

Research Article

Study on utilization of health care services at secondary level setting and satisfaction among out patients

Saravanakumari Arumugam Dhanaraj*, P. K. Govindarajan, A. J. W. Felix, N. Ethirajan

Department of Community Medicine, Raja Muthiah Medical College, Annamalai University, Tamilnadu, India

Received: 28 September 2015

Accepted: 20 October 2015

*Correspondence:

Dr. Saravanakumari Arumugam Dhanaraj,
E-mail: dr.saravanakumari@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Patient care is the primary function of a hospital. Hospital performance can be best assessed by measuring patient satisfaction. Patient satisfaction with the health care services largely determines their compliance with the treatment and thus contributes to the positive influence on health. Patient satisfaction is considered as one of the desired outcomes of health care and is directly related with utilization of health. The objective of the study was to assess the level of satisfaction among out patients attending secondary level hospital and to assess the utilization of health care services.

Methods: A cross sectional study was conducted among out patients (aged 18 – 85 years) attending Chidambaram Government Hospital, Tamilnadu, India. Systematic random sampling technique was used to select the respondents. A total of 152 outpatients were taken for the study purpose. A self designed, pretested, semi structured questionnaire was developed to draw the patient's satisfaction to the health care services.

Results: 99.3% of the patients were highly satisfied with the cleanliness of the hospital. 91.4% of the respondents were satisfied with the doctor's behavior. 62.5% of the out patient were neutral with drinking water facility. Overall satisfaction among the patients was a mean of 3.75 out of 5 (75%).

Conclusions: Patients are generally satisfied with the hospital facilities. Patients inputs on various deficiencies should always be taken care by the hospital administration to improve its services to the patients satisfaction.

Keywords: Patient satisfaction, Secondary level Hospital, Quality medical care

INTRODUCTION

Over the past few years consumer considerations and perceptions of service quality, which go in for selection of a particular health outlet have been studied by administrators in the public as well as private sector.

The concept of patient satisfaction has a long history of controversy and debate. Yet patient satisfaction remains a topic of scientific investigation.

But little is known about its relations and importance regarding the monitoring of the right to health.¹

Patient satisfaction is multifaceted and a very challenging outcome to define. It seems easy to understand but hard to define. Satisfaction is a psychological concept which is defined in different ways. Patient satisfaction has been defined as the degree of congruency between a patient's expectations of ideal care and his/her perception of the real care(s) he receives.²

Measuring and reporting on patient satisfaction with health care has become a major industry. The number of articles featuring “patient satisfaction” as a key word has increased more than 10-fold over the past two decades. Patient satisfaction measures have been incorporated into reports of hospital and health plan quality. If patient satisfaction is to take its place alongside morbidity, mortality, and functional status, several critical measurement issues must be addressed.³

Patient perceptions about healthcare systems seem to have been largely ignored by health care managers in developing countries.^{4,5}

India is the second most populous country of the world after China, and has changing socio-political-demographic and morbidity patterns that have been drawing global attention in recent years.

According to the Indian constitution, Health is the responsibility of state Government. The health care delivery in India has been envisaged at 3 levels namely - primary, secondary and tertiary level.⁶ The hospital care of government set-up is cheaper and accessible to rich and poor people. Hospital services at secondary level play a vital and complimentary role to the tertiary and primary health care systems and together form a comprehensive district based health care system.⁷

Utilization of healthcare services refers to the accessibility and affordability of the household to avail services pertaining to health.⁸ Patient-centred outcomes have taken center stage as the primary means of measuring the effectiveness of health care delivery.⁹

Quality is one of the chief factors which affect satisfaction. There is a strong connection between health service quality perceptions and customer satisfaction. Only when the health service providers understand what exactly the patients wants, such as he says that he wants quality, they will be able to satisfy their patients and only then will it be a successful hospital.¹⁰

Patients are the main users of a hospital. The expectations of the users differ from one individual to another individual because everyone carries a particular set of thoughts, feelings and needs. Hence determination of patient's real feelings is very difficult.¹¹

In India, the infra-structure and man power varies between private and public hospitals in majority of the states.

Health care is changing rapidly. The need to improve quality in healthcare delivery is increasing. Quality care is one of the central dimensions of public health. Good quality care needs to be delivered at the earliest and at the proper time which is a basic right of consumers.⁴

In countries where governments provide either free or subsidized health treatments, it has been found that the tendency to utilize these treatments is higher among citizens belonging to the poor households.¹²

The high patient satisfaction is certainly indicative of good treatment. Return of customers is a fundamental marketing principle that is becoming increasingly important for health care providers in today's competitive environment.¹³ Satisfied patients are more likely to follow the specified medical regimens and treatment plans. Any unsatisfied patient will not come back to the hospital, and it will lead to loss of money of patient, as well as wastage of government resources.¹⁴

Keeping all these in views, the present study was aimed to assess patient satisfaction and utilization with services provided in a secondary level govt. Taluk hospital in Chidambaram town in Tamilnadu, South India.

METHODS

Setting and study design

A cross sectional study conducted in Government Kamaraj secondary level hospital situated in Chidambaram town in Tamilnadu

Chidambaram Government Secondary level hospital is a 231 bedded hospital with an outpatient of approximately 1638 per day, inpatient of 183 per day and referral in 110 and referral out of 89 per month.

Chidambaram Kamaraj hospital serves the population of 64,650 of Chidambaram town.

The hospital provides outpatient consultations and inpatient services to patients presenting to the hospital from other levels of care or on self-referral. Patients are mainly seen in the General Outpatient Department, Specialty clinics and Accident and Emergency unit.

Questionnaire

A self designed, pre tested, semi structured questionnaire was designed to examine several aspects of hospital care. Questions to be included in the instrument were devised on the basis of a literature review and in depth interviews of the patients attending the hospital.

The questionnaire was standardized by a small scaled pilot test on 50 patients. After the pilot study, certain modifications were done in the questionnaire after thorough scrutiny. It contained questions on socio demographic characteristics of the respondents.

It also comprised of 38 items which measures seven core dimension of patient satisfaction accessibility of health care facility, registration process, perception of waiting time, reason for selecting the hospital, perception of

availability of basic amenities, relationship between patient and health providers, cleanliness of hospital, availability of laboratory and pharmacy facilities, willingness to recommend, information and communication.

The questionnaire consisted of five points Likert scale items.

Responses to the variables in the questionnaires were assigned a score of 1 for 'highly dissatisfied', 2 for 'dissatisfied', 3 for 'neutral', 4 for 'satisfied' and 5 for 'highly satisfied'.

Mean analysis was carried out on the individual factors. A mean of 5 was classified as highly satisfied, 4 was classified as being satisfied with the service provided, and a mean of 3 was classified as neutral with the service provided.

Sample size determination

In a pilot study out of 50 patients interviewed, 36 of them were highly satisfied in all facilities available in the hospital. Keeping this as prior information, the sample size has been

$$\text{Calculated using } n = \frac{Z^2 \cdot 1 - \alpha / 2 \cdot P \times (1 - P)}{(\sum P)^2}$$

Where p= proportion of the satisfaction level (72%)

α = 5% and

\sum =relative precision as 10%

The required sample size has been 149.

A total of 152 outpatients, were the study population. The study population consisted of patients aged above 18 years who got services at the general Outpatient Department from February 2015 to April 2015.

Inclusion criteria

A person who attends the hospital with some complaints in Outpatient Department aged above 18 years.

Exclusion criteria

Patients from paediatric, psychiatric, Dental, Antenatal care and postnatal care units were excluded in this study. The location and service system are different from other units in OPD. Emergency cases were excluded.

Systematic random sampling method was used. Every third patient reporting to the main dispensary after OPD consultation in case of outpatients was being selected for the study.

Prior approval of the ethical board was obtained before beginning the survey. Permission from the District Joint

director of health services and chief medical officer was obtained before the survey was carried out in the hospital.

Outpatients were interviewed during their exit from the main dispensary. An informed verbal consent was taken from all the participating patients before start of the interview. Doctors and the supporting staffs were largely kept unaware of the survey, except in unavoidable circumstances, to avoid the bias in their behaviour with the patients. Respondents were assured of the confidentiality of their responses.

All respondents were encouraged to express their opinion freely and fairly. Precautions were also taken to obtain unbiased results. Schedules are explained by the researcher personally in a vernacular language and were filled by her personally. Since the investigator herself carried out the survey, there was no problem of observer variation as far as the study is concerned.

The survey was carried out in the morning hours during OP timing.

Analysis

The surveyed questionnaires were collected and coded in a MS Excel database and analysed by using the SPSS statistical package, version 20. Descriptive statistics were performed on the socio demographic data. Satisfaction score was expressed as Mean and standard deviation for overall satisfaction with the health services. Friedman test was performed for comparison of satisfaction among facilities available in the hospital.

RESULTS

A total of 152 patients from outpatient department were included in the study. Out of 152 out patients, majority of the respondents (55.26%) were females. 34.21% of outpatients belong to the age category of 30-45 years. 28.94% of respondents were illiterates. 7.89% were graduates indicating higher educational status.

Majority of the respondents (92.76%) were married. Regarding occupation 47.36% belonged to unskilled group. 36.84% of outpatient's belonged to families having monthly income less than 3000.

Recording the place of residence, data shows that 112 (73.68%) were from rural area. It can be observed that the proportion of rural area was very high (Table-1).

99.34% of outpatients came to the hospital of their own only and less than 1% of patients were referred in to the hospital.

Regarding accessibility to the hospital 20.39% travelled less than 2 km to reach the hospital while 32.23% came from 6 to 10 km distance to avail health care services.

76.31% patients travelled by bus to avail themselves to health care services (Table 2).

All the patients were asked about the reasons for selection of this hospital. Treatment being good (51.31%), easy to reach (53.28%) and less expenses/free services (52.63%) were the primary reasons stated by the respondents. Other reasons like emergency services, drugs availability, investigations, doctors availability and government hospital gained less than 20% satisfaction were not taken into account (Table-2).

Table 1: Socio-demographic profile of the respondents from the out-patient department (OPD) (n = 152).

Characteristics	No. of Subjects (%)
Sex	
Male	68 (44.7)
Female	84 (55.3)
Age	
18-29	26 (17.1)
30-45	52 (34.2)
46-60	51 (33.6)
61-75	19 (12.5)
>75	04 (2.6)
Marital status	
Married	141 (92.76)
Single	11 (7.23)
Widow/separated	0 (0)
Place of residence	
Urban	40 (26.31)
Rural	112 (73.68)
Education	
Illiterate	44 (28.94)
Primary	28 (18.42)
Middle	28 (18.42)
High school	26 (17.10)
Higher secondary	14 (9.21)
Degree	12 (07.89)
Occupation	
Unemployed/dependent	62 (40.78)
Unskilled	72 (47.36)
Skilled	18 (11.84)
Family income(Rs)	
<3000	56 (36.84)
3001-5000	47 (30.92)
5001-10000	40 (26.31)
>10000	09 (5.92)

Regarding the registration system 65.8% of the respondents were satisfied with the services provided. 34.2% of the respondents were highly satisfied with the behaviour of the staffs.

When assessing the respondents satisfaction with the attitude and practice of health care providers they were

asked to indicate if the physician/doctors were courteous, listened to their complaints, took enough time and explained what they wanted to know and gave them good advice and treatment.

In this aspect 91.4% were satisfied with Doctors promptness and behaviour. 5.9% were highly satisfied.

The degree of satisfaction at various services of the hospital was also assessed. 55.9% of respondents were highly satisfied with the services of the Pharmacy. 42.8% were satisfied.

Table 2: Distribution of patients based on factors influencing utilization of services in secondary level hospital (n= 152).

Characteristics	No. of Subjects (%)
Reasons	
Easily accessible	81 (53.28)
Treatment good	78 (51.31)
Less expenses /free services	80 (52.63)
Mode of transport	
By-bus	116 (76.3)
Auto	5 (3.28)
Car	0 (00)
Two-wheeler	11 (7.23)
Walk	12 (7.89)
Ambulance Service	108 (00)
Cycle	8 (5.26)
Transport cost(Rs)	
6-10	57(45.6)
11-50	64(51.2)
51-100	04(3.2)
101-1500	0
Time taken to reach the facility	
<30 min	105(69.07)
<1 hr	41(26.97)
1-2 hr	03 (1.97)
>2 hr	03 (1.97)
Distance	
<2 km	31 (20.39)
3-5 km	38 (25)
6-10 km	49 (32.23)
11-20 km	24 (15.78)
>20 km	10 (6.57)

Degree of satisfaction on cleanliness, waiting time and behaviour of staffs in injection and dressing services among respondents was found to be 88.8% (Table-3).

Out of 152 patients only 59 were prescribed investigations. Among them 84.7% were satisfied the cleanliness and services of the lab.

Concerning the infrastructure and basic facilities at the hospital 44.7% were satisfied with the available facilities. Majority (55.3%) gave neutral response on wheelchair, functioning ambulance, blood bank and suggestion box services (Table 3). 28.9% were dissatisfied with drinking water facility. Canteen and telephone facility are not available inside the hospital premises.

There was a high degree of satisfaction 99.3 % (a mean of 4.80) as far as cleanliness of the hospital was concerned followed by satisfaction with injection and dressing room (a mean of 4.50) (Table-3).

Regarding the overall satisfaction, Friedman test was performed for comparison between available health care services in the hospital. The observed data showed the injection and dressing room with a mean of (5.28) was the number one ranked highly satisfied among all the facilities followed by cleanliness of the hospital with a mean of (5.08), pharmacy (3.68), registration system (3.53), doctors attitude and practice (2.29) and other amenities with the least of all (1.14) (Table 4).

92.7% were satisfied with the improvement of health 91.4% were willing to recommend this hospital to their friends and relatives for treatment.

Table 3: Level of satisfaction of facilities available in secondary level hospital.

Facilities	Neutral		Satisfied		Highly satisfied		Total	Mean
	N	%	N	%	N	%		
Basic amenities	84	55.3	68	44.7	-	-	152	3.04
Cleanliness of the Hospital	-	-	1	0.7	151	99.3	152	4.80
Registration System	-	-	100	65.8	52	34.2	152	4.19
Doctors Attitude and Practice	4	2.6	139	91.4	9	5.9	152	3.67
Pharmacy	2	1.3	65	42.8	85	55.9	152	4.19
Injection and Dressing Room	14	9.2	3	2.0	135	88.8	152	4.50
Overall satisfaction	12	7.9	86	56.6	54	35.5	152	3.75

Table 4: Mean & standard deviation of level of satisfaction of facilities available in secondary level hospital.

Facilities	Mean	Standard Deviation	Mean rank	Friedman's Test value	P value	Friedman's multiple comparison test Result
Other amenities	3.04	0.13	1.14	573.808	<0.001	INJ > CL > PHAR > REG > DAP > OA
Cleanliness of the hospital	4.80	0.15	5.08			
Registration system	4.19	0.32	3.53			
Doctors practice and attitude	3.67	0.33	2.29			
Pharmacy	4.19	0.58	3.68			
Injection and dressing room	4.50	1.44	5.28			

DISCUSSION

The present study attempted to assess the satisfaction of the patients with various aspects of health care in secondary level hospital of Chidambaram. The results of the study shows that majority of the respondents were satisfied with the services they received. Only very few studies on patients satisfaction in tertiary care hospitals are available in India and therefore we lack data for comparison and that too from secondary level. Yet the

findings of the survey are helpful for further improvement of the hospital. Location of the hospital can determine its utilization pattern. Once the patient enters the hospital the first entry is to the registration counter. In our present study, 80.2% were satisfied with the location of OPD, 65.1% with availability of the staffs which is very similar (81-86%) to the study done by surg et al. in a tertiary hospital Karnataka and Andrabi et al (94%) in Tertiary Hospital, Jammu and Kashmir.^{4,15}

Staff behaviour, particularly polite and courteous behaviour has been accepted as a necessity for hospital OPD services.

The behaviour of the doctors and paramedical staff in our study (91.4%) was found to be satisfactory, which is similar (86.6%) to the study done by Syed et al and found to be low (66%) in study by Andrabi et al.^{2,4} Humaneness of the physician was the highest (95%) in the study by Said Bodur et al. urban primary health centres in Turkey.¹⁶

Consultation time spent with doctor is important attribute to determine satisfaction level among patients. Studies indicated that longer contact time have been significantly associated with better recognition and handling of physical problems and patient empowerment. 90.1% of the respondents in present study felt that doctor gave adequate time to them which is high compared (77%) to the study done by Andrabi et al.⁴

On the contrary, satisfaction regarding doctor patient communication decreased (68%) in the study by Ranjeeta et al. in Lucknow.⁹

Accessibility in term of time and distance is important for patient satisfaction. In the present study, 32.2% of patients travelled a distance of 6-10 KM to avail services in this hospital which is similar to the study done by Andrabi et al, which indicates the faith of the respondents in quality of services provided. On the contrary, there was a high level of dissatisfaction (84%) as far as accessibility of health care services by Syed et al in Tertiary Hospital Haryana.^{2,4}

The affordability of the cost involved in reaching the health facility by almost all signifies the readiness of the patients to pay for their health. In our study 51.2% of the patient spent Rs. 11-50 for travel which is very similar (44.75%) in the study by Andrabi et al.⁴

76.31% patients travelled by bus to avail themselves to health care services in our study which is similar (79.5%) with the study of Andrabi et al.⁴

Regarding place of residence majority belong to rural area (73.68%) in our study which is 53.9% in study by Sodani et al. Madhya Pradesh, which shows that the health care services are mostly utilized by the rural population.⁵

Out of 152 patients only 59 had availed lab services in our study. The degree of satisfaction was (83.5%) regarding the behaviour of the staffs in the lab which is (88.9%) to that recorded by Sodani et al.⁵

Main Dispensary is the usual exit point where patients arrive after OPD consultation, collect medicines and depart. Congestion is expected due to convergence of

patients from various OPDs during peak time. Availability of medicines along with courtesy of the staffs has been the key attributes for patients satisfaction.

It was observed in our study that the level of satisfaction among respondents with the pharmacy facilities was 83.8% (mean of 4.19) which is similar (73.85%) with the study by Syed et al in Haryana.²

Concerning the infra-structure and basic amenities in the hospital, the level of satisfaction observed was 60.8% (a mean of 3.04) which is 71.7% in the study by Syed et al. In our study 28.9% of the respondents showed dissatisfaction towards drinking water facility which is similar (32.5%) to the study by Syed et al.²

Regarding cleanliness of the hospital in the present study, satisfaction level was found be high with (a mean of 5.08) as per Friedman result, which shows the changing attitude and concern towards patients' services by the government hospitals which has to be highly appreciated. No other studies in India have showed this level of satisfaction regarding cleanliness of public hospitals.

In our present study, the respondents were highly satisfied 90% (a mean of 4.50) in injection and dressing room (behaviour, waiting time and cleanliness). Friedman mean rank observation also showed that Inj & dressing ranks first with a mean of (5.28) among all the services which shows the contribution of manpower and concern of the staff nurses towards the patients.

CONCLUSION

Our study indicates that the patients are generally satisfied with hospital facilities. An attempt to evaluate the level of satisfaction with the quality of health services has provided us with certain areas that need corrective efforts to improve hospital services quality. The response of the patients depends upon their socio economic profile and perceptions. Majority of the respondents were from rural area who are illiterates and with low socio economic status that contributes the overall satisfaction. It can be recommended that the hospital management needs to bring out some simple changes to improve amenities like safe drinking water; strengthening infra-structure; providing canteen and telephone facilities inside the hospital premises.

ACKNOWLEDGEMENTS

I thank the respondents for taking part in interview, sharing their experiences and provided their valuable time, my special thanks are due to the Joint Director of Health Services cuddalore District, Gov't of Tamilnadu, Chief Medical officer, Gov't hospital Chidambaram for providing me constant comfort during the course of this study.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Mpinga EK. Patient Satisfaction Studies and the Monitoring of the Right to Health: Some Thoughts Based on a Review of the Literature *Global Journal of Health Science*. 2011;3(1):64-9.
2. 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):1524-35.
3. Kravitz R. Patient Satisfaction with Health Care Critical Outcome or Trivial Pursuit? *J Gen Intern Med*. 1998;13(4):280-2.
4. Arshad S, Andrabi H, Hamid, Shamila, Masooda S. Measuring patient satisfaction: A cross sectional study to improve quality of care at a tertiary care hospital. *East Afr J Pub Health*. 2012;9(1):26-8.
5. Sodani PR, Sharma K. Assessing Patient satisfaction for investigate services at public hospitals to improve quality of services, *National Journal of Community Medicine*. 2011;2(3):404-8.
6. Lal S. *Textbook of Community Medicine*, Third Edition 2011, Chapter 14, Health Management.
7. A Study to review the health care delivery system provided by PHSC, Punjab Health Systems Corporation, India, 2008.
8. Nipun A, Prakash S, Kumar SA, Danish I. Healthcare services Utilization by Geriatric population in Rural Area of District Bareilly, India *Int J Curr Microbiol App Sci*. 2015;4(5):720-7.
9. Kumari R, Idris MZ, Bhushan V, Khanna A, Agarwal M, SK Singh Study on Patient Satisfaction in the Government Allopathic Health Facilities of Lucknow District, India, *Indian Journal of Community Medicine*. 2009;34(1):35-42.
10. Tesfaye H. Statistical Analysis of Patients' Satisfaction with Hospital Services: A Case Study of Shashemene and Hawassa University Referral Hospitals, Ethiopia. Arbaminch University, College of Natural Sciences.
11. Ibrahim A. Patient Satisfaction with Health Services at the Outpatient Department of Indira Gandhi Memorial hospital, Male' Maldives, Thesis Mahidol University, 2008.
12. Dey DK, Mishra V. Determinants of Choice of Healthcare Services Utilization: Empirical Evidence from India, *Indian Journal of Community Health*. 2014;26(04):356- 63.
13. Harnagle R, Vijaysagar T, Binu J. Patient Satisfaction assessment amongst patients in a Multi-speciality Government hospital India. *Int J Curr-Micorbiol app. Sci*. 2014;3(10):1173-82.
14. Sreenivas T, Babu NS. A Study on Three Urban Hospitals in Guntur District, Andhra Pradesh. *Int J Mgmt Res. & Bus. Strat*. 2012;1(1):101-18.
15. Surg Lt Cdr AtharMohd a, Brig Abhijit Chakravarty b, Patient satisfaction with Services of the Outpatient Department, *Medical Journal Armed Forces India*. 2014;237-42.
16. Bodur S, Yusuf E. Outpatient Satisfaction with Health centres in Urban Areas *Turk J Med Sci*. 2002;409-14.

Cite this article as: Saravanakumari AD, Govindarajan PK, Felix AJW, Ethirajan N. Study on utilization of health care services at secondary level setting and satisfaction among out patients. *Int J Community Med Public Health*. 2015;2:388-94.