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Assessment of Inpatient Services by the Customers at the Time of Discharge in a Multispecialty Hospital

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Abstract

Patient satisfaction is concerned with the fulfilment of the patients' expectations and their own experience related to the various services rendered to them during the hospital visit. It has become essential for hospitals to assess and improve the experiences of their patients, especially those receiving inpatient care, with growing competition, increased patient awareness, and an emphasis on evidence-based health care. (Niraula 2019) Among various quality indicators, patient satisfaction has emerged as a crucial measure that reflects the performance of healthcare providers and the overall effectiveness of hospital services. The current paper analyses the patient experience from admission to discharge at the multispecialty hospital with the help of their feedback at the time of discharge. This study follows a descriptive research design, and SPSS 20 was used to analyse the data.

The study reveals that the patient satisfaction is borderline with tangible variables like room cleanliness, hospital linen, and dissatisfied with treatment expenses, length of stay in hospital, and plan of discharge. The patients were moderately satisfied with care by nursing staff and patient diet, discharge information, discharge medicine advice, time taken for discharge, and discharge activities on the day of discharge the patients were satisfied with intangible clinical variables, the duty medical officer's care, doubts clarification, information on next follow-up, and patient discharge summary. The study also reveals that the patient perception of the inpatient services varies based on the length of stay and the specialty of admission.

Keywords: *Inpatient satisfaction, Patient assessment, Patient discharge*

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1. Introduction

The national accreditation board for hospitals and healthcare providers focuses on ensuring high-quality healthcare to patients in public and private hospitals. As healthcare systems shift towards a patient-centered model, the needs, expectations, and comfort of patients are highly prioritized. It becomes more essential for hospitals to assess and improve the experiences of their patients, with growing competition, increased patient awareness, and an emphasis on evidence-based health care (Niraula, 2019). The hospitals render diagnostic, preventive, curative, and rehabilitative care through inpatients, outpatients, and day care services. In this context, inpatient services, where patients are admitted for one or more days for treatment, play a critical role in shaping patient experiences, as they are exposed to medical and paramedical services of the hospital. The inpatient experiences continuous medical attention, nursing care, room facilities, dietary services, and emotional support.

Patient satisfaction is a multi-dimensional concept that encompasses a patient's experiences and perceptions during their hospital stay from admission to discharge, including medical care, nursing services, hospital infrastructure, communication, and responsiveness. The patient satisfaction rate is one of the quality indicators of healthcare service quality in today's hospital systems, so the hospital should receive patient feedback through a survey and address the complaints. The patient satisfaction level is influenced by health literacy, socio-demographics, and their expectations towards the hospital services. Nowadays, most hospitals use the patient feedback system as a marker of quality. The feedback provided by patients assists hospital management in evaluating the effectiveness of the hospital's services and supports in upholding patient satisfaction and quality of services.

There are so many research studies conducted in the patient satisfaction area; however, this remains a field ripe for further exploration. The current study offers valuable insights through the perception of patients about their stay in the hospital, which helps hospital management to develop strategies for improvement. The patient satisfaction of related to the tangible variables like room cleanliness, hospital linen, found borderline, treatment expenses, length of stay in hospital, and plan of discharge, found dissatisfied. The patients were satisfied with intangible clinical variables, the duty medical officer's care, doubts clarification, information on next follow-up, and patient discharge summary. Patients were moderately satisfied with care by nursing staff and patient diet, discharge information, discharge medicine advice, time taken for discharge, and discharge activities on the day of discharge.

2. Literature Review

According to the World Health Organization, patient satisfaction is defined as the measure of how content a patient is with the healthcare they receive, encompassing their perceptions of quality, access, and the overall experience. Over the past decades, patient satisfaction has become a vital focus area in healthcare research, serving as a key performance indicator for hospitals. Various studies have examined its determinants, dimensions, and impact on healthcare delivery. Patient satisfaction in healthcare settings is influenced by multiple factors across different countries. In Egypt, a study of 1,818 patients found 82.2% satisfaction with outpatient services, with education level being a significant predictor (Sanad, 2020). At Sina Hospital, the SERVQUAL model identified the largest satisfaction gaps in reliability and the smallest in assurance, with special care units showing wider gaps than other departments (Esmailpour, 2014). In Eastern Nepal, a cross-sectional study of 680 participants revealed 94% overall satisfaction, with higher rates in private hospitals (OR = 2.842, $p<0.001$), and satisfaction was significantly linked to hospital type, gender, age, education, and occupation (Niraula, 2019). In Bangladesh, research comparing public (Chittagong Medical College Hospital) and private (Chattogram Maa Shishu O General Hospital) hospitals identified low satisfaction with waiting times (71.70%

dissatisfied), toilet cleanliness (79.25%), and consent before examinations (79.25%), while finding higher satisfaction with examination privacy (71.70%) and OPD fees in public hospitals (86.67% vs 26.09% in private) (Deb A, 2018). The review by Crow et al. (2002) categorized patient satisfaction factors into two broad groups: those related to the characteristics of the patients and those associated with healthcare providers. It highlighted the significance of the doctor-patient relationship, health outcomes, and patient expectations. It also emphasized the challenges in accurately measuring satisfaction due to subjective bias and varying expectations. Naidu (2009) identified several core dimensions influencing patient satisfaction, such as access to care, communication, hospital environment, and trust in care providers. The study emphasized that regular monitoring and quality enhancement are essential to maintaining high satisfaction levels. Al-Abri & Al-Balushi (2014) In their analysis of 29 studies, the authors concluded that interpersonal skills, including courtesy, respect, and effective communication were more influential in determining satisfaction than technical skills alone Batbaatar et al. (2017) This meta-narrative review of 109 studies found interpersonal care, service quality, physical environment, staff competence, and accessibility as major determinants of patient satisfaction. The review suggested that socio-demographic factors also influence perceptions of care, although their impact varies across studies. The review by Salehi et al. (2018) focused on inpatient care in public hospitals and highlighted that health system factors (like staff behavior, hospital features, and insurance coverage) play a crucial role in shaping patient satisfaction. It stressed the need for continuous service evaluation. The study by Sarfraz et al. (2020) explored satisfaction across different healthcare settings and identified key dimensions such as effectiveness, accessibility, safety, and patient-centered care. It noted that low- and middle-income countries face unique challenges due to limited resources and infrastructure. The evaluation of the hospital services in Madurai, highlighting the implications for the quality of the service (Faisal and Chandra mohan), cleanliness is fundamental, as reported by various studies (Paul et al., N.D. Priya) of professional satisfaction between nurses in improving the quality of the service. Empathy experiences (Bharath, 2023)

3. Objectives of the Study

The primary goal of this study is to understand and assess the level of satisfaction among inpatients at the time of discharge at a multispecialty hospital, Madurai.

The objectives are as follows:

1. To understand the demographic profile of the respondents related to age, gender, and payment type (cash, insurance), their length of stay, and specialty under treatment.
2. **To a**ssess the patient satisfaction related to length of stay, nursing care, doctor-patient communication, food quality and discharge.
3. To analyze the relationship between the specialty of admission with registration waiting time, the time taken for the preliminary diagnosis by doctor and nurse, length of stay, treatment expenses, and discharge delay.
4. **To study and analyze the relationship between the length of stay with treatment expenses,** nursing care, doctor-patient communication, room cleanliness, food quality, **and discharge activities.**

4. Research Questions

The data collected with the below type of research data sheet format from the patients or attenders on the day of the patient's discharge from the hospital

Patient Feedback Data Sheet	
Contents	
Patient name /UHID	
Gender	Male / Female
Age	0-15 / 16-25 / 26-35 / 36-45 / 46-55 / 56-65 / 66-75 / 75 and above
Room number	Block / Room number
Date of admission	dd / mm / yyyy
Date of discharge	dd / mm / yyyy
Length of stay	Number of days calculated, including date of admission and discharge
Specialty of admission	Name of the Specialty (total 28 specialties)
Primary consultant	Name of the consultant (total 40 consultants)
Payment Type	Cash / Claim (Totally 27 claim types available in the hospital)
Registration Waiting Time	Below 10 minutes /10 - 20 minutes / 20 -30 minutes/ 30- 40 minutes / Above 40 minutes
Doctor/ Nurse visit time after admission for preliminary diagnosis	Below 10 minutes /10 - 20 minutes / 20 -30 minutes/ 30- 40 minutes / Above 40 minutes

Kindly tick the ratings that suit your satisfaction related to the care received in the hospital.					
Components of care	Highly unsatisfied	Unsatisfied	Neither unsatisfied nor satisfied	Satisfied	Highly satisfied
Doctors care					
Nursing care					
Diet quality					
Patient room cleanliness					
Cleanliness of patient linen					
Cleanliness of the bed sheet and pillow cover					
Proposed amount of expenses information					
Patient and family doubts like Treatment plan explanation / Disease /illness-related information, Risk involved information /Alternative treatment /Second opinion information from doctors, nurses					
Treatment expenses					
Discharge plan					
Discharge information					
Follow-up Medicine advice					
Time taken for discharge					
Overall satisfaction					

5. Hypotheses

E.1. Null Hypotheses

1. H_o: There is no significant association between specialty under treatment and patient satisfaction with the care by the duty medical officer and nursing staff.
2. H_o: There is no significant association between specialty under treatment and patient satisfaction regarding treatment expenses and length of stay.
3. H_o: There is no significant association between specialty under treatment and patient satisfaction with the plan of discharge, time taken for discharge, and discharge information.
4. H_o: There is no significant association between specialty under treatment and patient satisfaction with discharge summary, patient & family doubts clarification, and discharge activities on the day of discharge.
5. H_o: There is no significant association between length of stay and patient perception of care by the medical officer and care by nursing staff.
6. H_o: There is no significant association between length of stay and patient rating on diet quality and room cleanliness.
7. H_o: There is no significant association between length of stay and patient perception of treatment expenses.
8. H_o: There is no significant association between length of stay and patient satisfaction with the plan of discharge, discharge information.

H_o: There is no significant association between length of stay and patient satisfaction with discharge medicine advice, follow-up information, and patient doubt clarification.

H_o: There is no significant association between length of stay and patient satisfaction with discharge activities on the day of discharge.

E.2. Alternative Hypotheses

1. H_1: There is a significant association between specialty under treatment and patient satisfaction with the care by the duty medical officer and nursing staff.
2. H_1: There is a significant association between specialty under treatment and patient satisfaction regarding treatment expenses and length of stay.
3. H_1: There is a significant association between specialty under treatment and patient satisfaction with the plan of discharge, time taken for discharge, and discharge information.
4. H_1: There is a significant association between specialty under treatment and patient satisfaction with discharge summary, patient & family doubts clarification, and discharge activities on the day of discharge.
5. H_1: There is a significant association between length of stay and patient perception of care by the medical officer and care by nursing staff.
6. H_1: There is a significant association between length of stay and patient rating on diet quality and room cleanliness.
7. H_1: There is a significant association between length of stay and patient perception of treatment expenses.
8. H_1: There is a significant association between length of stay and patient satisfaction with the plan of discharge, discharge information.
9. H_1: There is a significant association between length of stay and patient satisfaction with discharge medicine advice, follow-up information, and patient doubt clarification.
10. H_1: There is a significant association between length of stay and patient satisfaction with discharge activities on the day of discharge.

6. Research Methodology

F.1. Research Design:

This study follows a **descriptive research design**, which aims to systematically describe the satisfaction levels of inpatients at a multispecialty hospital and identify factors that influence their hospital experience. It helps in analyzing current conditions based on feedback from actual service users. The data were collected for 2 months from December 2024 to January 2025. used in the feedback form.

The Patient's personal information related variables such as. Patient name, Gender, Age group, Room number, Specialty, Treating Consultant, Length of Stay, and Payment Type were observed and collected. The satisfaction assessment criteria related to the Time taken for admission and preliminary diagnosis, with the time slot selection, and the Patient care variables, Hospital Facility, Supportive Services, Hospital stay, and discharge were assessed by the patient and family. 1. Time taken for admission procedures and preliminary diagnosis: The time consumed for registration at the admission counter and the time taken for the Doctor/Nurse visit for preliminary diagnosis 2. Patient care variables: The care provided by the consultant, the Duty medical officer, and the Nursing staff of the hospital. 3. Hospital Facility and Supportive Services: The patient's diet quality, room, and bed linen cleanliness. 4. Hospital Stay and discharge plan: The length of stay, discharge plan, discharge information, time taken for discharge, and treatment expenses were taken as variables.

F.1.1. Sources of Data and Data Collection Methods:

Table 1- Patient discharge data

Financial year/ month	2023- 2024	2024- 2025
April	755	840
May	812	1029
June	865	899
July	805	926
August	824	900
September	841	908
October	930	916
November	970	898
December	993	1021
January	890	
February	826	
March	811	

Courtesy – from hospital records

The Primary data were collected directly from inpatients through a structured **questionnaire,** The 5 rating "Likert scale" "1" as Highly unsatisfied to "5" as Highly satisfied, for assessing the care experienced by the patients during the hospital stay covering various dimensions of satisfaction consists of 10 patients' personal information and 15 elements as assessment criteria. The **Secondary Data** Obtained from hospital records, previous research studies, academic journals, and other published literature related to patient satisfaction.

F.1.2. Sampling Frame

Table 1- Patient discharge month wise, shows the number of discharges of two years monthly wise. The total number of discharges in the financial year 2023- 2024 is 10322 calculated the monthly average is 860.333, daily average number of discharges 28 per day. The study was conducted between December 2024 and January 2025. The data is planned to be collected for two months; thus, the sampling frame is taken as 1700 samples.

F.1.3. Sample size:

The sample size is calculated with the help of the formula. The sample size formula for a known population using Slovin's formula is: n = N / (1 + Ne^2), where "n" is the sample size, "N" is the total population size, and "e" is the desired margin of error. The population is 1700 with a confidence level of 95% that the real value is within ±5% of the measured/surveyed value. This means 323 samples are needed. when using Cochran's equation together with a population of 1700, A total of **332 inpatients** were surveyed across different wards and rooms, representing a mix of patients from general, semi-private, and private rooms.

F.1.4. Sampling Method:

The study adopts a **convenience sampling** method due to practical limitations in accessing all inpatients. The data was collected over **60 days from December 2024 to January 2025.** The patient feedback form was given to 415 discharged patients, only 332 were accepted and filled out the data sheet, ensuring adequate time for interaction with respondents and accurate feedback recording.

F.2. Analysis and Interpretation of the data

The data was analyzed with the help of SPSS 20, the collected data were verified for validity and missing data, and 0 variance was considered nonperforming. The normality analysis was conducted, the percentage analysis was used for frequency-based interpretation, tabulation was used to present satisfaction levels, and **Comparative analysis** was used to analyze the data.

F.2.1. Respondent demographic information

Table 2: Gender proportion of respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Female	132	39.8	39.8	39.8
Male	200	60.2	60.2	100.0
Total	**332**	**100.0**	**100.0**	

The female respondents of the study were 39.8 percent, and the male respondents were 60.2 percent. Among the respondents, the number of male patients was 17.6 percent higher than that of female patients.

Table 3: Age group proportion of respondents

Age Group	Frequency	Percent	Valid Percent	Cumulative Percent
Zero to 15 years	20	6.0	6.0	6.0
16 years to 25 years	9	2.7	2.7	8.7
26 years to 35 years	21	6.3	6.3	15.1
36 years to 45 years	54	16.3	16.3	31.3
46 years to 55 years	107	32.2	32.2	63.6
56 years to 65 years	91	27.4	27.4	91.0
66 years to 75 years	30	9.0	9.0	100.0
Total	**332**	**100.0**	**100.0**	

Among the respondents, 32.2% belong to 46-55 years, 27.4 % belong to 56-65 years, 16.3 % belong to 36-45 years of age group.

It shows that 75.9 % of the patients of the hospital's falls between the 35 - 65 year age group, and a lower percentage of patients are in the age group of 16 - 25 age.

Table 4: Specialty of admission

Specialty	Frequency	Percent	Cumulative Percent	Specialty	Frequency	Percent	Cumulative Percent
Onco Surgery	7	2.1	2.1	Urology	10	3.0	87.7
General Surgery	3	.9	3.0	Surgical Gastrology	18	5.4	93.1
Medical Gastrology	48	14.5	17.5	Vascular Surgery	5	1.5	94.6
Pediatrics	20	6.0	23.5	Dental	1	.3	94.9
Cardiothoracic	27	8.1	31.6	Plastic Surgery	3	.9	95.8
Family Medicine	9	2.7	34.3	Onco-Radiotherapy	2	.6	96.4
Orthopedics	42	12.7	47.0	Endocrinology	1	.3	96.7
Cardiology	45	13.6	60.5	ENT	1	.3	97.0
Pulmonology	5	1.5	62.0	Pediatric Surgery	1	.3	97.3
Nephrology	10	3.0	65.1	Spine Surgery	1	.3	97.6
Neurology	25	7.5	72.6	Psychiatry	2	.6	98.2
OBG	18	5.4	78.0	oncology	5	1.5	99.7
General Medicine	22	6.6	84.6	Radiology	1	.3	100.0
				Total	**332**	**100.0**	

Related to the specialty of admission, 14.5% to medical gastrology and 13.6 % to cardiology, 12.7% to orthopedics, 6.0% to pediatrics, 8.1% to cardiothoracic, 6.6% to general medicine, 5.4% to OBG and Surgical gastrology for their treatment.

Table 5 – Length of stay

LOS	Frequency	Percent	Cumulative
1 day	53	16.0	16.0
10 days	2	.6	16.6
11 days	5	1.5	18.1
12 days	5	1.5	19.6
16 days	2	.6	20.2
2 days	67	20.2	40.4
21 days	5	1.5	41.9
23 days	3	.9	42.8
3 days	48	14.5	57.2
31 days	1	.3	57.5
4 days	49	14.8	72.3
5 days	34	10.2	82.5

6 days	26	7.8	90.4
7 days	14	4.2	94.6
8 days	8	2.4	97.0
9 days	10	3.0	100.0
Total	**332**	**100.0**	

The above table interprets, 20.2% of the patients stayed for 2 days 16% of the patients for 1 day, 14.5 % of the patients for 3 days, 14.8% of the patients for 4 days, 10.2% for 5 days, and 7.8% for 6 days. And 1.5% of the patients stayed for 11, 12, and 21 days. 9 % stayed for 23 days, .6 % stayed for 10 days, and 16 days.

Table 6 – Payment Type

Payment Type	Frequency	Percent	Valid Percent
Cash Payment	221	66.6	66.6
Claim - FHPL	4	1.2	1.2
Claim - Care Insurance	6	1.8	1.8
Claim - MediAssist	14	4.2	4.2
Claim - TNEHS	20	6.0	6.0
Claim - ECHS	18	5.4	5.4
Claim - VIDAL	6	1.8	1.8
Claim - NHISP	11	3.3	3.3
Claim - Star Health	9	2.7	2.7
Claim - Bajaj	1	.3	.3
Claim - Health India	6	1.8	1.8
Claim - ICICI	4	1.2	1.2
Claim - Safe way	1	.3	.3
Claim - GHPL	1	.3	.3
Claim - IFFCO	2	.6	.6
Claim Railway	3	.9	.9
Claim - ERICSON	1	.3	.3
Claim - HDFC	1	.3	.3
Claim - Paramount	1	.3	.3
Claim - CM Scheme	2	.6	.6
Total	332	100.0	100.0

Most of the patients (66.6%) paying cash for treatment. The remaining 33.4% utilising the cashless treatment, such as TNEHS (6.0%), ECHS (5.4%), and Medi Assist (4.2%), are the most frequently used claim-based payments. Other claim-based payment methods (e.g., Star Health (2.7%), NHISP (3.3%)) are used by fewer patients. Several insurance providers, such as Bajaj, indicate that using cashless treatment is less common in the patient population of Madurai.

F.3. Waiting time for registration and doctor / Nurse visit

Table 7 – Registration waiting time

Registration Waiting Time	Frequency	Percent	Valid Percent	Cumulative Percent
Below 10 minutes	12	3.6	3.6	3.6
10 min - 20 min	47	14.2	14.2	17.8
20 min - 30 min	111	33.4	33.4	51.2
30min - 40 min	142	42.8	42.8	94.0
above 40 minutes	20	6.0	6.0	100.0
Total	332	100.0	100.0	

For inpatient registration, 33.4% of patients waiting for 20-30 minutes, 42.8% of patients waiting for 30-40 minutes. Combined, 76.2% of patients experience a waiting time between 20 to 40 minutes. 3.6% of patients are registered in under 10 minutes. 14.2% wait between 10-20 minutes.

Table 8 – Initial assessment waiting time

Doctor and Nurse visit time after admission	Frequency	Percent	Valid Percent	Cumulative Percent
Below 10 minutes	9	2.7	2.7	2.7
10 min - 20 min	58	17.5	17.5	20.2
20 min - 30 min	87	26.2	26.2	46.4
30min - 40 min	131	39.5	39.5	85.8
above 40 minutes	47	14.2	14.2	100.0
Total	**332**	**100.0**	**100.0**	

26.2% of patients receives initial assessment within 20-30 minutes. 39.5% within 30-40 minutes, 17.5% within 10-20 minutes, 2.7% within 10 minutes and 14.2% of patients experience delays exceeding 40 minutes.

F.4. Overall satisfaction of the inpatients

Table 8 – Patient satisfaction

Descriptive Statistics	N	Range	Mean	Std. Deviation	Variance
Care by duty medical officer	332	4.00	4.4849	.84246	.710
Care by Nursing Staff	332	4.00	3.0361	1.04804	1.098
Patient diet	332	4.00	3.6988	1.10735	1.226
Cleanliness of the patient's room	332	4.00	2.9819	1.07974	1.166
Cleanliness of the Patient linen	332	4.00	3.0633	.94832	.899
Treatment Expenses	332	4.00	2.5151	1.00290	1.006
Length of stay in hospital	332	4.00	2.9428	1.16846	1.365
Plan of Discharge	332	4.00	2.9127	1.14304	1.307

Discharge information	332	4.00	3.0663	1.12717	1.271
Discharge medicine advice	332	4.00	2.9789	1.14355	1.308
Time Taken for Discharge	332	4.00	3.0090	1.12775	1.272
Discharge activities on the day of discharge	332	4.00	3.1958	1.17408	1.378
Patient & Family doubts clarification	332	4.00	3.2952	1.15436	1.333
Information on the next follow-up	332	4.00	3.1145	1.13931	1.298
Patient Discharge Summary	332	4.00	3.6837	.93568	.876
Valid N (listwise)	332				

The patients were consistently satisfied with the duty medical officer's care (Mean 4.48, SD 0.84). and satisfied with doubts clarification (Mean 3.2, SD 1.15), information on next follow-up (Mean 3.1, SD 1.13), and patient discharge summary (Mean 3.68, SD 0.93). and moderately satisfied with care by nursing staff (Mean 3.0, SD 1.0), patient diet (Mean 3.7, SD 1.1), discharge information (Mean 3.06, SD 1.1), discharge medicine advice (Mean 2.9, SD 1.1), time taken for discharge (Mean 3.0, SD 1.1), and discharge activities on the day of discharge (Mean 3.1, SD 1.17). The patient satisfaction is borderline with the room cleanliness (Mean 2.98, SD 1.07), and the hospital linen (Mean 3.06, SD 0.94). The patients were dissatisfied with treatment expenses (Mean 2.52, SD 1.0), length of stay in hospital (Mean 2.94, SD 1.16), and plan of discharge (Mean 2.9, SD 1.14).

F.5. Analysis of Variance by Specialty:

Table 9 – Specialty Vs Patient Services

ANOVA Table			Sum of Squares	df	Mean Square	F	Sig.
Care by duty medical officer * Specialty	Between Groups	(Combined)	19.289	25	.772	1.095	.347
	Within Groups		215.636	306	.705		
	Total		234.925	331			
Care by Nursing Staff * Specialty	Between Groups	(Combined)	63.338	25	2.534	2.582	.000
	Within Groups		300.229	306	.981		
	Total		363.566	331			
Treatment Expenses * Specialty	Between Groups	(Combined)	60.337	25	2.413	2.709	.000
	Within Groups		272.588	306	.891		
	Total		332.925	331			
Length of stay in hospital * Specialty	Between Groups	(Combined)	91.114	25	3.645	3.091	.000
	Within Groups		360.799	306	1.179		
	Total		451.913	331			
Plan of Discharge * Specialty	Between Groups	(Combined)	67.852	25	2.714	2.278	.001
	Within Groups		364.615	306	1.192		
	Total		432.467	331			

Time Taken for Discharge * Specialty	Between Groups	(Combined)	69.981	25	2.799	2.440	.000
	Within Groups		350.992	306	1.147		
	Total		420.973	331			
Discharge information * Specialty	Between Groups	(Combined)	72.286	25	2.891	2.541	.000
	Within Groups		348.256	306	1.138		
	Total		420.542	331			
Patient Discharge Summary * Specialty	Between Groups	(Combined)	38.677	25	1.547	1.885	.007
	Within Groups		251.115	306	.821		
	Total		289.792	331			
Patient & Family doubts clarification * Specialty	Between Groups	(Combined)	64.821	25	2.593	2.109	.002
	Within Groups		376.251	306	1.230		
	Total		441.072	331			
Discharge activities on the day of discharge * Specialty	Between Groups	(Combined)	63.686	25	2.547	1.986	.004
	Within Groups		392.588	306	1.283		
	Total		456.274	331			

There is no difference in care by the duty medical officer (F 1.095, P .347) among all the specialties, which represents the efficiency of physicians.

There is a significant difference in the patient perception related with the specialty of admission with services like nursing staff (F 2.582, P .000), treatment expenses (F 2.709, P .000), length of stay (F -3.091, P- .000), plan of discharge (F 2.278, P .001), time taken for discharge (F 2.440, P .000), discharge information (F 2.541, P .000), patient discharge summary (F 1.885, P .007), patient and family members doubt clarification regarding patient treatment (F 2.109, P .002), discharge activities (F 1.986, P .004).

Table 10 – Association between Specialty Vs Patient Services

Measures of Association	Eta	Eta Squared
Care by duty medical officer * Specialty	.287	.082
Care by Nursing Staff * Specialty	.417	.174
Treatment Expenses * Specialty	.426	.181
Length of stay in hospital * Specialty	.449	.202
Plan of Discharge * Specialty	.396	.157
Time Taken for Discharge * Specialty	.408	.166
Discharge information * Specialty	.415	.172
Patient Discharge Summary * Specialty	.365	.133
Patient & Family doubts clarification * Specialty	.383	.147
Discharge activities on the day of discharge * Specialty	.374	.140

The measures of association between the specialty and the care by medical officers explains 8.2% of the variance is moderate.

Care of nursing staff 17.4% of variance explained large and shows strong link, treatment expenses 18.2% length of hospital stay 20.2% discharge planning 15.7% strongly affected by the specialty, and time taken for discharge 16.6%, information of discharge 17.2% varies between specialties. The discharge summary 13.3% notes that moderate link among different specialty.

The patient and family doubts clarification 14.7% shows different specialty patients receives different experience in receiving the communication form the hospital staff like doctors, nurses, and paramedical staff etc., the day of discharge activities 14.0% shows the process affected with the specialty under admission.

Table 11: Chi-Square test: Relationship between length of stay and inpatient services

Length of stay impacts with the IP services	Pearson Chi-Square &	Asymp. Sig. (2-sided)	Likelihood Ratio and	Asymp. Sig. (2-sided)	df
Care by the duty medical officer	74.655[a]	.096	78.989	.051	60
Care by Nursing Staff	91.933[a]	.005	95.668	.002	60
Patient diet	98.575[a]	.001	96.855	.002	60
Cleanliness of the patient's room	127.004[a]	.000	110.651	.000	60
Treatment Expenses	105.896[a]	.000	84.454	.020	60
Plan of Discharge	97.929[a]	.001	86.781	.013	60
Discharge information	99.669[a]	.001	94.521	.003	60
Discharge activities on the day of discharge	106.009[a]	.001	111.605	.000	60
Discharge medicine advice	99.458[a]	.001	92.807	.006	60
Patient & Family doubts clarification	90.883[a]	.001	91.860	.005	60
Information on the next follow-up	100.700[a]		107.534	.000	60
Patient Discharge Summary	94.061[a]	.003	98.233	.001	60

The Pearson correlation denotes that there is no significant association between length of stay and care by the duty medical officer ($p = .096$). The Likelihood Ratio, $P = .051$, is borderline but still not conventionally significant.

There is a signification association between the length of stay and inpatient services like care by nursing staff ($p = .005$), hospital diet (χ^2 (60) = 98.575, $p = .00$), room cleanliness (χ^2 (60) = 127.004, $p < .001$), treatment expenses (χ^2 (60) = 105.896, $p < .00$. 1, Likelihood ($p = .020$)), the plan of discharge ($p < .05$), Likelihood ($p = .013$). The perception of the above services varies significantly depending on the length of hospital stay of the patients in the hospital.

And also, the patients perceptions related to the services like discharge information ($p < .05$), Likelihood ($p = .003$) discharge medicine advice ($\chi^2(60) = 99.458$, $p = .001$), discharge activities on the day of discharge ($p < .001$), Likelihood ($p < .001$) patient and family satisfaction with doubts clarification ($p < .05$) Likelihood ($p = .005$), information on their subsequent follow-up ($p < .05$), Likelihood Ratio ($p < .001$). with the discharge summary ($p < .05$), Likelihood ($p = .001$)) varies depending on length of stay of the patients.

7. Results

The results of this study can help hospital management and policymakers design more effective patient-centered protocols and training programs for staff to deliver compassionate and timely care.

The male patients were 20.4 % higher than the female patients. 75.9 % of the patients belong to the middle age group of 35 to 65 years, and very few patients are admitted in the age group of 16 to 25 years. Out of the respondents, the majority of the patients were getting treatment under the specialty of (14.5%) gastrology, (13.6%) cardiology, (12.7%) orthopedics, (8.1%) cardiothoracic, (6.6%) general medicine, (6.0%). The length of stay of 83.5% of patients was 1 to 6 days. Most of the patients (66.6%) were paying cash, and 33.4% of patients used various insurance schemes.

For inpatient registration, 76.2% of patients wait 20 to 40 minutes, and 17.8% of patients experience quick registration. The patient initial assessment was completed within 20 minutes of admission for 20.2% of patients and within 20 to 40 minutes for 65.7% of patients. And 14.2% of patients experienced a delay of more than 40 minutes.

Patients are highly satisfied with the care provided by the duty doctors, and the low standard deviation shows the consistency in satisfaction. Patient discharge summaries are also rated well, indicating patients find the summaries clear and useful. Patients were moderately satisfied with the patient diet (M-3.7), doubt clarification with the doctor and nurses (M-3.3), discharge information and activities related to discharge (M-3 and 3.2), the hospital operations are performing reasonably well, and can improve a little more. The patients were dissatisfied with treatment expenses(M-2.5), cleanliness of the patient's room and linen (M-2.9, 3.06), length of stay, and plan of discharge (M-2.9).

Patients' perceptions of hospital services vary with their specialty of treatment. Fortunately, there is no significant difference in the care provided by the duty medical officer ($p = .347$), which is perceived similarly across all specialties. The measures of association between specialty show the strongest associations with ($Eta^2 > .18$): length of stay (.202), treatment expenses (.181), and nursing staff care (.174).

There is a difference in rating for nursing staff (F -2.582, P- .000), treatment expenses (F -2.709, P- .000), length of stay (F -3.091, P- .000), plan of discharge (F-2.278, P- .001) time taken for discharge (F-2.440, P- .000), discharge information (F -2.541, P- .000) patient discharge summary (F-1.885, P- .007), patient and family doubt clarification regarding patient treatment (F-2.109, P- .002), discharge activities (F-1.986, P- .004) among the various specialties by the patients.

The patients staying longer might notice more issues with food quality and consistency, or conversely, may adjust expectations over time; high treatment costs depend on the stay period. Related to cleanliness, short-stay patients may have different expectations or experiences. And longer-stay patients may notice recurring issues, inconsistent maintenance, or improvements over time. According to the quality of nursing staff care, the dissatisfaction is high across all groups, especially for short stays. The more extended stays might result in more dissatisfaction due to perceived delays or communication gaps. Patients with more extended stays may receive more detailed discharge information, which may lead to feelings that discharge communication is rushed or insufficient. Medication counselling quality or perception varies with hospitalisation length. Patients with shorter stays may perceive discharge activities as rushed or insufficient.

8. Discussions

Patient satisfaction has become a crucial indicator of hospital performance and service quality in today's highly competitive healthcare environment. With increasing awareness and expectations among patients, hospitals are required to provide clinical excellence and ensure a positive patient experience throughout the inpatient journey. Over the past decades, patient satisfaction has become a vital focus area in healthcare research, serving as a key

performance indicator for hospitals. Various studies have examined its determinants, dimensions, and impact on healthcare delivery**.** While extensive research has been conducted globally on patient satisfaction, particularly in developed healthcare systems, several key gaps exist, especially in the context of private tertiary hospitals in India. Across all studies, common recommendations included improving physical environments, enhancing communication, and addressing waiting times to increase patient satisfaction. Despite evidence showing wider satisfaction gaps in specialized care units (Esmail Pour, 2014; Niraula, 2019), insufficient research focuses on tailored interventions for these departments.

A structured patient satisfaction study helps align hospital practices with this model. Most of the existing literature focuses on outpatient care or is centred around government/ public hospitals. There is a lack of focused studies on **inpatient satisfaction in private multi-specialty hospitals** in tier-2 cities like Madurai. The previous studies conducted in the inpatient area related to discharge suggested including the patient and family establish explicit guidelines to put the patient in focus and encourage participation, including participant demographics for better understanding and enhanced communication with patients and families. However, without **systematic patient feedback**, it becomes difficult to measure whether the hospital is meeting its service goals from the patients' perspective.

The current study provided insight into admission, patient care, facility, and supportive services and also discussed the impact of the length of stay and specialty of admission on the various inpatient services at the time of discharge. The result shows a significant association between nursing care, diet, room cleanliness, discharge information, time taken for discharge, discharge summary, and treatment expenses.

9. Conclusion

Patient experience is central to overall satisfaction. This study offers valuable insights into how patients perceive their stay, which can help develop strategies to improve comfort, reduce anxiety, and foster trust during the treatment. The majority of patients prefer direct cash payments rather than insurance claims. Insurance claims are diverse but less frequent; no single insurance provider dominates, but some have slightly higher usage. Partnering with popular insurance providers to facilitate a smoother claims process and educating patients on available claim options and how to use them effectively may be adopted. The registration waiting timings indicate occasional administrative inefficiencies or peak-hour congestion and a need for improvement in removing the bottlenecks in the registration process, like pre-registration, increasing staff availability during peak hours to enhance efficiency. The doctor/nurse visit, most (65.7%) patients take between 20 and 40 minutes for the initial assessment after admission. The long waiting times occur in some cases due to unavailability or engagement in other staff duties at the time of admission of the patients. Most patients were consistently satisfied with the duty medical officers or consultants and the discharge summary. The patients dissatisfied with treatment expenses(M-2.5), cleanliness of the patient's room and linen (M-2.9 and 3.06), length of stay and plan of discharge (M-2.9) need to be improved in the future.

The relationship with the speciality and other factors suggests standardised protocols for hospital-wide SOPs for discharge planning, communication, and nursing care to reduce variability. The cost difference may be due to treatment differences, and the dissatisfaction from high expenses shown by the patients' side reveals the need for billing transparency and patient education with proper investigation and training. Many aspects of care vary substantially by speciality, indicating a need for standardisation or department-specific quality improvements. The dissatisfaction with short-stay patients may reflect gaps in nursing care communication, understaffing, or higher patient expectations.

Implementing real-time tracking of doctor/nurse visits to ensure timely patient care. And introducing a priority-based patient management system to reduce

waiting time, increasing staff availability during peak admission hours to enhance response time. Departments with high registration waiting times and high post-admission delays (e.g., Pulmonology, Urology) might benefit from process optimisation or additional staffing. Departments with low variance and efficient processes (like Family Medicine and Oncosurgery) could serve as models for best practice.

10. Contribution to literature and industry

From a research perspective, this study adds to the existing body of knowledge on healthcare service management and can be a valuable reference for future studies in the field of hospital administration and patient care strategies.

Improving the quality of care by understanding the aspects of inpatient services includes improvements in clinical treatment, nursing services, communication, hygiene, and hospital facilities. Structured patient feedback will help to identify specific gaps in service delivery, knowing exactly where improvements are needed. Patient experience is central to overall satisfaction. This study offers valuable insights into how patients perceive their stay, which can help develop strategies to improve comfort, reduce anxiety, and foster trust during the treatment.

Satisfied patients are more likely to return to the same hospital for future care and recommend it to others. Therefore, improving satisfaction levels can lead to long-term loyalty and positive word-of-mouth. Regular assessment of patient satisfaction is also a requirement for hospital accreditation standards.

Findings from this study can be used to support quality initiatives and institutional benchmarking. The results of this study can help hospital management and policymakers design more effective patient-centred protocols and training programs for staff to deliver compassionate and timely care related to the area of registration and discharge, especially when dealing with claim patients.

11. Limitations and future scope

The study is confined to patients admitted for at least 24 hours. It does not cover outpatient services, day-care procedures, or emergency-only visits. **Multiple dimensions of patient experience** areas covered include quality of medical and nursing care, doctor-patient and nurse-patient communication, cleanliness and hygiene, Room comfort and hospital facilities, food and dietary services, billing and discharge procedures.

The study is conducted solely at one multispecialty hospital, Madurai. Patient satisfaction is highly subjective and may vary based on individual expectations, emotions, cultural background, and current health conditions, which can influence the responses. Patients who were critically ill, unconscious, or mentally unfit to participate were excluded from the study. The data collection was limited to a specific period, which might not capture seasonal or long-term variations in service quality or patient experiences. Some patients may have hesitated to give honest feedback due to fear of offending staff or misunderstanding the purpose of the questionnaire. And also, the existing research provides generalised findings, so there is a need for department-wise or speciality-wise **evaluation** to identify specific service gaps more accurately. **Future research can be conducted as a prospective approach to understanding the fundamental gaps during the hospital stay from admission to discharge, and a longitudinal study involving other hospitals in the same region can help to get more insight.**

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