measuring patient's satisfaction by interviews assist in evaluating services and identify problem areas.

A Pre tested Questionnaire was administered to a sample of 200 OPD patients in cross-sectional descriptive research.

Patient Experience Feedback

Signage and easy accessibility provide a good image of the hospital. Satisfaction was fine for the services but low for the structural variables like parking, signage and other facilities. The spread and vintage of the hospital building may have contributed to the dissatisfaction.

Registration Counter: There is 01 JCO and 01 NCO to direct the patients. Adequate information should be received at the Registration Counter. While the officers were satisfied by the information provided at the Registration counter, the satisfaction level of the JCOs and ORs was less.

Staff Behaviour: Polite and courteous behaviour is accepted as a necessity. The study revealed that 90 % clientele found the OPD staff polite and courteous. 90% officers and 65% JCOs/ORs are satisfied with the Queuing system at the Registration counter which is statistically significant. However, there was a suggestion of separate queue for Officers and JCOs /Ors.

Waiting Time: The number of patients who took prior appointment were 20% while 80% patients were walk in patients.

The study revealed that Officers were satisfied with the waiting time, 95% at the various interfaces like Registration counter, OPD, Dispensary. However, the satisfaction level of JCOs and ORs and families was around 65%.

The waiting period had a direct link with the timing. The Specialists come to OPD at around 0930-1000 Hrs after completing the ward rounds. Any patient who comes to OPD at 0830 has to wait till 1000 (1 ½ hrs) till his turn comes. 60% waited for 15 min to 30 min. 20 % waited less than 15 min. 20% had to wait for more than 30 min.

The remedy would be," TOKEN SYSTEM". Patients are given token numbers so that they can know when their turn is due. Also, there should be No Queue Jumping and First in First Out (FIFO) policy.

Waiting Rooms: The waiting rooms need to be supplied with Television sets, adequate sanitary facilities like clean toilets. 62% clients said there should be better facilities.

Doctors Room Environment: Very high level of satisfaction was present in this aspect. In the study majority of the clientele spent 10-15 min with the doctors which led to high level of satisfaction. The positive attributes are Courtesy, good communication, confidentiality, explaining about sickness and maintaining respect and privacy, which contribute towards trustful, frank and open relationship. The satisfaction was high in all these aspects.

Dispensary: In majority of cases on waiting time, dispensary is the bottleneck. In the study there was requirement of separate dispensing counters for Offrs and JCOs and ORs. The source of dissatisfaction included various factors from waiting area to lack of medicines.

Nurses' services are the backbone of any healthcare system and a key determinant of patient satisfaction.

Besides the doctor and nurses' services, waiting time was also exposed as an essential factor that influences patient satisfactions during service delivery. Since effective services are linked to satisfaction, therefore administration has to provide services in an effective way.

The first opinion is formed at the Registration counter. The amount of information at the Registration counter is important.

Hygiene

20 % rated the hygiene and sanitation as excellent. 30% rated as good, 20 % as above average. 30% as average.

Practical Implication

Basic health is the primary need of everyone. According to the increasing patient needs, the employment of doctors and nurses should be done to facilitate the patient satisfaction. Also, the registration and administrative system should be easier and less time consuming. The need is to focus on Courteous staff, queries handling at reception, cooperative behavior of registration staff and efficient system of handling complaints. Also, the patients to adhere to hospital timings and avoid overcrowding by following Token System and waiting for turn.

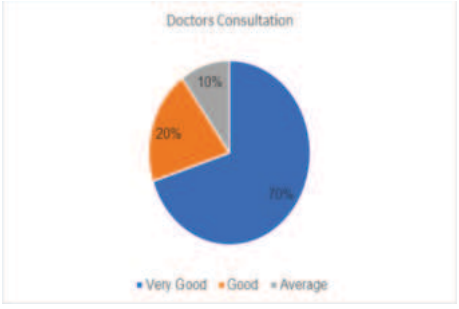
Limitations

The study was conducted in a service hospital. The data was collected from Out Patient Department, MI Room and Lab and Radiology department. The findings of the study cannot be generalized to other healthcare organizations.

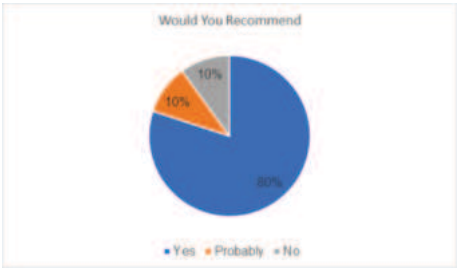
Patients were also permitted to suggest any improvements in the OPD. The results were tabulated in the following format:

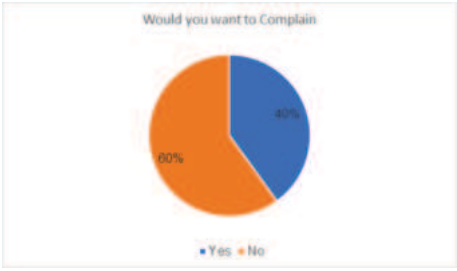
Question	Good	Average	Bad	Remarks
General				
1. Accessibility				
2. Parking				
Registration Facility				
3. Information 4. Procedure 5. Staff Courtesy 6. Waiting area 7. Seating and General area 8. Toilets 9. Magazines				
OPD				

Availability of Doctors 10. Waiting Time 11. Environment of the Consultation Room 12. Level and Standard of Consultation Privacy				
Lab				
13. Quality 14. Services 15. Environment				
Radiology 16. Waiting Time 17. Quality of Service				
Dispensary 18. Dispensing Counters 19. Queue system 20. Availability of Drugs 21. Explanation about Medicines and Dosages				
Overall Response 22. Overall view of the Services 23. Would you recommend the services? 24. Would you come again				



S.No	Criteria
1	Arrival in the Hospital • Parking: Good • Signage: Could be Improved • Courtesy: Good
2	Waiting • Time:6-15 min • Seating: Good • Seating Area: Comfortable
3	Hospital Environment • Cleanliness: Fairly Clean • Toilets: Not Very Clean • Hand Washing Facility: Not Visible • Assistance: Average
4	Doctor-Patient Relationship • Availability of Doctor: Yes • Time with Doctor: Good (6-15 min) • Satisfaction with Consultation Time: Good • Explanation about Sickness: Good • Privacy: Average • Sense of Concern: To Some extent
5	Investigation • Explaining Reason for Tests: To some extent • Explaining Results of Tests: To some extent • Response to queries: To some extent
6	Dispensary • Dispensing Counters: More needed • Queue: Medium • Waiting Time: Average • Availability of Drugs: Fine • Explaining about use of drugs: In adequate
7	Overall Response • Overall Feel: Good • Would you Recommend: Maybe • Any Complaints: Averages





Recommendations

1. Introduce On line appointments: There were some patients who had taken prior appointment. These patients could walk in and the doctors were having prior information about their case. Those who were walk in had a longer waiting time. It is suggested if patients can take prior appointment before coming. That would ease the traffic and would also benefit the patient as the consulting doctor would have prior knowledge before at the time of meeting the doctor and thereby take shorter time.
2. Lab report to be dispatched at Lab Counter
3. Token System: Each Patient to be given a Token and Number to be displayed on board
4. Patients to follow Number allotted to them and NOT crowd in front of doctor. Follow FIFO (First in First Out)
5. Easy accessibility and good signage are beneficial. Satisfaction among patients is high if signage is good. The old building and spread may lead to some level of dissatisfaction.
6. Availability of clean toilets, comfortable seats, clean waiting areas directly influence patient satisfaction.
7. Staff behavior and more importantly knowledge of the staff and willingness to help.
8. 50 % suggested doctors should come on time
9. 30% complained that the Receptionist were unable to attend to them since they were attending other calls.
10. 30 % suggested display of consultant timings for the entire network.

CONCLUSION

The Patient Satisfaction Surveys are powerful tools to capture, "Voice of the Consumer", to understand the views of the patients with respect to the services provided. An attempt was made to evaluate the patient satisfaction level by studying the various parameters of the service delivery of OPD in a service hospital. The present study concludes that

improving consultation services quality and information provided to the patient, establishing or improving on line appointment or Telephone appointment system to decrease waiting time, coordination between doctors, nurses and staff, patients adhering to OPD timings and waiting for turn (Token System) are effective strategies for the management of hospitals to increase patient satisfaction. Registration procedures should be easier to enhance Patient Satisfaction.

Statistically significant differences have been identified by this study against various study attributes as well as overall impression towards OPD services among the study groups, which need to be addressed by the hospital leadership to achieve consumer delight.

The overall level of satisfaction was 65-70-%.

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