Original Research Article

Patients' Satisfaction with Diagnostic MRI Services in Teaching Tertiary Care Hospital in Telangana

C. Narender Kumar[1*], B. Ranga Rao[2]

[1]Assistant Professor of Hospital Administration, Govt. Medical College, Nizamabad, Telangana, India
[2]Assistant Professor of Hospital Administration, KIMS, Narketpally, Nalgonda, T.S., India
[*]Corresponding author email:**cnarender24@gmail.com**

International Archives of Integrated Medicine, Vol. 4, Issue 1, January, 2017.

Available online at http://iaimjournal.com/
ISSN: 2394-0026 (P)ISSN: 2394-0034 (O)

Received on: 05-01-2017 **Accepted on:** 10-01-2017
Source of support: Nil **Conflict of interest:** None declared.

How to cite this article: C. Narender Kumar, B. RangaRao. Patients' Satisfaction with Diagnostic MRI Services in Teaching Tertiary Care Hospital in Telangana. IAIM, 2017; 4(1): 85-95.

Abstract

Introduction: The health care industry is undergoing transformation to meet the demands of the patients. Hospitals are shifting from viewing patients as illiterates and with little health care choice, to that of educated consumer who has wider health care choices. Patient satisfaction is regarded as an important indicator of quality of care and survey is one of the tools for measuring consumer experiences in the hospital.

Objective: To study "Patients' perceived satisfaction with diagnostic MRI services" in a Teaching hospital situated in Hyderabad.

Materials and methods: A cross–sectional survey, conducted in 200 respondents attending hospital for MRI investigation. Pilot tested, pre-structured, self-completion questionnaire is used to collect data. The data isanalyzed using SPSS (statistical package for social sciences version 10.0.2).

Results: The result showed that 79% (n=158) were males and 21% (n=42) females. Among two hundred respondents 54 (27%) were outpatients, 77 (38.5%) inpatients of same hospital, 50 (25%) subjects from private nursing homes, 9 (4.5%) patients from other hospitals and 10 persons not responded. Overall 74.5% of the patients satisfied with the waiting time, 80.5%, 77.5% and 86.5% of the patients satisfied with guidance to reach MRI facility, staff behaviour and staff communication respectively. 85.5% opined that utilization of waiting time by providing information regarding MRI is useful, and 62% of them requested to have trained personnel by their side during the procedure.

Conclusion: Hospital administration shall take feedback from patients and their attendants and identify deficiencies and drawbacks in providing services and improve them to their satisfaction which in turn increases indirect publicity of the hospital.

Key words

Patients' Satisfaction Survey, Hospital, Imageology, MRI.

Introduction

The patient is an important person in the hospital and it is the duty of the health care personnel to impart special consideration and attention to augment effective service delivery [1]. MRI investigation is an important diagnostic procedure in the hospital and as a service provider one need to realize the quality and delivery of service, which combines knowledge of customer service and their satisfaction. MRI facility plays a major role in influencing patient satisfaction. In this service the more number of patients and their diverse mix, procedure-related discomforts and phobias and examination types ranging from routine imaging to emergency cases pose unique challenges [2]. Patient satisfaction (PS) is an expression of the gap between expected and perceived attributes of service. It is an important and commonly used indicator for measuring the quality in health care [3]. Patient satisfaction is an attitude. Though it does not ensure that the patient will remain loyal to the doctor or the hospital, it is still a strong motivating factor. Patient satisfaction is only an indirect or a proxy indicator of the quality of hospital performance [4]. Patient evaluation of service and facility are important concepts and quality outcome indicators. It provides an opportunity for improvement such as strategic framing of hospital plans [5]. Rashid Al-Abri and Amina Al-Balushi found that there is no consensus between the literatures on how to define the concept of patient satisfaction in healthcare [5]. In Donabedian's quality measurement model, the patient satisfaction is defined as patient-reported outcome measure while the structures and processes of care can be measured by patient-reported experiences [5].

Patient satisfaction is also defined as the degree of congruency between a patient's expectations of ideal care and his perception of the real care he receives. It is a multi-dimensional aspect, represents a vital key marker for the quality of health care delivery and an internationally accepted factor. Various dimensions of patient satisfaction range from admission to discharge activities, as well as other factors like medical care, waiting time, responsiveness, attitude, clinical skill, comforting skill, amenities, food, etc. When patients are assessing the hospital care they will take consideration of other two dimensions like interpersonal and technical skills of medical personnel [6].

In recent years, studies on patient satisfaction gained popularity. Patients' feedback is providing an opportunity to know unidentified problems that need to be resolved and the chance to health care providers to improve the services in hospital. Patients' satisfaction surveys (PSS) are the medium of expressing dissatisfaction and serve as a tool in communicating the information from patient to Health Care Provider (HCP) in improving service delivery [7]. The important goal of any HCP is to provide customer with quality imageology services in a comfortable vicinity and favourable setting. HCP need to strive for customer feedback and suggestions. Institution-specific questionnaires may be used for PSS to improve quality delivery of service [2].Salazar,et al. found that the most common complaint was failure to provide patient-centered care; most of these complaints could be attributed to issues of organization system and interventional procedures. The key areas for improvement were hospital personnel's interactions with patients, delays in service and waiting time [8]. Waiting time is the total time from registration until consultation with healthcare personnel and also receiving reports. Insufficient number of receptionists, radiologists and radiographers were some of the factors that affect patient's satisfaction with waiting time, as investigations and reports were delayed [1].

Sobechukwu, et al. in their study found that one of the major causes of dissatisfaction of patients

with hospital is waiting time. To improve service delivery and enhance patient satisfaction there is a need to review the registration and other processing steps of the department so as to reduce the waiting time [9]. Correia (2011), Gill and White (2009), Baalbaki, et al.(2008) and others have suggested that the health care provider to focus on patient centred care such as waiting time to schedule an appointment, patient examination and report turnaround time which results in improved patient satisfaction [10-12].

Anthony, et al. (2009) suggested good staff-patient interaction and proper organizational behaviour could improve patients' perception of care. To improve on patients' satisfaction, radiographers have to imbibe the right ethical attitude in their conduct while discharging duties [13]. Augustine Obi Okar (2015) found that there is a need for improved ethical/professional conduct of radiographers and general service delivery in the radiology departments of the hospitals to enhance patient satisfaction [14].Ogbonnia Godfrey Ochonma, et al.(2016) suggested customer relations are sources of dissatisfaction. Providers of health care services and radiographers in particular need special orientation in customer relations to foster good patient satisfaction strategies [15].Whitney L. Jackson (2012) in his article revealed that James Lipcamon, out-patient imaging services manager for East Cooper Medical Centre in Mt. Pleasant, SC, "*patient satisfaction is a big deal for today's radiologists, both in the hospital and private imaging centre setting. For any patient coming into a hospital setting or an imaging centre, they already expect our competency. That's not what they're mainly concerned about; they're looking for the warm fuzzies*," he said. "*And, if you're in a competitive market, patient satisfaction is critical because word-of-mouth drives a lot of health care business. Someone has a bad experience with you, they'll tell 10 people. If they have a good one, they'll tell three or four* [16]." Patients satisfaction usually echo their perception of the health care offered as well as the process of giving that care, compared to their expectations. Deficits in research in radiography may restrict the chance to improve patient services. PSSs may provide the means for patients to express concerns about the services received, and to express their views about new services that are needed [17].This study sought to investigate patients' satisfaction with diagnostic MRI (Imageology) services in a hospital in the Telangana Region and in doing that it sought to achieve these purposes, first the anticipation was that the outcome of this study will help the hospital management in the field of diagnostic MRI, the information on the state of satisfaction or dissatisfaction of patients with MRI services. It was also expected that the study will equip the entire MRI team with knowledge on improving upon services offered to meet their patients' needs. The final expectation was the study could help hospital management in policy and decision-making to plan and implement programs that meet the expectations and needs of their patients.

Materials and methods

Setting and study design

A cross-sectional survey was conducted in a tertiary care hospital situated in Hyderabad after obtaining ethical committee approval. This hospital is a research and medical postgraduate and super specialty teaching and training centre and has an operational strength of 946 beds with 27 departments. Patient satisfaction was measured by a validated questionnaire with following domains: demographic data, education, profession, income, employment, referring doctors, guidance to reach the facility, reception at registration, location, presence of trained persons during the procedure, time taken for the investigation, time taken to receive the report, the cost of investigation, communication of staff, maintenance of toilets, staff behaviour, availability health education or procedure brochures during the waiting time, canteen services, facility complaints, conveyance of wheelchair, trolleys, signage, unpleasant or pleasant experience in hospital and suggestions about the improvement of the MRI facility. Data

collected and analyzed by using a computer programme.

Opinion Survey

The well-designed, pilot tested, structured questionnaire was the tool for data collection. It was distributed to 200 subjects selected randomly and their opinions regarding the various aspects of the MRI facility and their impressions were collected and analyzed with statistical tools**.**

Data Collection

The subjects are defined as 'all patients and their relatives in the age group from 15 to 65 years who were attending the Imageology department for MRI investigation'. On the basis of previous studies of patient satisfaction in radiology units and using an appropriate statistical formula for estimating minimum sample size in descriptive health studies (n=Z pq/d), a sample size of 200was calculated to detect level of satisfaction among the study participants. The prevalence used for sample size calculation was 80%. The sample size was inflated by 10% to take care of non-response, incomplete responses and refusals. A simple random sample of 200 people considered for interviewing. Written permission was obtained from the hospital authority and informed verbal consent was taken from every respondent.

Selection and preparation of the interviewees

As the sample group consisted of people from different cross-sections of the society with highly variegated social, cultural and economical backgrounds, well-planned and rehearsed personal interaction had to be used to win their confidence. The interviewees were asked to complete the survey questionnaire; the purpose of survey was explained to them.

Statistical analysis

Statistical product and service solutions (SPSS) 10.0.2 version software was used for statistical analysis. Results were analyzed statistically using percentage, proportions and Chi-square test. If *p*-value will be equal or less than 0.05 the observed difference was considered to be statistically significant.

Results

The demographic characteristics of the study are shown in **Table - 1**. Out of 200 respondents 79% (n=158) were males while 21% (n=42) were females, out of these 4% (n=8) were below 20 years of age, while between age 20 to 30 years were 23.5% (n=47), 30-40 years were 18 % (36), 40-50 years were18 % (n=49) and above 50 years were 28.5% (n=57) and while 3 persons have not revealed their age. Of respondents, 19.5% (39) had primary education, 28% (56) had secondary education, 17% (34) had higher secondary education, 22% (44) had graduation, 8.5% (17) had post-graduation and ten persons not revealed their educational status. Among two hundred respondents, 54 (27%) patients were recommended by outpatient department consultants, while 77 (38.5%) patients were inpatients, 50 (25%) patient were referred from private nursing homes, 9 (4.5%) patients were from other hospitals and 10 persons did not responded, **Figure - 1**.

Response of study group regarding their opinions of MRI facility in hospital is tabulated in **Table - 2**.Overall 74.5% of the patients were satisfied with the waiting time and services, while the remaining 16.5% were dissatisfied and 9% did not comment. Specifically 80.5%, 77.5% and 86.5% of the patients were satisfied with, received guidance to reach MRI facility, staff behaviour and staff communication respectively. 85.5% opined that the health education is useful during the waiting period and 62% of them opined that to have trained personnel by their side during the procedure. Association between socio-demographic variables like age and other independent variables is shown in **Table - 3**, men and women and other independent variables is shown in **Table - 4** and different educational groups against independent variables is shown in **Table - 5**.

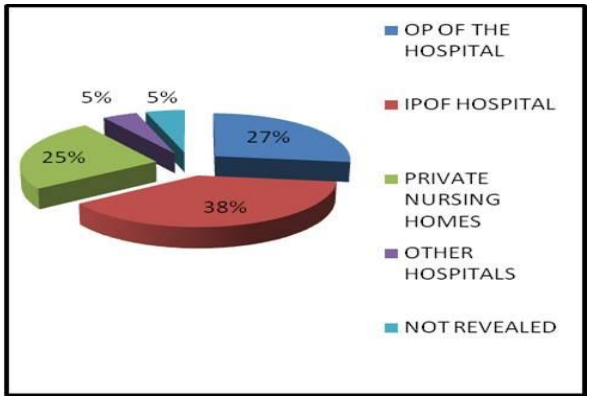
Discussion

Information collected and analyzed from the questionnaire is critical for effective decision making for hospital administrators, and is an important tool to enhance the patient satisfaction in turn increases the revenue of any investigation facility. Two hundred questionnaires were completed, collected and used in the analysis of data.

Table - 1: Socio-demographic characteristics of the study population (*n*=200).

Category	Frequency	Percentage
Gender		
Male	158	79
Female	42	21
Age(in years)		
<20	8	4
20-30	47	23.5
30-40	36	18
40-50	49	24.5
>50	57	28.5
Not responded	3	1.5
Education		
Primary school	39	19.5
10th class	56	28
Intermediate	34	17
Graduation	44	22
Post-graduation	17	8.5
Not responded	10	5
Residence		
Urban	94	47
Rural	93	46.5
Not responded	3	1.5
Religion		
Muslims	15	7.5
Christians	13	6.5
Hindus	158	79
Others	4	2
Not responded	10	5
Monthly income(INR)		
<1000	34	17
Up to3000	57	28.5
Up to 5000	42	21
Up to 10000	18	9
Not responded	68	24.5
Employment		
Government	61	30.5
Private	35	17.5
Self employed	12	6
Agriculture	24	12
Retired	12	6
Labor	19	9.5
Business	5	2.5
Other professionals	16	8
Not responded	16	8

Figure – 1: Distribution of patients.



In the present study, more than half of the respondents were males 79% (n=158) signifying that more males participated in the study. The respondents in the age group of 40-50 years 24.5%, (n=49), while the least were within the age group of 20 to 30 years 23.5% (n=47) this could be because most of these age people were referred for MRI. Among two hundred respondents 27% (n=54) outpatients and 38.5% (77) inpatients of same hospital, remaining patients were referred from other hospitals. To improve further referrals, this hospital needs further marketing of their services. The Chi-square test calculated between the age groups and the opinion about receiving guidance to reach the MRI facility, the significant difference was found between above two variables and the x^2score is 10.49 and (p = 0.0329), the Chi-square test between the educational groups and the opinion about receiving guidance to reach the MRI facility, significant difference was found, the x^2score is 12.44 and (p =0.002). Among two hundred respondents 80.5% (n=161) persons

received guidance. Chi-square test between the age groups and the difficulty in reaching MRI facility, the significant difference was found and x^2score is 14.11 and (p = 0.0009), 61.5% (n=123) persons felt that the signboards were adequate to show the direction, 84% (n=168) people located MRI facility. Few personnel are required in hospital to guide the people to reach MRI facility.

Table - 2: Results of Survey Questionnaire.

Sr. No.	Questionnaire	Yes	No	Not commented
1	Receiving guidance to reach MRI facility	80.50%	16%	3.50%
2	Opinion about the reception at the Registration Counter of MRI facility	76%	10%	14%
3	Locating MRI by themselves	84%	12%	4%
4	Presence of Trained personnel during the procedure of MRI investigation	62%	22%	6%
5	Opinion about the time taken for the MRI investigation, reasonable	82%	8.50%	9.50%
6	Opinion about the time taken to receive the report, reasonable	54.50%	11.50%	34%
7	Opinion about the Cost of investigation, reasonable	68.50%	22%	9.50%
8	Opinion about the staff communication with the persons and patients	86.50%	4.50%	9%
9	Opinion about the maintenance of toilets	64%	19.50%	16.50%
10	Opinion about the staff behaviour with the patients and relatives**:**	77.50%	9.50%	13%
11	Opinion about the waiting time is reasonable or not	74.50%	16.50%	9%
12	Opinion about the necessity of Health Education during the waiting time	85.50%	8.50%	6%
13	Whether they found any Health Education Material/Pamphlets at the waiting place	34.50%	54.50%	11%
14	Opinion about knowing the procedure before MRI investigation	87.50%	5.50%	7%
15	Opinion regarding the canteen services at MRI premises	63.50%	29.50%	7%
16	Opinion about any complaint against MRI	8.50%	79.50%	12%
17	Opinion about the satisfaction with conveyance of wheel chairs or trolleys	60%	17.50%	22.50%
18	Opinion about the signboards were adequate to show the direction MRI	61.50%	30%	8.50%
19	Opinion about presence of any unpleasant experience in the Hospital	11%	31%	58%
20	Opinion about presence of any pleasant experience in the Hospital	20%	20%	60%
21	Opinion about giving suggestion to improve the MRI facility	17.50%	18.50%	65%

The Chi-square test between the gender and the opinion about the time taken for MRI investigation, the significant difference was found and x^2score is 6.38 and (p = 0.0116). 82% (n=164) opined that the time taken for the MRI investigation was reasonable. Out of respondents 54.5% (n=109) persons felt that the time taken to receive the report was reasonable.

The Chi-square test calculated between the educational groups and the opinion about accompanying the trained person during the procedure, the significant difference was found and x^2score is 11.017 (p=0.0264).The study revealed that 62% (n=124) patients were accompanied by trained personnel during procedure, the hospital management to see that

one trained person shall accompany each patient during the procedure.

Table - 3: Statistical analysis of obtained data tested with Chi-Squared test age and other independent variables tested.

Sr. No.	Independent variables	p-value	Conclusion
1	Different categories of doctors recommending MRI investigation	0.0611	Accept
2	Receiving guidance to reach MRI facility	0.0329	**Reject**
3	Opinion about reception	0.6249	Accept
4	Difficulty in reaching MRI facility	0.0009	**Reject**
5	Trained personnel during procedure	0.8617	Accept
6	Time taken for MRI Investigation	0.4628	Accept
7	Time taken in receiving report	0.3061	Accept
8	Opinion about the cost of investigation	0.651	Accept
9	Opinion about staff communication	0.0247	**Reject**
10	Opinion about maintenance of toilets	0.053	Accept
11	Opinion about staff behaviour with patient and relatives	0.0144	**Reject**
12	Opinion about the waiting time	0.0152	**Reject**
13	Opinion about health education during waiting time	0.4595	Accept
14	The finding of health education material at the waiting area	0.5209	Accept
15	Necessity about knowing the procedure before investigation	0.0885	Accept
16	Necessity about Canteen services	0.2186	Accept
17	Wishing to a lodge complaint about MRI	0.4267	Accept
18	Satisfaction about conveyance of wheel chairs and trolleys	0.7975	Accept
19	Opinion about signboards to direct to MRI	0.5351	Accept
20	Opinion about unpleasant experience	0.002	**Reject**
21	Opinion about pleasant experience	0.549	Accept
22	Suggestions	0.421	Accept
SCV – Statistic Calculated Value			

The Chi-square test calculated between the age groups and opinion about the staff communication the significant difference was found and x^2score is 7.4 and (p=0.0247), between the educational groups and opinion about the staff communication, the significant difference was found and x^2score is 8.94 and (p=0.0028), 86.5% (n=173) persons felt that the staff communicated well with them.

The Chi-square test statistic calculated between the age groups and the opinion about the staff behaviour with patient and relatives the significant difference was found and x^2score is 12.43 and (p=0.0144). The Chi-square test calculated between the educational groups and the opinion about the staff behaviour with patient and relatives: the significant difference was found and x^2score is 16.39 and (p=0.0026). 77.5% (n=155) persons opined that the staff behaviour was good.

The Chi-square test calculated between the educational groups and the opinion about the conveyance of wheel chairs or trolleys the significant difference was found and x^2score is 18.8 and (p = 0.0088). Among two hundred respondents 60% (n=120) persons were satisfied with conveyance of wheel chairs and trolleys.

The Chi-square test calculated between the educational groups and the maintenance of toilets the significant difference was found and x^2score is 16.12 and (p=0.0132), 64% (n=128) persons said that toilets were maintained well. The maintenance of toilets is perishable service hence continuous maintaining of this service is required to get maximum satisfaction.

Table - 4: Statistical analysis of obtained data tested with Chi-Squared test Men and Women tested against different independent variables.

Sr. No.	Independent variables	p-value	Conclusion
1	Different categories of doctors recommending MRI investigation	0.0292	**Reject**
2	Receiving guidance to reach MRI facility	0.7542	Accept
3	Opinion about reception	0.518	Accept
4	Difficulty in reaching MRI facility	0.8065	Accept
5	Trained personnel during procedure	0.7558	Accept
6	Time taken for MRI Investigation	0.0115	**Reject**
7	Time taken in receiving report	0.2102	Accept
8	Opinion about the cost of investigation	0.9436	Accept
9	Opinion about staff communication	0.4552	Accept
10	Opinion about maintenance toilets	0.7707	Accept
11	Opinion about staff behaviour with patient and relatives	0.2661	Accept
12	Opinion about the waiting time	0.8479	Accept
13	Opinion about health education during waiting time	0.2712	Accept
14	The finding of health education material at the waiting area	0.4404	Accept
15	Necessity about knowing the procedure before investigation	0.6538	Accept
16	Necessity about Canteen services	0.6603	Accept
17	Wishing to a lodge complaint about MRI	0.6035	Accept
18	Satisfaction about conveyance of wheel chairs and trolleys	0.1661	Accept
19	Opinion about signboards to direct to MRI	0.7298	Accept
20	Opinion about unpleasant experience	0.4771	Accept
21	Opinion about pleasant experience	0.7408	Accept
22	Suggestions	0.3985	Accept
SCV – Statistic Calculated Value			

The Chi-square test calculated between the age groups and the opinion about the unpleasant experience in the hospital the significant difference was found and x^2score is 20.79 and (p=0.002), between the educational groups and the opinion about the unpleasant experience in the hospital the significant difference was found and x^2score is 19.02 and(p=0.0042), among the two hundred respondents 8.5%(n=17) persons were complained against MRI service,11% (n=22)persons faced unpleasant experience in the hospital. The hospital management shall take care of complaints of people and there should be a proper redressal system in hospital.

The Chi-square test statistic calculated between the educational groups and the opinion about the necessity about knowing the procedure before investigation the no significant difference was found and x^2score is 1.05 and(p=0.5916). Out of total respondents 87.5% (n=175) persons said that they wish to know the procedure before MRI, which was not informed to them. In the present study 87.5%(n=175) of subjects had no experienced diagnostic MRI in the past to base their expectation upon and they wished to know the procedure and these findings were similar to the study of Kofi AdesiKyei (2016), where most patients who were referred for radiological examinations had no idea of what they may encounter and what the examination may involve [17].

The Chi-square test calculated between the educational groups and the opinion about the Health Education during waiting time the significant difference was found and x^2score is 8.82 and (p = 0.0122), among the two hundred subjects 85.5%(n=171) persons opined that the health education is necessary during the waiting

period, and brochures, pamphlets are required at the waiting point. The study revealed that 54.5% (n=109) respondents not found any brochures or health education materials to know the procedures and 87.5%(175) persons opined to know the procedure during waiting period. Patients scheduled for MRI examinations could therefore be provided with brochures or materials that may help educate them regarding the procedure which in turn reduces patients' fear and anxiety and these findings were similar to the study of Kofi AdesiKyei [17].

Table - 5: Statistical analysis of obtained data tested with Chi-Squared test: different educational groups are tested against different independent variables.

Sr. No.	Independent variables	p-value	Conclusion
1	Different categories of doctors recommending MRI investigation	0.2465	Accept
2	Receiving guidance to reach MRI facility	0.002	**Reject**
3	Opinion about reception	0.8019	Accept
4	Difficulty in reaching MRI facility	0.8065	Accept
5	Trained personnel during procedure	0.0264	**Reject**
6	Time taken for MRI Investigation	0.2578	Accept
7	Time taken in receiving report	0.3497	Accept
8	Opinion about the cost of investigation	0.6108	Accept
9	Opinion about staff communication	0.0028	**Reject**
10	Opinion about maintenance of toilets	0.0131	**Reject**
11	Opinion about staff behaviour with patient and relatives	0.0025	**Reject**
12	Opinion about the waiting time	0.8615	Accept
13	Opinion about health education during waiting time	0.0122	**Reject**
14	Finding of health education material at the waiting area	0.1165	Accept
15	Necessity about knowing the procedure before investigation	0.5916	Accept
16	Necessity about Canteen services	0.3916	Accept
17	Wishing to a lodge complaint about MRI	0.2014	Accept
18	Satisfaction about conveyance of wheel chairs and trolleys	0.0088	**Reject**
19	Opinion about signboards to direct to MRI	0.3414	Accept
20	Opinion about unpleasant experience	0.0041	**Reject**
21	Opinion about pleasant experience	0.0041	**Reject**
22	Suggestions	0.0031	**Reject**
SCV – Statistic Calculated Value			

The Chi-square test statistic calculated between the age groups and the opinion about the waiting time the significant difference was found and x^2score is 12.31 and(p=0.0152). The Chi-square test statistic calculated between the educational groups and the opinion about the waiting time, no significant difference was found and x^2score is 1.9094 and (p=0.8615). 74.5% (n=149) persons opined that the waiting time was reasonable. Holbrook, et al.,(2016) in their study found thatperceived and actual times were compared and correlated with standardized satisfaction scores using Kendall τ correlation. The mean actual wait time between patient arrival and examination start was 53.4 ± 33.8 min, whereas patients perceived a mean wait time of 27.8 ± 23.1 min, a statistically significant underestimation of 25.6 min (P < .001). Both shorter actual and perceived wait times of patients were correlated with higher satisfaction scores. As satisfaction of people play a larger role in any environment, the hospital management shall introduce amicable measures in hospital to augment patients' satisfaction [18].

The Chi-square test calculated between the educational groups and the opinion about the suggestions to improve MRI facility the significant difference was found and x^2score is 18.64 (p=0.0031), 17.5% (n=35) persons gave their suggestion towards the improvement of MRI facility. There was no kiosk at MRI facility and 63% (n=127) persons felt that a kiosk service is necessary. 68.5% (n=137) persons felt that it was the costly investigation. The hospital administration shall take necessary steps to improve ambience at MRI facility and same to introduce cost containment measures and also to reduce the price of MRI investigation.

Conclusion

This study results show that the MRI services radiology department is moving in the right direction with respect to patient satisfaction. The success of a Medical Institute lies in solving critical medical problems and attending organization's operations and managerial issues like public and clientele relations and incorporating feedback and complaints for necessary improvements in the system .The physical facilities of the Unit are conducive for the patients and their attendants. The opinion survey resulted in the conclusions that majority of persons found difficulty in reaching MRI, a few persons told that the time taken for receiving report is more and the presence of trained person during the procedure is required. Availability of the health literature for the general public is very necessary in the waiting area. More direction signboards are required. Most of the respondents gave suggestions for changes in appointment procedures for reduction in waiting time, for MRI procedure and reporting time.

Research Limitations

Sample size (n=200) may affect the degree of results generalization. Research restricted to respondents only but there are many other patients who attend the Imageology department. Two respondents were not answered all questions but all questionnaires were received. Because of literacy status of respondents some of the questions were not answered.

References

1. Nwobi IC, Luntsi G, Ahmadu MS, Nkubli FB, Kawu HD, Dauda F, Moi AS, Abubakar GM, Tahir MB. The Assessment of Patients' Perception and Satisfaction of Radiology Waiting Time in University of Maiduguri Teaching Hospital. Kanem Journal of Medical Sciences, 2014;8(1):19-26:
2. Lang EV, William TCY, Kelly R, Macadam L, Richard P, Nina AM. Understanding Patient Satisfaction Ratings for Radiology Services. American Journal Roentgenology, 2013; 201(6): 1190-1196.
3. Prakash B. Patient Satisfaction. Journal of Cutaneous and Asthetic Surgery, 2010; 3(3): 151-155.
4. Tabbish S. Hospital and Health Services Administration Principles and Practice; Oxford: Oxford University Press; 2001, p. 699.
5. Rashid AA, Amina AB. Patient Satisfaction Survey as a Tool Towards Quality Improvement. Oman Medical Journal, 2014; 29(1): 3-7.
6. Qadri SS, Pathak R, Mukhmohit S, Ahluwalia SK, Shveta 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(2): 1524-37.
7. Kofi AK, Antwi WK, Brobbey PK. Patients' Satisfaction with Diagnostic Radiology Services in two Major Public and Private Hospitals in Ghana. International Journal of Radiology &Radiation Therapy, 2016; 1(1).

8. Salazar G. Quencer K, Aran S, Abujudeh H. Patient satisfaction in radiology: qualitative analysis of written complaints generated over a 10-year period in an academic medical center. Journal of American College of Radiology, 2013 Jul; 10(7): 513-7.
9. Sobechukwu W, Onwuzu I, Mabel C, Ugwuja, Thomas A. Assessment of Patient's Waiting Time in the Radiology Department of a Teaching Hospital. ARPN Journal of Science and Technology, 2014; 4(3): 183-186.
10. Correia EW, JD, MP. Accountable care organizations: the proposed regulations and the prospects for success. The American Journal of Managed Care, 2011; 17(8): 560–568.
11. Gill L., White L. A critical review of patient satisfaction. Leadership in Health Services, 2009; 22(1): 8–19.
12. Baalbaki I, Ahmed ZU, Pashtenko VH, Makarem S. Patient satisfaction with healthcare delivery systems. International Journal of Pharmaceutical and Healthcare Marketing, 2008;2: 1.
13. Anthony C U, Samuel L S, Felix E. Patients' perception of care during special radiological examinations. African Journal of Primary Health Care & Family Medicine, 2009; 1 (1): 3.
14. Augustine Obi Okaro. Patients' reaction to the ethical conduct of radiographers and staff services as predictors of radiological experience satisfaction: a cross-sectional study, 2015.http://bmcmedethics.biomedcentral.com/articles/10.1186/s12910-015-0062-4 (20-11-2016)
15. Ogbonnia GO, Charles U E, Soludo B E. Differentials in patients' satisfaction with routine radiological services: A cross-sectional study in a developing country. African Journal of Bussiness Management, 2016; 10(18): 429-439.
16. Whitney L J. Why Patient Satisfaction Matters for Radiology. Psychiatric Times November 05, 2012. file:///C:/Users/User/Downloads/Psychiatric_Times_Why_Patient_Satisfaction_Matters_for_Radiology_-_2013-06-19.pdf
17. Kofi AK, Antwi WK, Brobbey PK. Patients' Satisfaction with Diagnostic Radiology Services in two Major Public and Private Hospitals in Ghana. International Journal of Radiology and Radiation Therapy, 2016; 1(1).
18. Holbrook A, Glenn H Jr, Mahmood R, Cai Q, Kang J, Shorter. Duszak R Jr. Perceived Outpatient MRI Wait Times Associated With Higher Patient Satisfaction. Journal of the American College of Radiology, 2016; 13(5): 505-509.