



## Patients Satisfaction using SERVQUAL model: A study of Geta Eye Hospital, Nepal

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**Abstract :** Every healthcare organization strives to provide quality healthcare services. There is no doubt that all healthcare organizations provide the same kinds of healthcare services, but it depends on the system of service delivery and the quality of healthcare services. As consumers' demands and needs continue to rise, healthcare providers are transforming their services as well. The study was conducted at Geta Eye Hospital, Dhangadhi, Nepal, which is affiliated with Nepal Netra Jyoti Sangh (NNJS) – a non-profitable organization providing eye care services throughout Nepal. "The SERVQUAL model developed by Parasuraman et al. (1988) is used to assess patient satisfaction by observing five quality dimensions (Reliability, Responsibility, Assurance, Empathy, and Tangibility)"(1) at Geta Eye Hospital. According to Hospital data from 2015 to 2019, the number of patients from neighboring districts of India accounted for 46.04% (Male 49.20%/Female 50.80%) and Nepali Patients accounted for 53.96% (Male 48.76% /Female 51.24%) of the total patients. During the study, the target patients were interviewed to determine how they perceive the Hospital's service facilities and their expectations from them.

**Index Terms –** Quality healthcare, SERVQUAL, NNJS, Expectation, Perception, .

### I. INTRODUCTION

It is widely agreed that safety and reliability, effectiveness and efficiency, patient-centered, timely, affordable, and equitable are the major domains of quality health care services. A quality of care can be defined as the grade to which a health service can advantage to the desired health outcomes for individuals and populations.

"Under the umbrella of Nepal Netra Jyoti Sangh, Geta Eye Hospital was founded in 1981 with the financial support of NORAD, Norway. This is non-profitable, service-oriented, and social organization providing preventive, curative, and pro-motive eye care service in Sudurpashchim Province (than Far-Western Region) covering nine districts." <sup>1</sup> The Sudurpashchim Province has a population of 2.53 million people, <sup>2</sup> many of whom receive eye care services directly or indirectly from Geta Eye Hospital. For the purposes of making easy excess to the needy people, the hospital conducts free surgical eye camps and diagnostic, DST camps (screening and treatment) in remote areas. There is also a good excess of patients from neighboring states such as Uttar Pradesh and Uttaranchal in Northern India in the hospital.

A total of 501,331 patients were enrolled in the OPD between 2015 and 2019 (51% females, 49% males), resulting in a higher percentage of female patients. Out of these numbers, 54% are Nepalese and 46% are Indians. From 2015 to 2019, the hospital has performed 113,812 cataract surgeries (49 percent males and 51 percent females). Among the 113,812 operations, only 20 percent of the patients are Nepalese, while 80 percent are Indians.<sup>3</sup>

<sup>1</sup> Nnjs.org.np. 2022. *Nepal Netra Jyoti Sangh | Eye Hospital*. [online] Available at: <<https://nnjs.org.np/eye-hospital-detail/geta-eye-hospital>> [Accessed 14 May 2022].

<sup>2</sup> Sthaniya.gov.np. 2022. □□□□□□ □□. [online] Available at: <<https://sthaniya.gov.np/gis/>> [Accessed 14 May 2022].

<sup>3</sup> Hospital Data

Geta Eye Hospital has made an excellent reputation for delivering quality services to its patients. In order to maintain high quality service, a few important aspects need to be maintained such as timely delivery of service, the provision of quality care, the expansion of accessibility, and the reduction of cost. However, there are many factors to consider such as the patient's behavior, their choice, their satisfaction, and their negative perceptions.(2)

The study was conducted in Geta Eye Hospital using SERVQUAL, a tool that assesses service quality (SQ). (Service Quality is closely related with Costs (Crosby, 1979), profits (Buzzell and Gale, 1987; Rust and Zahorik, 1993; Zahorik and Rust, 1992), customer satisfaction (Bolton and Drew, 1991; Boulding et al., 1993), customer retention (Reichheld and Sasser, 1990), and positive word of mouth)(3).

## II. NEED OF THE STUDY

A patient-centered approach is the best approach for delivering quality health care to every health care institution. The patients-centered approach is concerned with different aspects of service quality, such as: Reliability, Responsiveness, Assurance, Empathy, and Tangibility. Such studies are very helpful in understanding the perception and values of patients, and also in improving the quality of service in order to increase the hospital's service facilities.

## III OBJECTIVE

### Primary Objective

The objective of the study was to identify the satisfaction level and the perception of the patients towards hospital service.

### Specific Objective

- To measure different level of patient satisfaction using SERVQUAL model questionnaire.
- To suggest hospital management team for further improvement.

## IV SCOPE OF THE SERVICES

There are many eye hospitals under NNJS that are located near the Indian border. Apart from that, there are also many other private hospitals which are increasing in the fastest growing trend in Nepal. Health care industries have become more competitive due to new technology in the workplace, multi-subspecialty services, and shorter waiting times and quick service. The purpose of the study is to find out the level of satisfaction of patients, to see how a hospital provides eye care services to its patients, and to get feedback from them about the quality of the services they receive at that specific hospital. This study will add valuable information to the hospital management team's efforts to further improve the hospital's service quality and many other things related to patient satisfaction and service quality.

## V RESEACH METHODOLOGY

The research method is descriptive in nature with qualitative and quantitative research approach. The research is based on the SEVQUAL model of Parasuramn et al. (1998). The respondents respond are taken with direct interview approach. Descriptive type study will support to find specific expectation and feedback of patients. Five points likert scale (Highly Satisfied, Satisfied, Neural, Dissatisfied and Highly Dissatisfied) are used to generate data.

## VI POPULATION AND SAMPLE

This study was conducted on a population of 100 consecutive patients who visited Geta Eye Hospital on different dates within the study period. The sample is taken from patients who have been operated on, re-visited, and treated in an OPD.

## VII RESEARCH TOOLS

Research tools are divided into three parts such as Personal Profile, General Information and Patients satisfaction regarding service quality to assess patients satisfaction.(3)

## VIII DATA COLLECTION

The data was collected by two volunteers. The data was collected through direct interview using a structured questionnaire. To get their proper response, the questionnaire was translated from English into Hindi and Nepali.

## IX STATISTICAL ANALYSIS

The data were analyzed using SPSS software to discern the reasons behind the perceived satisfaction level.

## X LITERATURE REVIEW

R.Khandekar, S. Devi, R. Sachan et.al. (2011) cited in their research paper that patients' satisfaction survey is very important to the accountability and strengthening of health care service, so that a better management system and quality health care service can be implemented.(4)

S.Qadri, R.Pathak Dr., M.Singh et.al. (2012) have indicated in their research paper that in order to have an effective hospital administration, it is important that the patients and attendants provide feedback by denoting various shortcomings or flaws that they find to be common to the hospital services, which will result in a positive outcome of improving the hospital services to the pleasure of the patients.(5)

T. Aghamolaei, T.Eftekhaari, S Rafati et al. (2014) have discussed on when there is a gap in service quality dimensions, the hospitals do not meet all of their patients' expectations. As a result, in order to bridge the gap between patients' views and expectations, the improvement actions should be aggressively implemented.(6)

I. Ezegwui, O. Okaye, A.Aghaji et al. (2014) have focused on the quality of care provided by the hospital, the quality of the infrastructure, the quality of the training, and the operating system of the hospital itself. According to their study, the main tool for achieving patient satisfaction is understanding how patients perceive you and how you perform, as well as how you handle them, especially politeness in your service. Several studies have shown that physical comfort, emotional support, and patient preference are the major factors that affect patient satisfaction with medical care. There are a number of factors that influence the overall satisfaction of patients, including medical aspects such as the outcome of the treatment, advancements in technology, as well as nontechnical aspects such as the behavior of nurses and the cleanliness of the hospital. Another major reason for dissatisfaction is long waiting times. In order to strengthen and sustain hospitals, regular surveys of patient satisfaction should be conducted. Using the survey report, the administrator can identify any gaps between hospital service and patient satisfaction.(7)

Bahadori, Mohammedkarim, Teymourzadeh, et.al. (2016)" have emphasized that when planning a hospital and a health care organization, patient's preferences and demands need to be taken into account in order to make the hospital and health care organization the right fit for the patient. As far as patients are concerned, two of the major factors affecting their choice of medical facility are the "physicians and employees" and "the clinical environment". They found that these two factors need to be strategically taken into the most priority in order to maintain the level of choice that patients have towards the hospitals".(8)

B. Abdi, D. Salman et.al. (2017) conducted a study where they found that there was a higher level of satisfaction in the nursing care and a minimum level of satisfaction in the discharge plan. There were only inpatients included in the study, but the researchers have suggested to do more research on different departments and also other sectors like transportation, psychological support, the waiting time for admission and the behavior of the

staff in different parts of the hospitals. It was also suggested to the Ministry of Health that they should work on the results of the research work to improve the weak areas of the health care system. It was suggested to take inputs from patients, guardians, make a poster in order to make patients aware of the rights and responsibilities of patients. (9)

Ranjan Karn Rajiv (2018) has conducted a study to determine the satisfaction level of patients at Biratnagar Eye Hospital in Nepal. An assessment of the health care service was done from the perspective of the patients in order to identify areas of potential problems and to identify ways of resolving them as early as possible. Due to an increase in the number of eye hospitals, the patients have many opportunities to get eye care services. This is good for the hospital because they will be able to concentrate on quality of care and ensure that the patients are satisfied with their care. The study found that the more satisfied patients not only received eye care in the same hospital in the future, but also supported the hospital in catering to other patients.(10)

## XI DATA ANALYSIS

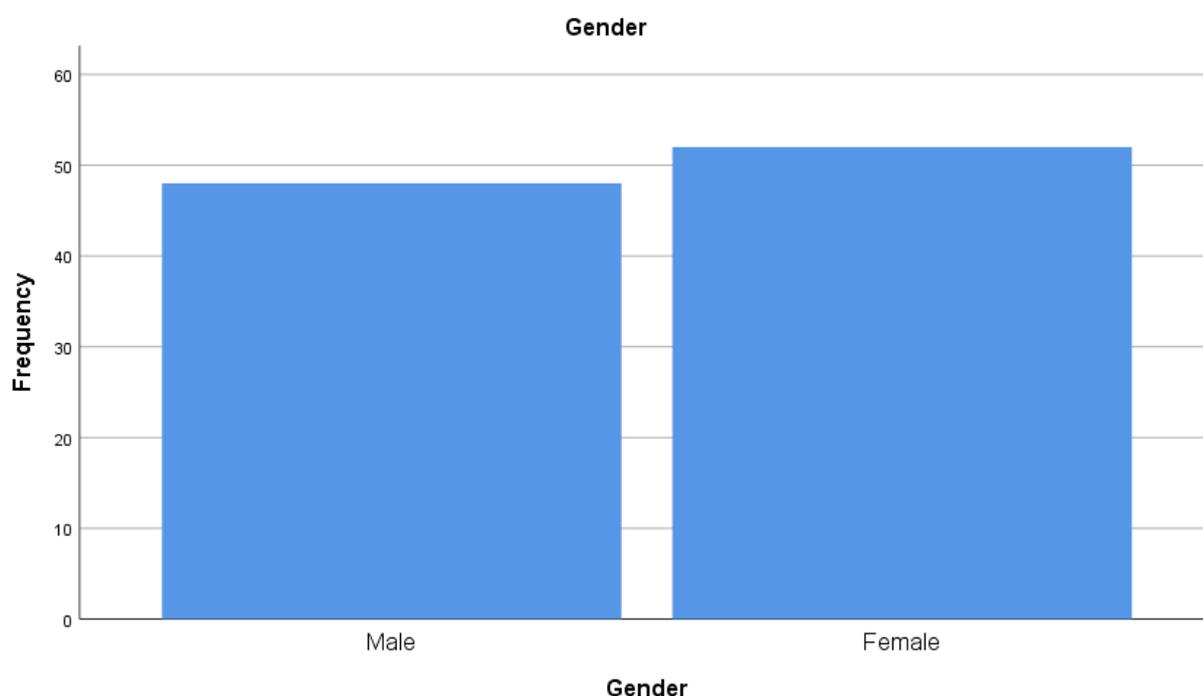
Using the IBM-SPSS software, data were analyzed and interpreted based on the results obtained from the research. In this study, descriptive statistics such as frequencies and percentages were used to determine the outcomes.

## XII RESULT AND DISCUSSION

Personal profile of the respondents.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	48	48.0	48.0	48.0
	Female	52	52.0	52.0	100.0
	Total	100	100.0	100.0	

(Table-1)

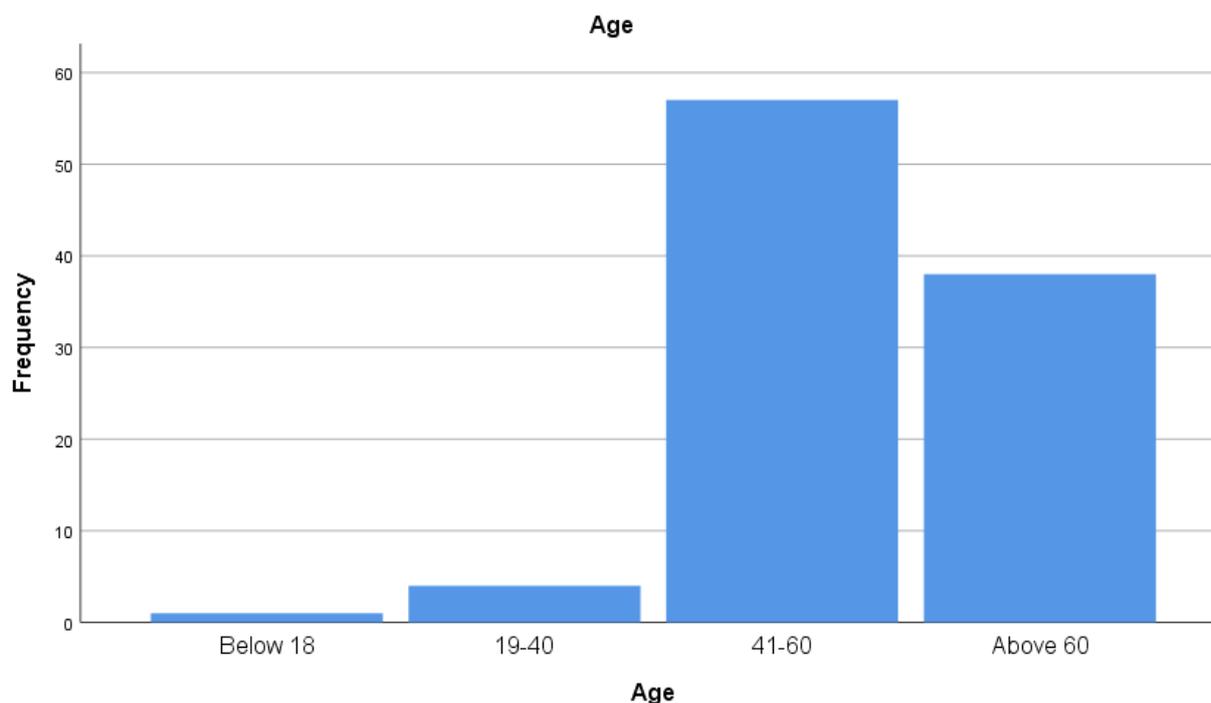


(Graph-2)

Out of 100 respondents, there was a higher percentage of females (52%) than males (48%).

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 18	1	1.0	1.0	1.0
	19-40	4	4.0	4.0	5.0
	41-60	57	57.0	57.0	62.0
	Above 60	38	38.0	38.0	100.0
	Total	100	100.0	100.0	

(Table-2)

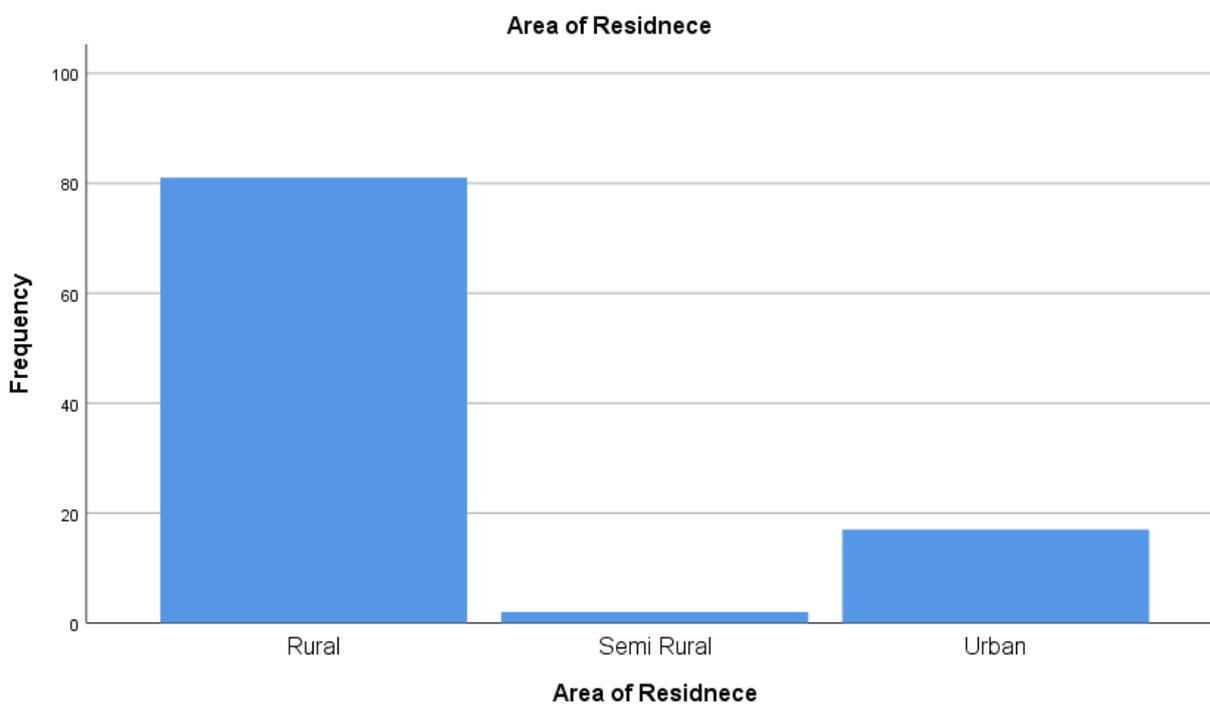


(Graph-2)

According to the results of the study, over the course of the study period, we observed that a greater number of individuals fell into the 41 to 60 age group, followed by those who fell into the 60 and older age group than those who fell into the 19 to 40 age group, and there were very few individuals in the 18 and under age group.

Area of Residence					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rural	81	81.0	81.0	81.0
	Semi Rural	2	2.0	2.0	83.0
	Urban	17	17.0	17.0	100.0
	Total	100	100.0	100.0	

(Table-3)

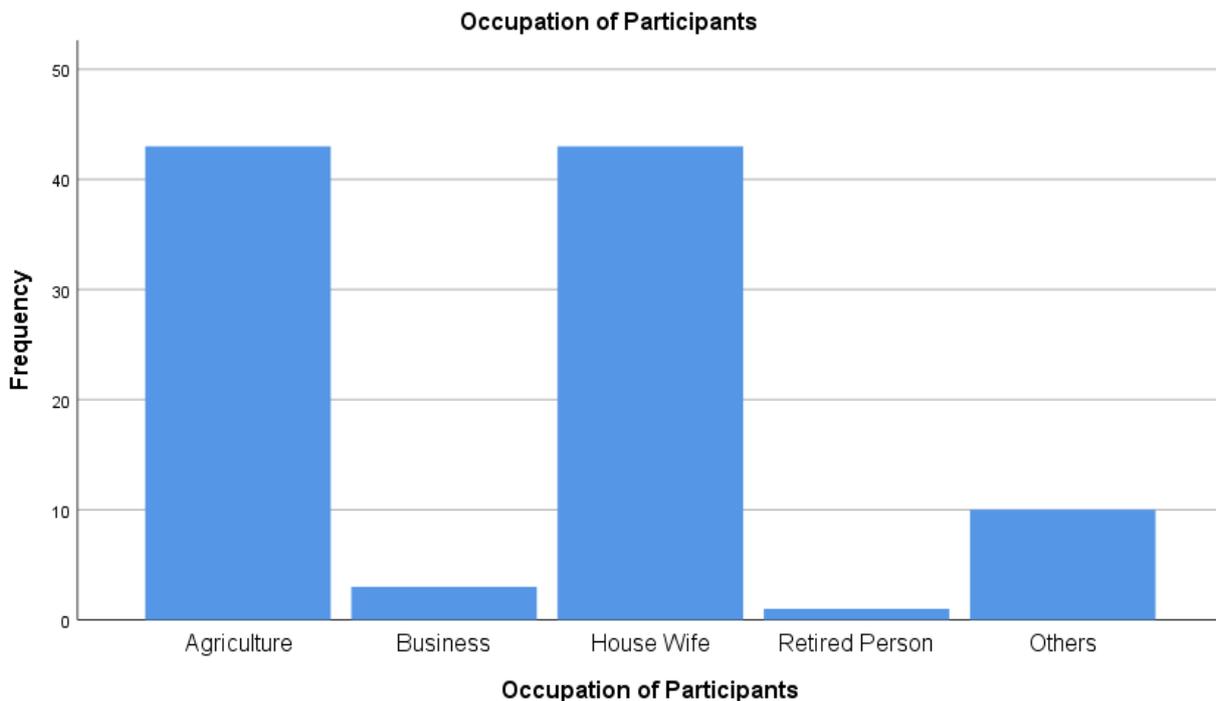


(Graph-3)

There has been a significant difference between patients from rural areas and patients from urban areas in the study, with 81% coming from rural areas and 17% from urban areas. There are very few patients who have come from semi-rural areas, the number is only 2%.

Occupation of Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture	43	43.0	43.0	43.0
	Business	3	3.0	3.0	46.0
	House Wife	43	43.0	43.0	89.0
	Retired Person	1	1.0	1.0	90.0
	Others	10	10.0	10.0	100.0
	Total	100	100.0	100.0	

(Table-4)

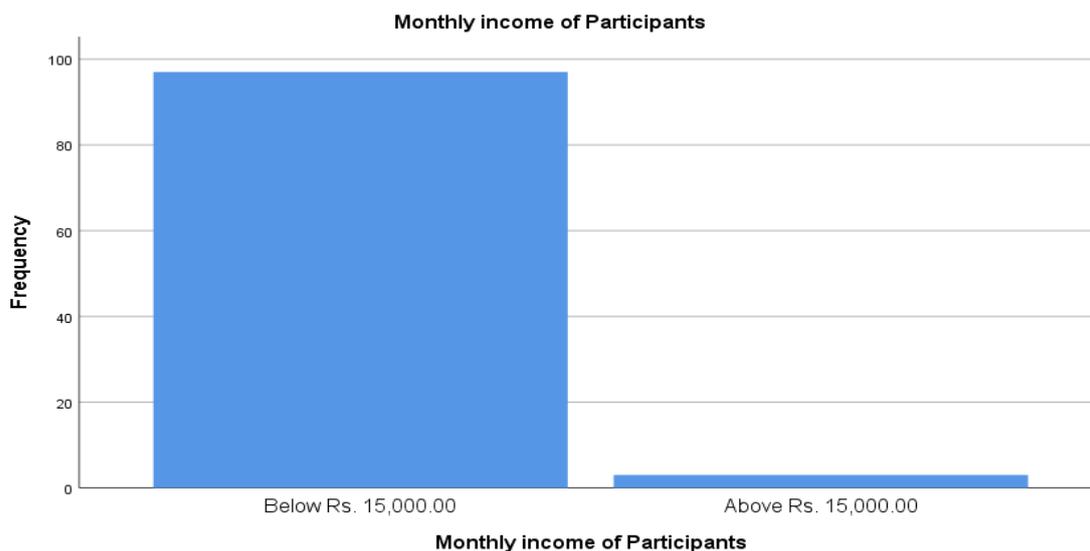


(Graph-4)

It is interesting to note that among the respondents, the percentage of house wives and the percentage of people involved in agriculture were the same (43%), others were 10%, the person involved in business was 3%, and very few were retired persons only 1%.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Rs. 15,000.00	97	97.0	97.0	97.0
	Above Rs. 15,000.00	3	3.0	3.0	100.0
	Total	100	100.0	100.0	

(Table-5)

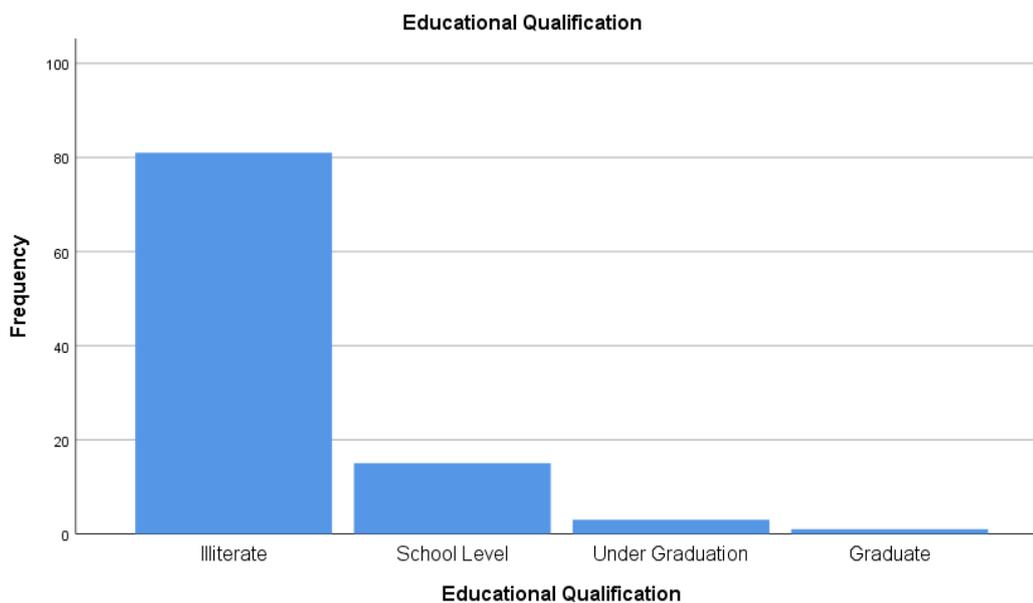


(Graph-6)

Ninety-seven percent of the respondents reported they had a monthly income that was below Rs. 15,000.00, while only three percent reported that they had a monthly income that was over Rs. 15,000.00.

Educational Qualification					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Illiterate	81	81.0	81.0	81.0
	School Level	15	15.0	15.0	96.0
	Under Graduation	3	3.0	3.0	99.0
	Graduate	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

(Table-7)



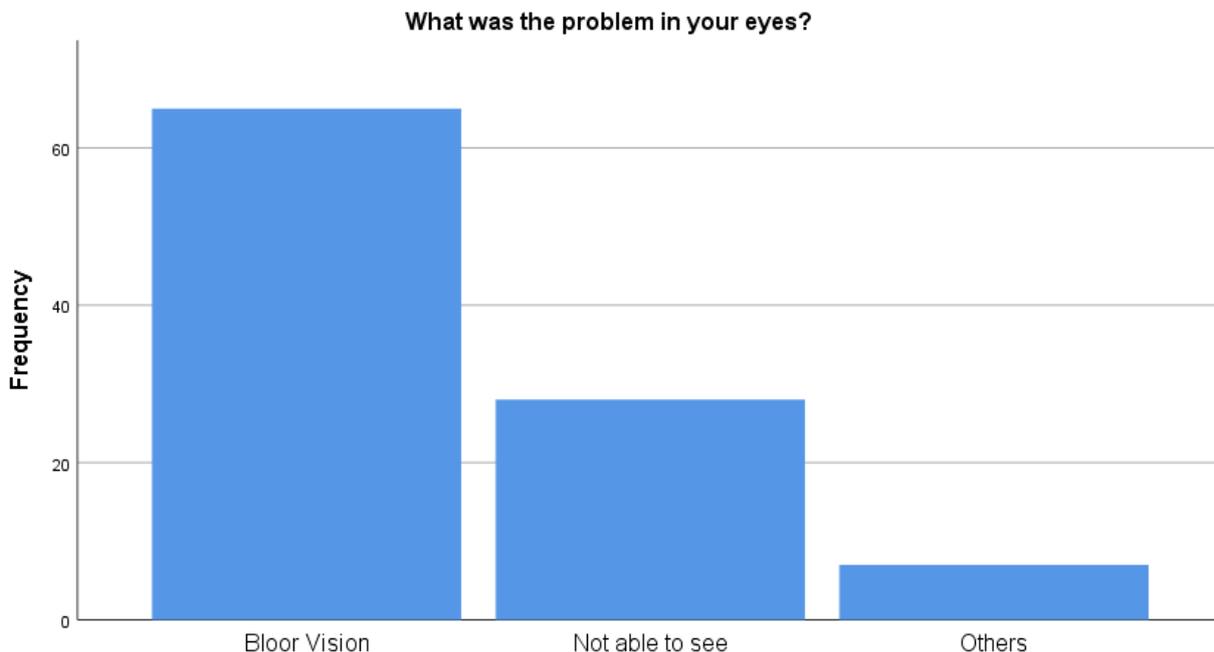
(Graph-7)

In the interview, only 1% of those surveyed were graduates, 3% were undergraduates, and 15% were school-level graduates. There were a large number of respondents (81%) who were illiterate.

General Information:-

What was the problem in your eyes?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bloor Vision	65	65.0	65.0	65.0
	Not able to see	28	28.0	28.0	93.0
	Others	7	7.0	7.0	100.0
	Total	100	100.0	100.0	

(Table-8)



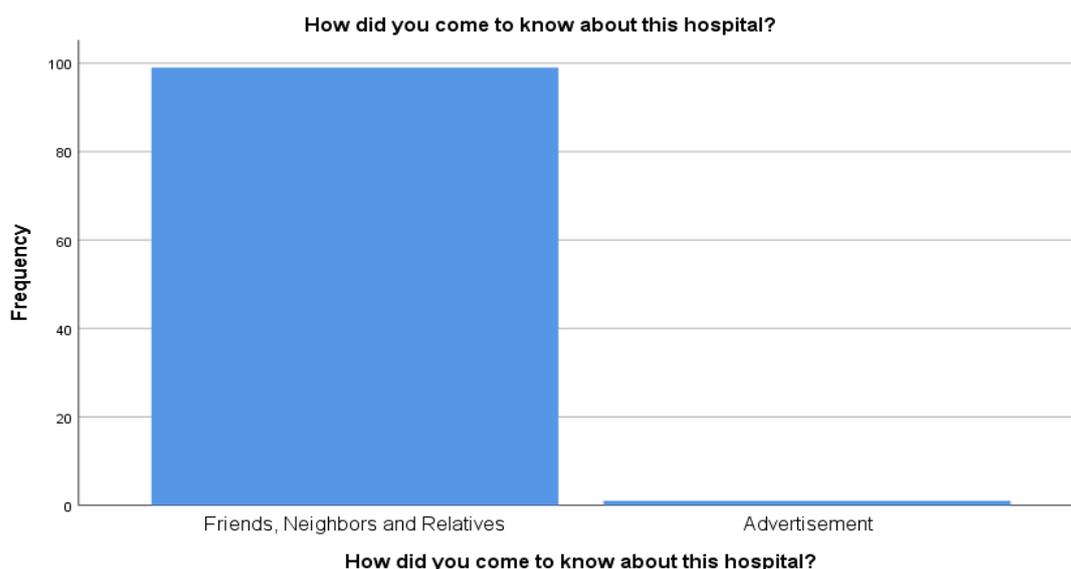
What was the problem in your eyes?

(Graph-8)

There were 65% of respondents who had Bloor vision, 28% who had no vision, and 7% who had other vision problems.

How did you come to know about this hospital?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Friends, Neighbors and Relatives	99	99.0	99.0	99.0
	Advertisement	1	1.0	1.0	100.0
	Total	100	100.0	100.0	

(Table-9)

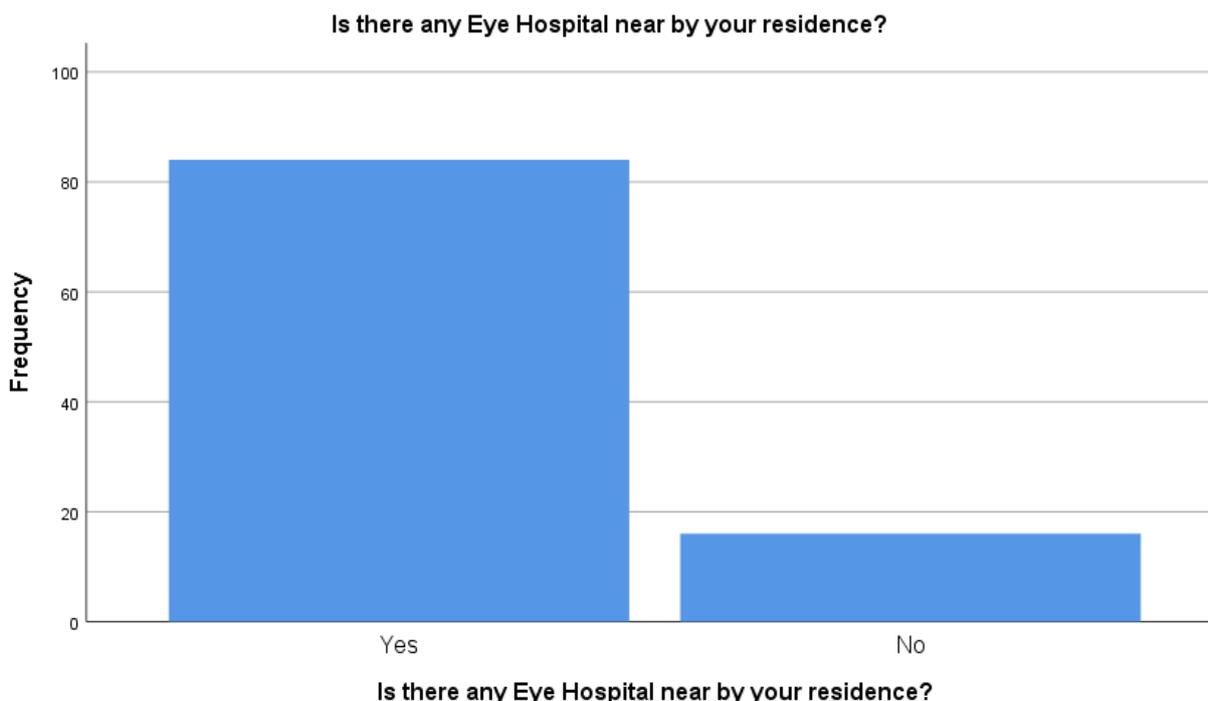


(Graph-9)

According to the survey, 99% of the patients know about the Hospital through their friends, neighbors, and family members.

Is there any Eye Hospital near by your residence?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	84	84.0	84.0	84.0
	No	16	16.0	16.0	100.0
	Total	100	100.0	100.0	

(Table-10)

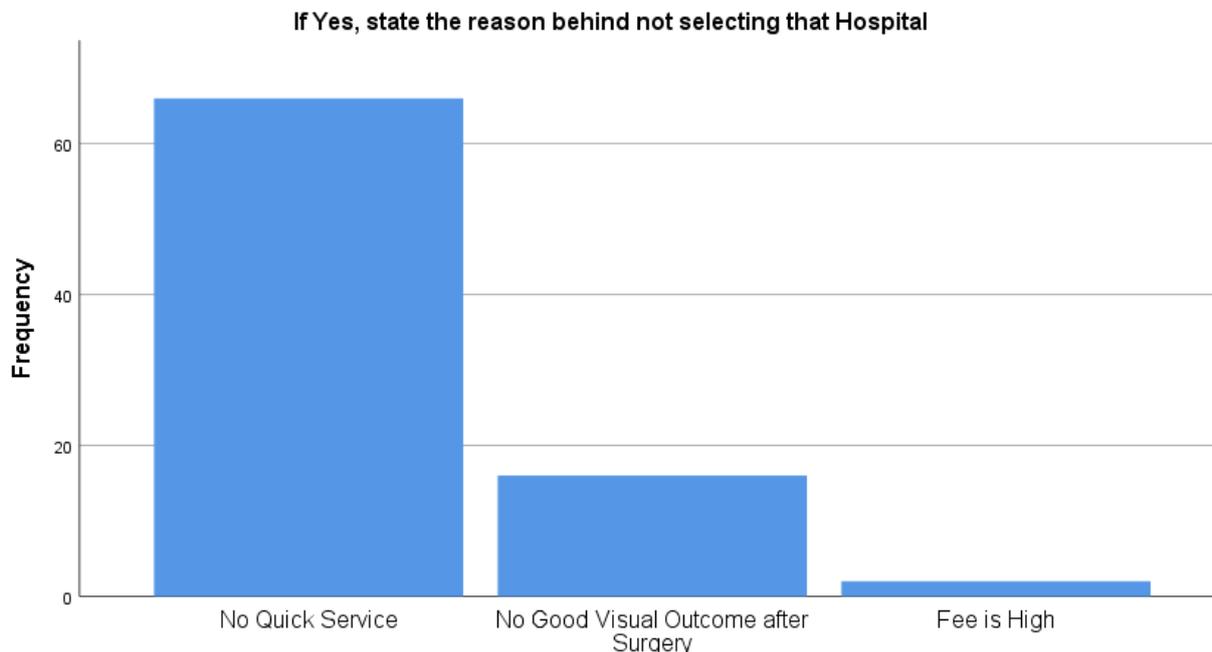


(Graph-11)

84 % of the respondents said they lived close to an eye hospital in their area. A mere 16% of respondents reported that there is no eye hospital nearby where they live.

If Yes, state the reason behind not selecting that Hospital					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Quick Service	66	66.0	78.6	78.6
	No Good Visual Outcome after Surgery	16	16.0	19.0	97.6
	Fee is High	2	2.0	2.4	100.0
	Total	84	84.0	100.0	
Missing	System	16	16.0		
Total		100	100.0		

(Table-12)



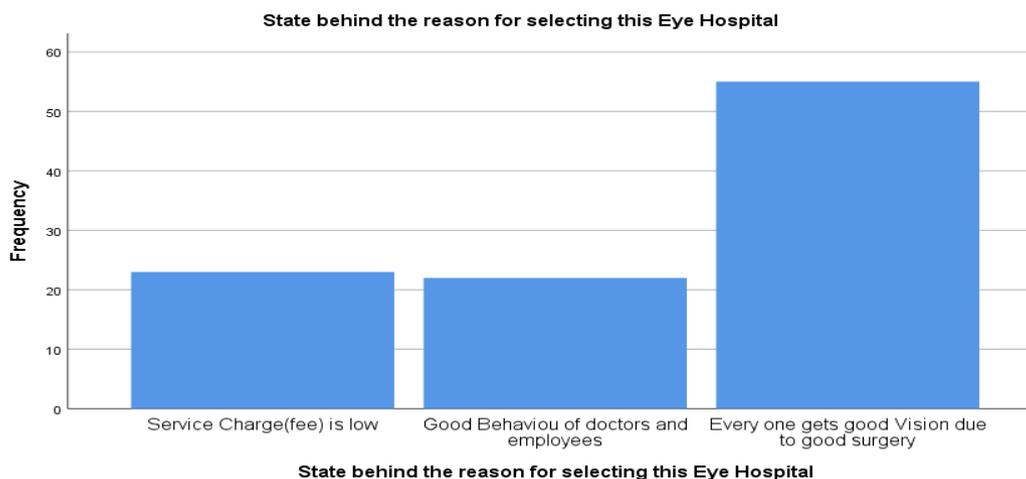
**If Yes, state the reason behind not selecting that Hospital**

(Graph-12)

The most common reason for patients not selecting a nearby hospital for their surgery is the lack of a quick service (78.6%), the second most common reason is the outcome of the surgery not being as good as expected (19%), and the third reason is the cost of the service charge.

<b>State behind the reason for selecting this Eye Hospital</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Service Charge(fee) is low	23	23.0	23.0	23.0
	Good Behaviou of doctors and employees	22	22.0	22.0	45.0
	Every one gets good Vision due to good surgery	55	55.0	55.0	100.0
	<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	

(Table-13)



(Graph-13)

55% of respondents have replied that they choose this Geta Eye Hospital because of the good visual outcomes after surgery, while 23% have replied that they chose this hospital because of its low service charge and 22% have told us that they chose this hospital because it has good behavior from the doctors and the employees.

### Patients Satisfaction and Service Quality

S.No	Factors	Level of Satisfaction				
		HS	S	N	D	HD
<b>TANGIBILITY</b>						
1	Infrastructure (Buildings) of the Hospital		98%	2%		
2	Convenient means of transportation to reach Hospital		98%	2%		
3	Convenient parking facilities for patients and visitors	3%	96%		1%	
4	Convenient place to cook, stay at Hospital for patients and their visitor		99%			
5	Canteen facilities for patients and visitors		97%	1%	2%	
6	Facilities of drinking water and toilet.	1%	98%	1%		
7	Security and Safety Management of Hospital (i.e., CCTV, Security Guard, Safety awareness)	20%	80%			
8	Cleanliness of Hospital and its surrounding.	2%	98%			
9	Cleanliness of Toilet/Patient Ward	3%	95%		2%	
10	Cleanliness of Patient Bed	4%	96%			
11	Display of Information about the service facilities and Fee of service charge	100%				
12	Pharmacy and Spectacle service	1%	99%			
13	Hospital environment i.e., greenery, good looking garden	37%	63%			
14	Employees are professional and well trained	22%	78%			
15	Citizen Charter (information board) placed in public place provided lots of information.	7%	58%		35%	
16	Service Charge (Rate List) placed in public place provided detail information.	2%	48%	20%	30%	
<b>RELIABILITY</b>						
1	Friendly and fair behavior at Reception/Registration Counter	1%	99%			
2	No extra charge or hidden charge of service fee	1%	99%			
3	Prompt and quick service to patients	14.0%	86%			
4	Name and fame of Hospital for good vision outcome	10%	90%			
5	Vision outcome after surgery	26%	72%	1%	1%	
6	Same Day Operation no waiting date	1%	61%	3%	35%	
<b>ASSURANCE</b>						
1	Doctor's good surgical skill	29%	70%	1%		
2	Doctors availability in all time	31%	68%		1%	
3	Doctor good behavior and politeness toward patients	100%				
4	Patients are treated as friend, guest by staffs	100%				
5	Safe and safety	6%	94%			
6	Staffs attitude are very good and friendly behavior	100%				
<b>EMPATHY</b>						
1	Poor patients are treated with free of cost	1%	14%	47%	38%	
2	Patients gets discount on fee if short of money	51%		5%	44%	
3	Provide secure feeling to the patients	3%	97%			
4	Doctors giving more time while examining the patients	24%	76%			

5	Staffs treat each patient as their guest.	1%	99%			
<b>RESPONSIVENESS</b>						
1	Staffs/Doctors listen the problem of each patients	98%	2%			
2	Provide information required by the patients	99%	1%			
3	Counselling before surgery	98%		1%	1%	
4	Counselling before discharge		99%		1%	
5	Staff willingness to help the patients	100%				
<b>TIMELINESS</b>						
1	Service is provided without any delay	8%	92%			
2	Reports are delivered in time		99%		1%	
3	Surgery is done in same day	1%	55%	2%	42%	
4	Doctors are punctual on their service	26%	74%			
5	No gap of doctors	29%	71%			
6	Services in Lab report, medication, delivery of spectacles was also in time.	1%	97%	1%	1%	
<b>EQUALITY</b>						
1	No discrimination on the basis of Nationality	1%	98%	1%		
2	No discrimination on the basis of Language	1%	99%			
3	No discrimination on the basis of race and religious	1%	99%			
4	No discrimination on the basis of poor and reach	1%	99%			
5	Equal service opportunity	1%	98%		1%	

There were five levels of satisfaction indicators taken into account; HS (Highly Satisfied), S (Satisfied), N (Neutral), D (Dissatisfied), and HD (Highly Dissatisfied). According to the above indicators, responses from respondents were tabulated on the basis of those results.

Patients were 100% satisfied with the Information about service facilities and fees for service charges, the staff attitude to patients, their willingness to listen to patients' problems, their politeness and good behavior of doctors, and their friendly behavior like their guests.

It was found that 35% of respondents were highly dissatisfied with not receiving service on the same day, 38% were highly dissatisfied with not receiving free treatment, 44% were highly dissatisfied with not receiving subsidy if they were short of money and 42% were highly dissatisfied with the same-day surgery.

### XIII CONCLUSION

In general, the hospital is rated very well for its tangibility, reliability, assurance, empathy, responsiveness, timeliness, and equality of service in terms of satisfaction. Patients' expectation of having a same-day operation, the expectation of getting free treatment, and subsidy in case of short of money should be prioritized by hospital management. It was found that few respondents were dissatisfied with the Citizen Charter and Service charge displayed in a public place. Management should respond to their concerns.

### XIV. IMPLICATION OF THE STUDY.

The purpose of the study was to identify the level of patient satisfaction. According to the feedback provided by the patients, the expectations of the patients have been tabulated. The hospital's management will be able to determine which part is lacking compared to the patient's expectations. In order to develop a patient-centered approach to healthcare, it will support the hospital's development.

## XV. RECOMMENDATION

- It is recommended that such type of studies be conducted on a periodic basis in order to develop a patient-centered approach to service delivery.
- The management of a hospital should put a lot of emphasis on providing prompt service, avoiding long waiting times in order to retain the patient flow.
- It is important to understand that many of the respondents are from rural areas and low-income groups, so the management should pay close attention to their full satisfaction with the service facilities.
- Several indicators of the level of patient satisfaction are good. There is a need for hospital management to maintain such quality and level of satisfaction in the days to come.

## XVI. ACKNOWLEDGMENT

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