



Original Research Article

A CROSS-SECTIONAL STUDY ON PATIENT SATISFACTION ABOUT HEALTH CARE IN RURAL HEALTH TRAINING CENTRE AFFILIATED TO A TERTIARY CARE TEACHING HOSPITAL IN TELANGANA

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ABSTRACT

Background: Patient satisfaction represents an individual's perception of healthcare providers and services. It is considered a proxy indicator of the quality of care in healthcare facilities and serves as an effective measure for evaluating the performance of health services

Aim: To assess the level of satisfaction regarding different aspects of health care among patients attending a rural health training centre affiliated to a tertiary care teaching hospital

Materials & Methods: An institutional based cross-sectional study was conducted on 360 patients attending daily OPD of RHTC affiliated to a tertiary care teaching hospital using PSQ -18 questionnaire. Systematic random sampling was used.

Results: The current study found that approximately 79.18% of participants were satisfied with the services provided at the rural health training centre. The lowest score was in the domain of the time spent with doctor with percentage satisfaction of 65.7%.

Conclusion: The results of the present study showed that although the overall satisfaction was high (79.18%) some aspects of services indicated some degree of dissatisfaction which can be improved by use of efficient and skilled manpower utilization.

Key words: PSQ-18, Patient Satisfaction, RHTC.

INTRODUCTION

Patient satisfaction represents an individual's perception of healthcare providers and services. It is considered a proxy indicator of the quality of care in healthcare facilities and serves as an effective measure for evaluating the performance of health services.^[1]

A comprehensive understanding of the community's needs and expectations regarding healthcare services is essential for improving service delivery and enhancing their utilization. Patient feedback plays a

crucial role in identifying gaps and implementing necessary improvements.^[2]

Patient satisfaction surveys are a useful way to collect feedback from the public and evaluate how well healthcare services are working in a particular area. These surveys help identify both the strengths and weaknesses of the healthcare services. The information gathered reflects the quality of care provided by staff and healthcare providers, which can be used to make decisions. The surveys also help identify problem areas and guide management decisions.^[3,4]

Furthermore, these surveys encourage accountability by ensuring healthcare providers meet acceptable levels of patient satisfaction. By looking at both the positive and negative feedback, the surveys help healthcare providers and administrators track performance, understand patient needs, plan improvements, and provide evidence for financial requests and spending.^[3]

Studies indicate that overall patient satisfaction is shaped by multiple factors beyond service quality, such as patient demographics, the nature of the diagnosis, the treatment plan, and the chronicity of the illness. Among demographic variables, age, health status, and race have been consistently found to have a statistically significant influence on satisfaction levels.^[3]

Very few studies have been done in Telangana especially in rural areas regarding patient satisfaction. Since patient satisfaction with health services can differ based on settings, regions, and ethnic groups, this study aims to uncover new insights about patient satisfaction at the Rural Health Training Centre attached to our tertiary care hospital in Hyderabad. The findings could lead to improvements, changes, or enhancements in our current healthcare practices.

Objective of the study

1. To assess the level of satisfaction regarding different aspects of health care among patients attending a rural health training centre affiliated to a tertiary care teaching hospital.

MATERIALS AND METHODS

The present study was an Institutional based cross-sectional study conducted at Rural Health Training Centre located about 15km from the main hospital for 3 months (July to September 2024)

Study participants

Inclusion Criteria

- Patients aged 18 years and above of either gender.
- Those who were willing to participate and have given informed consent

Exclusion Criteria

- Severely Ill Patients
- Staff/ Health care provider of the centre

Sample size: 360 patients.

$$n \geq \frac{Z^2_{(1-\frac{\alpha}{2})} * p * (1 - p)}{d^2}$$

n = minimum sample required

Z = relative deviate (at 95% confidence intervals)= 1.96

p = expected prevalence= 73.77% 3

q = 100 - p =26.23%

d = absolute error taken as 5%

n = 297

Assuming the non-response rate at 20%, the final sample size was rounded off to 360.

Sampling technique: Everyday, about 60 patients attended the hospital. Ten patients were recruited daily until the target sample size was met. Through systematic random sampling, every 6th patient from the hospital registration list was selected each day, starting with the first OPD patient. If a selected patient declined participation or was ineligible, the next available patient was chosen.

Sample interval (SI)= 360/60=6

Procedure of data collection: Informed consent was taken from all the participants after explaining about the objectives of the study and strict confidentiality was assured to all the participants. The data collection was done using interviewer administered semi-structured questionnaire consisting mainly of two sections:

1. Demography consisting of age group, gender, education, Occupation, SES, Family type, Religion, Marital Status, Type of OPD Visited.

Socioeconomic Status(SES) was classified according to BG Prasad Classification.^[5]

2. PSQ-18 Questionnaire.^[6]

The PSQ-18 questionnaire thoroughly evaluated patient satisfaction with 18 items, which were grouped into seven domains of satisfaction: general satisfaction (items 3 and 17), interpersonal manner (items 10 and 11), communication (items 1 and 13), technical quality (items 2, 4, 6, and 14), financial aspects (items 5 and 7), time spent with the doctor (items 12 and 15), and accessibility and convenience (items 8, 9, 16, and 18).

Each item was phrased as an opinion statement, with responses categorized on a Likert scale from strongly agree to strongly disagree. The PSQ-18 provided scores for each of the seven subscales: general satisfaction (2 items), interpersonal manner (2 items), technical quality (4 items), financial aspects (2 items), time spent with the doctor (2 items), and accessibility and convenience (4 items). Responses were scored from one to five, with higher scores indicating greater satisfaction with healthcare. After scoring the items, the results within each subscale were averaged to produce the seven subscale scores.

Ethical Considerations

The study was approved by Institutional Ethics Committee (MRIMS/DHR-IEC-MBBS-INTERN/2024/292). The participants were briefed about the purpose of the study and prior informed consent was taken.

Statistical Analysis

The data collected were entered in Microsoft Excel (Microsoft Corp., Redmond, WA, USA), and statistical analysis was done using the SPSS software version 21 (IBM Corp., Armonk, NY, USA). Mean values and standard deviation were calculated for descriptive data. To determine the relationship between the domains of satisfaction and sociodemographic variables, Multivariable logistic

regression was done. $P < 0.05$ was taken as significant.

RESULTS

Table 1: Demographic analysis of the patient population

Characteristic	N	%
Sex		
Male	195	54.2
Female	165	45.8
Age		
18-25	40	11.1
26-35	79	21.9
36-45	115	31.9
46-60	54	15
>60	72	20
SES		
Class I	7	1.9
Class II	35	9.7
Class III	123	34.2
Class IV	167	46.4
Class V	28	7.8
Type of Family		
Nuclear	221	61.4
Joint	110	30.5
Three-generation	29	8.1
Religion		
Hindu	299	83.1
Muslim	47	13.1
Christian	14	3.8
Marital status		
Unmarried	29	8.1
Married	297	82.5
Widowed	28	7.8
Divorced/Separated	6	1.6

Of the 360 participants in the study (Table 1), 31.9% were aged between 36 and 45 years, 54.9% were male, and the remainder were female. Approximately 83.1% identified as Hindus, and the majority (61.4%) lived in nuclear families. Table 1 also shows that 46.4% of participants were classified as belonging to Socio-economic Class IV, and 82.5% were married.

Table 2: Mean scores of various sub-scales in PSQ-18

Sub-Scale	Mean Score	Percentage satisfaction
General satisfaction	4.06±0.72	84.2
Technical quality	4.06±0.57	79.2
Interpersonal manner	4.07±0.80	82.1
Communication	4.20±0.64	87.6
Financial aspects	3.95±0.66	73.4
Time spent with doctor	3.62±0.72	65.7
Accessibility and Convenience	4.06±0.55	80.2
Overall satisfaction	4.01±0.55	79.18

Table 2 illustrates the mean scores across various scales of the PSQ-18. The highest satisfaction score was recorded in the "Communication" domain, with a mean of 4.20, while the lowest score was in the "Time spent with doctor" domain, at 3.62. The overall satisfaction percentage was observed at 79.18%.

Table 3: Association of patient satisfaction with respect to age of study participants

DOMAINS	(18 To 37)	(38 To ≥60)	p-value
General satisfaction	3.7 ± 0.7	3.8 ± 0.7	0.35
Technical quality	3.8 ± 0.5	3.8 ± 0.6	0.69
Inter personal manner	3.7 ± 0.8	3.8 ± 0.8	0.56
Communication	3.8 ± 0.7	4.0 ± 0.6	0.05
Financial aspects	3.7 ± 0.6	3.7 ± 0.7	0.98
Time spent with doctor	3.2 ± 0.7	3.4 ± 0.7	0.048
Accessibility & convenience	3.7 ± 0.6	3.8 ± 0.5	0.087
Overall satisfaction	3.7 ± 0.5	3.7 ± 0.5	0.15

Table 3 shows the association of patient satisfaction with respect to age of study participants. The age group of (38 To ≥ 60) had comparatively higher mean scores when compared to age group of 18 to 37 years. There was significant association between age and patient satisfaction in the domains of communication and time spent with doctor.

Table 4: Multivariable logistic regression of predictor variables with Technical quality

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	3.746	.736		5.091	.000
	Age	-.129	.055	-.413	-2.341	.026
	Gender	.038	.124	.050	.304	.763
	Education	-.022	.066	-.066	-.334	.741
	Occupation	-.061	.052	-.219	-1.181	.247
	SES	-.144	.116	-.257	-1.240	.224
	Family Type	.027	.126	.039	.215	.831
	Religion	.040	.100	.070	.394	.696
	Marital Status	-.061	.139	-.079	-.436	.666

a. Dependent Variable: TECH_QUA

Table 4 highlights the relationship between technical quality and predictor variables. Age emerged as a significant factor ($p = 0.026$). Other variables, including gender, education, occupation, SES, family type, religion, and marital status, did not show statistical significance.

Table 5: Multivariable logistic regression of predictor variables with Interpersonal manner

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	2.372	.641		3.698	.001
	Age	.005	.048	.016	.094	.926
	Gender	.120	.108	.177	1.110	.276
	Education	-.019	.058	-.062	-.324	.748
	Occupation	-.084	.045	-.332	-1.853	.073
	SES	-.010	.101	-.020	-.102	.919
	Family Type	-.061	.110	-.096	-.557	.582
	Religion	.204	.088	.400	2.334	.026
	Marital Status	.161	.121	.232	1.329	.194

a. Dependent Variable: INT

Table 5 explores the relationship between interpersonal manner and predictor variables. Religion was found to be a significant predictor ($p = 0.026$), while other variables such as age, gender, education, occupation, SES, family type, and marital status were non-significant.

Table 6: Multivariable logistic regression of predictor variables with Communication

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	2.426	.769		3.153	.004
	Age	-.157	.058	-.453	-2.723	.011
	Gender	-.065	.129	-.079	-.506	.617
	Education	-.012	.069	-.033	-.178	.860
	Occupation	-.010	.054	-.032	-.183	.856
	SES	-.056	.121	-.091	-.464	.646
	Family Type	-.003	.132	-.003	-.020	.984
	Religion	.245	.105	.390	2.332	.026
	Marital Status	.339	.145	.399	2.333	.026

a. Dependent Variable: COMM

Table 6 examines how predictor variables relate to communication. Significant associations were observed for age ($p = 0.011$), religion ($p = 0.026$), and marital status ($p = 0.026$). However, gender, education, occupation, SES, and family type did not show significant effects.

Table 7: Multivariable logistic regression of predictor variables with Time spent with doctor

Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	4.658	1.122		4.150	.000
	Age	-.054	.084	-.119	-.641	.526
	Gender	-.005	.189	-.005	-.026	.979
	Education	-.182	.101	-.373	-1.799	.082
	Occupation	-.044	.079	-.107	-.551	.586
	SES	-.219	.177	-.268	-1.233	.227

	Family Type	-.270	.193	-.262	-1.397	.172
	Religion	-.060	.153	-.073	-.394	.696
	Marital Status	.146	.212	.131	.689	.496

a. Dependent Variable: TIMESPENT

Table 7 investigates the time spent with a doctor in relation to predictor variables. The analysis revealed no significant associations, with none of the predictors showing a meaningful relationship.

Table 8: Multivariable logistic regression of predictor variables with Overall satisfaction

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.246	.541		6.001	.000
	Age	-.080	.041	-.354	-1.958	.059
	Gender	.003	.091	.006	.036	.971
	Education	-.058	.049	-.240	-1.183	.246
	Occupation	-.019	.038	-.095	-.501	.620
	SES	-.073	.085	-.182	-.859	.397
	Family Type	-.052	.093	-.102	-.554	.583
	Religion	.082	.074	.202	1.114	.274
	Marital Status	.027	.102	.049	.264	.794

a. Dependent Variable: OVERALL

Table 8 analyzes overall satisfaction and its relationship with predictor variables. None of the predictors, including age, gender, education, occupation, SES, family type, religion, or marital status, showed statistical significance, suggesting a limited relationship with overall satisfaction.

DISCUSSION

The current study found that approximately 79.18% of participants were satisfied with the services provided at the rural health training centre. Similarly, a study conducted in India by Maheswaran et al³ reported a satisfaction level of 73.7%. In contrast, Goel et al,⁷ observed a significantly higher satisfaction rate of 87.8%. However, studies by Holikatti et al,² and Nazirah et al,⁸ recorded much lower satisfaction levels, at 55.3% and 23%, respectively. These disparities may result from differences in service delivery approaches, variations in the study populations, and, consequently, diverse patient expectations.

In the present study, the communication domain had the highest mean score (4.20), aligning with the results of Maheswaran et al.⁸ Likewise, as reported in their study, the domain of "time spent with the doctor" showed a lower percentage of satisfaction compared to other domains. Additionally, the mean scores across various domains were higher when compared to studies by Holikatti et al,² and Adhikari et al.⁹

On comparing age in relation to patient satisfaction levels, the age group of 38 to ≥ 60 years demonstrated higher mean scores compared to the 18 to 37 years group. In similar studies by Rajkumari et al,¹⁰ and Quintana et al,¹¹ older patients showed a higher level of satisfaction than younger patients. However, a study by Maheswaran et al,³ presented contrasting findings, where individuals over 60 years had lower mean scores than the younger population. Conversely, a

study by Goel et al reported that patient satisfaction was not influenced by age group.

Multivariable logistic regression analysis was performed to explore the association between sociodemographic factors and different domains of satisfaction. Age was identified as a significant predictor for the domain of technical quality, while both age and marital status were significantly associated to the domain of communication. In contrast, a study by Maheswaran et al,³ reported that sex was a significant predictor for satisfaction with technical quality, and both sex and marital status were significant predictors for the domain of time spent with the doctor. For other domains, their analysis found no significant associations, with none of the predictors showing meaningful relationships. These results differ from those of a study by Quintana et al,¹¹ in Spain, which found that age, gender, education level, and marital status were predictors of patient satisfaction with hospital care. Consistent with the findings of studies by Crow et al,¹² and Hall et al,¹³ the analysis of overall satisfaction and sociodemographic variables revealed no significant associations. A notable limitation of this study is the absence of an analysis of the reasons behind dissatisfaction.

CONCLUSION

The results of the present study showed that although the overall satisfaction was high (79.18%) some aspects of services indicated some degree of dissatisfaction which can be improved by use of efficient and skilled manpower utilization.

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Conflicts of interest: There are no conflicts of interest.

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