DISSERTATION TRAINING

AT

TATA STEEL FOUNDATION, JAMSHEDPUR(JH)

"Quality of life among cataract operated patients in selected blocks of Jharkhand"

By

Dr. Minal Tembhurne

ENROLL NO. PG/21/139

Under the guidance of

Dr. Himanshu Tolani

IIHMR, New Delhi

POSTGRADUATE DIPLOMA IN HOSPITAL AND HEALTH MANAGEMENT 2021-2023

Completion of Dissertation

The certificate is awarded to

Dr. Minal Tembhurne

In recognition of having successfully completed her internship in the Public Health vertical of Tata Steel Foundation's

Preventable Blindness Programme

She has successfully completed her project on

"Quality of life among the cataract operated patients in the selected blocks of Jharkhand"

Date of Submission: 23-05-2023

Organization: Tata Steel Foundation (TSF), Jamshedpur

She comes across as a committed, sincere and diligent person who has a strong drive and zeal for learning.

We wish all the best for her future endeavors.

Programme Manager
Tata Steel Foundation

TATA STEEL FOUNDATION JSR

Head, Public Health
Tata Steel Foundation

TATA STEEL FOUNDATION JSR

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr Minal Tembhurne** student of PGDM (Hospital & Health Management) from International Institute of Health Management Research, New Delhi has undergone internship training at **TATA Steel Foundation** from **22nd March 2023** to **23rd May 2023**.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific, and analytical.

The Internship is in fulfilment of the course requirements.

I wish him all success in all her future endeavours.

Dr. Sumesh Kumar
Associate Dean, Academic and Student Affairs
IIHMR, New Delhi

Himanshu Tolani
23/06/2023
Mentor
Dr. Himanshu Tolani
Assistant Professor
IIHMR, New Delhi

Certificate of Approval

The following dissertation titled **"QUALITY OF LIFE AMONG CATARACT OPERATED PATIENTS IN SELECTED BLOCKS OF JHARKHAND"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **PGDM (Hospital & Health Management)** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of the dissertation.

Name	Signature
Dr. Sumesh Kumar	
DR. PANKAJ TALREJA	
DR SHASHI BHUSHAN	

Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Minal Tembhurne,** a graduate student of the **PGDM (Hospital & Health Management)** has worked under our guidance and supervision. She is submitting this dissertation titled "**Quality of life among cataract operated patients in selected blocks of Jharkhand**" at "**TATA Steel Foundation, Jamshedpur**" in partial fulfillment of the requirements for the award of the **PGDM (Hospital & Health Management).**

This dissertation has the requisite standard and to the best of our knowledge no part of it has beenreproduced from any other dissertation, monograph, report or book.

26/06/23

Dr Himanshu Tolani
Assistant Professor
IIHMR, Delhi

Ms. Sagarika Gupta
Program Manager
Preventable Blindness Programme
TATA Steel Foundation, Jamshedpur

TATA STEEL FOUNDATION JSR

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH (IIHMR)
Plot No. 3, Sector 18A, Phase- II, Dwarka, New Delhi- 110075
Ph. +91-11-30418900, www.iihmrdelhi.edu.in

CERTIFICATE ON PLAGIARISM CHECK

Name of Student (in block letter)	**Dr/~~Mr./Ms.~~:** Minal Tembhurne		
Enrolment/Roll No.	PG/21/139	**Batch Year**	2021-2023
Course Specialization (Choose one)	Hospital Management	Health Management	Healthcare IT ✓
Name of Guide/Supervisor	Dr/ Prof.: Himanshu Tolani		
Title of the Dissertation/Summer Assignment	Quality of life among cataract operated patients in selected blocks of Jharkhand.		
Plagiarism detects software used	**"TURNITIN"**		
Similar contents acceptable (%)	Up to **15** Percent as per policy		
Total words and % of similar contents Identified	6 %		
Date of validation (DD/MM/YYYY)	24/06/23		

Guide/Supervisor

Name: Dr. Himanshu Tolani

Signature: Himanshu Tolani

Report checked by

Institute Librarian

Signature:

Date:

Library Seal

Student

Name: Dr. Minal Tembhurne

Signature: Minal Tembhurne

Dean (Academics and Student Affairs)

Signature:

Date:

(Seal)

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **"Quality of life among cataract operated patients in selected blocks of Jharkhand"** and submitted by **Dr. Minal Tembhurne** Enrollment No. **PG/21/139** under the supervision of **Dr. Himanshu Tolani** for award of PGDM (Hospital & Health Management) of the Institute carried out during the period from **22th March 2023** to **23rd May 2023** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature:

Dr. Minal Tembhurne

FEEDBACK FORM

Name of the Student: Dr Minal Tembhurne

Name of the Organization in Which
Dissertation Has Been Completed: TATA Steel Foundation

Area of Dissertation: Preventable blindness program

Attendance: 100%

Objectives achieved: Yes

Deliverables:

- To develop an operational manual on Prevention for blindness (Eye care project) - A comprehensive manual outlining the necessary steps and procedures for running the project of prevention for blindness caused by cataracts.
- Carry out an assessment on "Quality of life among the cataract operated patients in the selected blocks of Jharkhand" with the use of standardized questionnaires and assessment tools to measure impact of cataract surgery on quality of life and other outcomes.

Strengths: Sincere, passionate, dedicated to work

Suggestions for Improvement(if any)

Suggestions for Institute (course curriculum, industry interaction, placement, alumni):

Date: 23/03/2023
Place: Jamshedpur

Signature of the Officer-in-Charge

TATA STEEL FOUNDATION
JSR

AKNOWLEDGEMENT

I would like to express my heartfelt appreciation to Ms. Sagarika Gupta for her invaluable assistance in ensuring the success of this study. Her encouragement, guidance, and support were indispensable, and this research would not have been possible without her contributions.

I would like to express my sincere gratitude to my mentor and teacher, Dr. Himanshu Tolani, for enriching this project with his valuable advice and suggestions. His insights and experiences have been generously shared, providing me with invaluable guidance throughout the research process. I would also like to acknowledge the research team and support staff for their dedicated efforts in designing and conducting this study. Their expertise, professionalism, and attention to detail have been instrumental in ensuring the accuracy and validity of the findings.

I extend my gratitude to the institutional review research committee for their oversight and guidance throughout the study. Furthermore, I would like to express my appreciation to our colleagues, mentors, and advisors for their invaluable input, feedback, and encouragement. Their expertise and guidance have significantly enhanced the research process and contributed to the overall quality of this study.

I am also deeply grateful to my friends, family members, and all those who have directly or indirectly contributed to this study. Your support and collaboration have played a vital role in the successful completion of this research, and I offer my heartfelt thanks for your contributions.

TABLE OF CONTENTS

INTRODUCTION

Blindness imposes a significant financial burden worldwide, with cataracts being the leading cause. The majority of individuals who experience blindness are over 50 years old. Globally, 94 million people diagnosed with cataracts suffer from blindness[1] Cataracts account for a substantial portion of blindness cases and severe visual impairment, leading to bilateral blindness in approximately 20 million individuals worldwide. In developing countries, 50-90% of all cataract cases are attributed to cataracts[1]. While cataracts can arise from various conditions, the natural aging process is the most common cause.

Blindness represents a significant public health challenge in India, where cataracts are the primary cause of blindness (62.6%), followed by uncorrected refractive errors (19.7%)[2]. Other conditions such as glaucoma, diabetic retinopathy, corneal infections, and orbital diseases are also contributing significantly to blindness. The prevalence of blindness in India is a pressing public health issue. Cataracts account for the majority (66.2%)[2], followed by corneal opacity (CO) (8.2%), cataract surgical complications (7.2%), posterior segment disorders (5.9%), and glaucoma (5.5%)[1]. An overwhelming 92.9% of blindness cases are preventable[1]. However, due to increasing life expectancy and limited resources for cataract surgery, the burden of cataract-related blindness is growing. As the population continues to age, the absolute numbers of these age-related disorders are expected to rise in the future.

The TATA Steel Foundation is actively engaged in a project aimed at preventing blindness, particularly focusing on cataracts, in the selected operational blocks of the Jharkhand region. These operational blocks encompass the mining areas and collieries of Jharkhand.

---

1. https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

2. https://npcbvi.mohfw.gov.in/Home

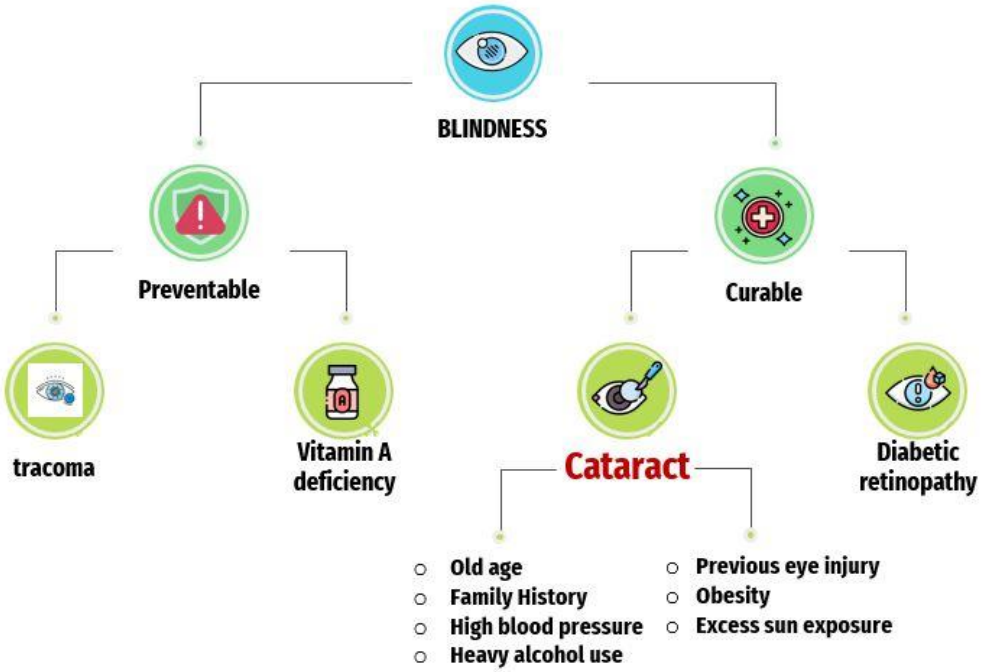
There is need to study impact of the surgeries that are operated on the beneficiaries of the program. In addition to this, many of the beneficiaries don't resume their activities after they are being operated.

TATA Steel Foundation is conducting the cataract surgeries in partnership with Jharkhand eye hospital and Sankara netralaya.

The study is purely patient oriented as well as organization oriented where it will focus on the outcomes of the both partner hospitals.

The burden of cataract-related blindness is on the rise due to the combination of increased life expectancy and a relative lack of accessible cataract surgery facilities. As the population continues to age, the absolute numbers of individuals affected by these age-related conditions will also increase. Presently, individuals requiring eye care services often do not receive them due to a lack of awareness and the high associated costs. Therefore, there is a pressing need to expand advanced eye care services to those in need.

CATARACT: A Leading Cause of Blindness in India



Social aspects of the problem are,

a. Lack of information

b. Fear of operation

c. Waiting for cataract maturity

d. Economic reason

As per National program for control of blindness and visual impairment, the backlogs of cataract in Jharkhand are as follows,

No. of blind cataract eyes	Incidence of cataract for next 3 years	FINANCIAL YEAR
126138	150225	2022-25

*DO LETTER SECRETARY.pdf

As individuals age beyond 40 years, the structural proteins present in the lens of the eye undergo a natural process of degradation, which primarily causes the formation of cataracts. Although the precise etiology of cataract development remains unknown, scientific evidence suggests that certain factors may accelerate the formation of cataracts. These factors are as Several factors can contribute to an increased likelihood of developing cataracts. These include:

1. Smoking

2. Excessive alcohol consumption

3. Prolonged exposure to sunlight without wearing sunglasses

Furthermore, certain health conditions and treatments can also heighten the risk of cataract formation, such as:

1. Diabetes

2. Significant eye injury

3. Prior eye surgery for glaucoma or other eye conditions

4. Use of steroids, which are medications employed for various health issues

5. Undergoing radiation treatment for cancer or other diseases.

CATARACT AND POVERTY

There is a well-established association between poverty and cataracts. Cataracts, characterized by the clouding of the eye's lens, can severely impair vision. It is a leading cause of blindness, especially in regions with low- and middle-income economies.

Poverty is a significant cataract risk factor. People who live in poverty are more likely to have poor nutrition, limited access to healthcare, and exposure to environmental factors that can encourage the development of cataracts. For people who are poor, the cost of cataract surgery, the best treatment available, may also be prohibitive.

Cataracts are an additional contributor to poverty. People with cataracts may find it challenging to see clearly enough to work, care for their families, or do daily duties, which may limit their ability to earn a living and contribute to their community.

In general, combating poverty, improving access to healthcare, and increasing the number of cataract procedures are necessary to reduce the burden of cataract and its impact on individuals and communities.

ORGANIZATION PROFILE

One of the largest steel producers in the world, Tata Steel has operations in over 26 countries and a substantial presence in India. The company is a leader in this field and well-known for its commitment to corporate social responsibility (CSR).

Tata Steel's CSR initiatives are centred on the four key areas of education, health and sanitation, livelihoods, and the environment. Because it thinks these sectors are essential to the development of the communities where it operates, the company has taken a variety of steps to help them.

In order to help youngsters in the communities where its operations are located have access to high-quality education, Tata Steel has launched a number of educational programmes. This includes initiatives like the Tata Steel Rural Development Society (TSRDS), which offers youngsters from economically disadvantaged families the chance to pursue an education and develop their skills. The company has also built educational institutions in a variety of places, notably the Tata Steel Rural Development Society (TSRDS) School in Kalinganagar, Odisha, which provides education to more than 1,200 children.

Tata Steel has taken a number of steps to improve the hygienic conditions in the communities, particularly in the areas of sanitation and health. Programmes like the Community Based Total Sanitation (CBTS) scheme, which attempts to promote better hygiene practises and reduce open defecation, fall under this category. Additionally, the company has opened clinics and hospitals in a variety of places, most notably Jamshedpur's Tata Main Hospital, which sees more than a million patients a year.

Tata Steel's livelihood initiatives promote sustainable livelihoods and local income generation. Programmes like the Tribal Entrepreneurship Development Programme (TEDP), which provides tribal tribes with the skills and assistance they need to start their own businesses, fall under this category. The company has also built a number of micro-enterprises throughout the nation, such as the Kalinganagar-based Tata Steel Rural Development Society (TSRDS) Livelihoods Centre, which provides advice and support for firms that make money.

The company is committed to preserving the environment, and it has taken a variety of steps to reduce its carbon impact and promote sustainable development. This includes initiatives like the Green School programme, which promotes environmental awareness and sustainability in educational institutions, and the garbage to Wealth programme, which tries to turn garbage into valuable products.

TSF is dedicated to collaborating with the local community and all other Indian stakeholders to build a sustainable future. The organisation focuses its efforts on upholding and promoting tribal culture and history while also enhancing the health and sanitation of the communities it serves.

The agency has implemented several initiatives to accomplish this objective, including the organization of the Samvaad tribal conclave, establishment of tribal language centers, conducting curated tribal literature workshops, and providing training on tribal musical instruments. These activities aim to aid Indian tribal communities in the preservation of their traditions for future generations, as well as to showcase their distinctive culture and heritage.

The goal of the tribal leadership programme is to discover and guide future tribal leaders. It provides them with the training and resources they need to succeed as community leaders and change agents. The Samvaad tribal conclave brings together tribal leaders, academics, activists, and decision-makers to discuss issues related to tribal welfare and development.

The agency has also established tribal language centres to save and enhance the indigenous languages spoken by tribal populations. These centres provide teaching and resources for language documentation, translation, and revitalization.

Authors and poets can share their work through curated tribal literature programmes, which aim to highlight the rich literary history of tribal cultures. TSF also hosts workshops and training sessions on tribal musical instruments to make sure the traditional music of these communities is preserved and passed down to future generations.

In addition to its cultural endeavours, TSF is dedicated to enhancing the health and hygiene conditions of the local population. In addition, it works collaboratively with foreign governments and non-governmental organisations to implement healthcare initiatives that allow people access to high-quality medical treatment, clean water, and hygienic facilities.

The organization's overall goals centre on building a sustainable future via the preservation and promotion of the unique cultural legacy of India's tribal people as well as the improvement of the health and wellbeing of the communities it works with. It believes that by working together, it can better the future of everyone engaged.

BACKGROUND

Blindness poses a significant public health challenge in India, with a cataract prevalence rate of 0.6% among the population. Cataracts are the leading cause of blindness, accounting for 62.6% of cases[2]. They contribute to both blindness and severe visual impairment, resulting in bilateral blindness for an estimated 20 million individuals globally. In developing countries, cataracts account for 50-90% of all cases[2]. While cataracts can stem from various conditions, the most common cause is the natural aging process.

A substantial proportion of blindness, around 92.9%[2], is considered avoidable. However, due to increasing life expectancy and limited resources for cataract surgery, the burden of cataract-related blindness is escalating. As the population ages, the absolute number of individuals affected by these predominantly age-related conditions will continue to rise in the coming years.

Presently, many patients with eye care needs remain underserved due to a lack of awareness and the high costs associated with accessing services. Consequently, there is an urgent need to expand advanced eye care services to meet the needs of those who require them.

TATA Steel foundation is working on the project for prevention for blindness specially on cataract. The project is focusing on the selected blocks of the Jharkhand region. The operational blocks include the mining areas and collieries of Jharkhand.

There is need to study impact of the surgeries that are operated on the beneficiaries of the program. In addition to this, many of the beneficiaries don't resume their activities after they are being operated.

TATA Steel Foundation is conducting the cataract surgeries in partnership with Jharkhand eye hospital and Sankara netralaya.

The study is purely patient oriented as well as organization oriented where it will focus on the outcomes of the both partner hospitals.

RATIONALE

The study will help to identify the effects of cataract surgery among the ones who are being operated.

Some people may find it difficult to recover from cataract surgery and may have trouble getting back to their regular routines.

The long-term effects of cataract surgery can thus be better understood by examining the patients who have undergone the procedure and evaluating their capacity to resume their normal activities, as well as by identifying the factors that contribute to improved functional outcomes.

Also, being aware of how cataract surgery affects particular everyday activities like recognizing people, reading, or doing housework can help to improve patient counselling and assure positive results.

Studying the relationship between patients stated quality of life and their capacity to resume daily activities might offer critical understandings of how cataract surgery affects patient's lives and how medical professionals can effectively help them during the process.

OBJECTIVE

The goal of the study is to undertake a thorough evaluation of individuals who have undergone cataract surgery in particular blocks of Jharkhand about their quality of life related to vision. The main goal is to assess how cataract surgery affects many parts of patients' lives that are directly related to their vision. This includes assessing their general well-being, functional capacities, emotional well-being, social contacts, and general happiness with their visual outcomes following surgery.

LITERATURE REVIEW

The article titled "Evaluation of visual outcome of cataract surgery in an Indian eye camp" authored by Kapoor, Chatterjee, Daniel, and Foster in 1999 centers around the examination of visual results arising from cataract surgery conducted within an eye camp situated in India. The primary objective of the study revolves around the assessment of the efficacy of cataract surgery in enhancing both visual acuity and functional outcomes among patients. A comprehensive analysis encompassing the visual outcomes was performed on a specific subset of patients who had undergone cataract surgery during their participation in the eye camp. The findings of the study revealed a considerable percentage of patients experiencing notable improvements in their visual acuity subsequent to the surgical intervention. Additionally, the authors identified significant factors such as pre-existing eye pathology and surgical complications that significantly contributed to unfavourable visual outcomes. The study imparts valuable insights into the effectiveness of cataract surgery as a means of enhancing vision within the context of an Indian eye camp, thus underscoring the significance of addressing pre-existing eye conditions and minimizing surgical complications to attain favourable visual outcomes.[3]

In "National Eye Institute Visual Function Questionnaire or Indian Vision Function Questionnaire for Visually Impaired: A Conundrum," the National Eye Institute Visual Function Questionnaire (NEI-VFQ) and the Indian Vision Function Questionnaire are contrasted as two different questionnaires used to evaluate visual function in visually impaired people (IND-VFQ). The writers compare and contrast the two surveys and come to the conclusion that each has advantages and disadvantages of its own. They advise researchers to select the questionnaire that is most appropriate for their unique study objectives and sample, taking into account elements like cultural relevance and cultural limitations.[10]

By 2020, the Vision 2020 Global Initiative visions to eradicate avoidable blindness and ensure that those who have permanent vision loss can realise their full potential. Untreated cataracts continue to be a major problem despite the survey's findings indicate that the prevalence of blindness in India has significantly decreased. This research emphasizes the value of regional planning, as well as accessibility to qualified cataract surgeons and first-rate operating rooms.[8]

The research article titled "Quality of Life of Cataract Patients Before and After Surgery-Evidence From Four Rural Communities in Ghana" authored by Amedo, Koomson, Pascal, Kumah, et al. in 2016 delves into the examination of the quality of life among cataract patients residing in rural communities in Ghana, both prior to and following cataract surgery. The study aimed to assess the impact of the surgical intervention on the patients' overall well-being and their perception of life quality. Extensive investigations were carried out in four specific rural communities, gathering evidence on the patients' quality of life through surveys and interviews conducted before and after the cataract surgery. The findings of the study revealed a significant improvement in the quality of life for cataract patients following the surgical intervention, indicating positive outcomes in terms of physical, psychological, and social well-being. This study provides valuable evidence regarding the positive impact of cataract surgery on the quality of life among rural communities in Ghana, underscoring the significance of accessible and effective eye care services in enhancing overall well-being for cataract patients.[9]

METHODOLGY

Study design – Cross sectional study

Study setting - Cataract surgery camp, Rajganj (Dhanbad) and Dumaria block in Jamshedpur

Duration of study - 22 March to 22 May

Study population - Selected patients for cataract surgery

Sample size- 100

$4pq/d^2$

The proposed sample size is calculated by assuming

P= 79.9 % (from previous studies), q= (1-79.9%) =0.201

and d= allowable error is 10% of 79.9%

Sampling technique – Convenience sampling

Method of data collection - Questionnaire (WHO recommended tool)

Methods for data analysis – Excel and SPSS

DATA ANALYSIS AND RESULTS

1. Gender wise distribution

Gender	Count
Female	40
Male	60
Total	100

Analysis:

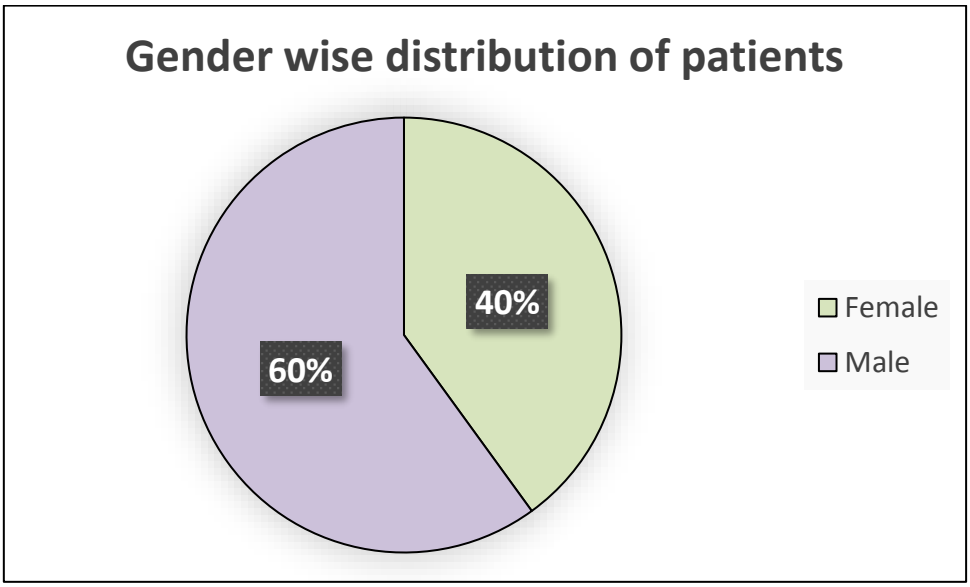


Figure 1.1

The above pie chart (Figure 1.1) shows the gender distribution of the patients whose cataract was detected. The majority of cataract patients were males making up to 60% of total sample and remaining 40% were females.

For this gender disparity of about 20%, one possibility could be men are more likely to be exposed to risk factors for cataract such as smoking, drinking alcohol and excessive sunlight exposure. Second possibility could be most of them do delay in seeking the treatment for cataract and lack of awareness about the early detection.

2. Age of the patients

Age	Count
40-50 yrs	10
50-60 yrs	33
60-70yrs	40
70-80 yrs	14
80-90 yrs	3

Analysis:

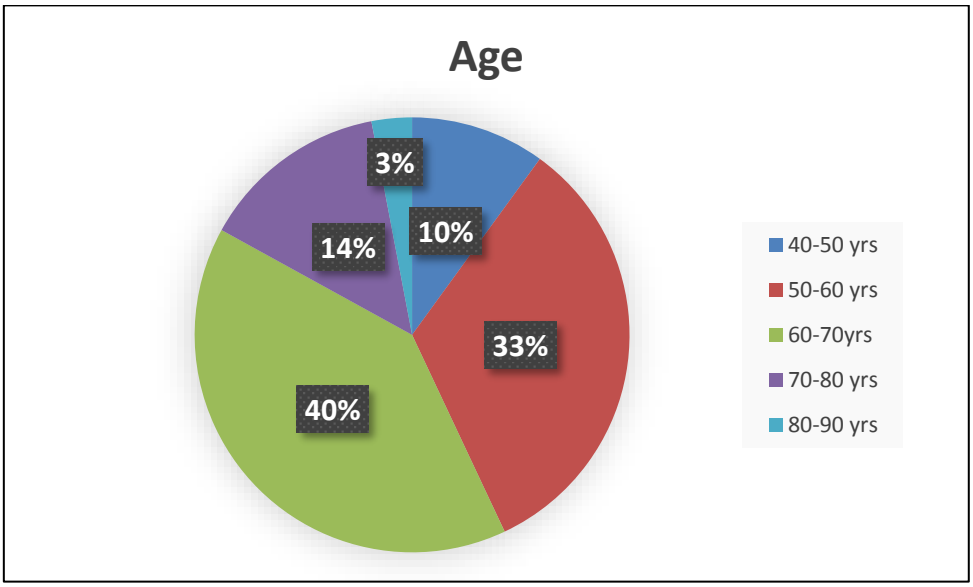


Figure 2.1

According to the pie chart, the majority of the population (40%) was between the ages of 60 and 70; 33% were between the ages of 50 and 60; 14% were between the ages of 70 and 80; 10% were between the ages of 40 and 50; and 3% were between the ages of 80 and 90.

3. Occupation wise distribution

Occupation	Count
Not working	74
Labour	12
Other	9
Farmer	5
Total	100

Analysis:

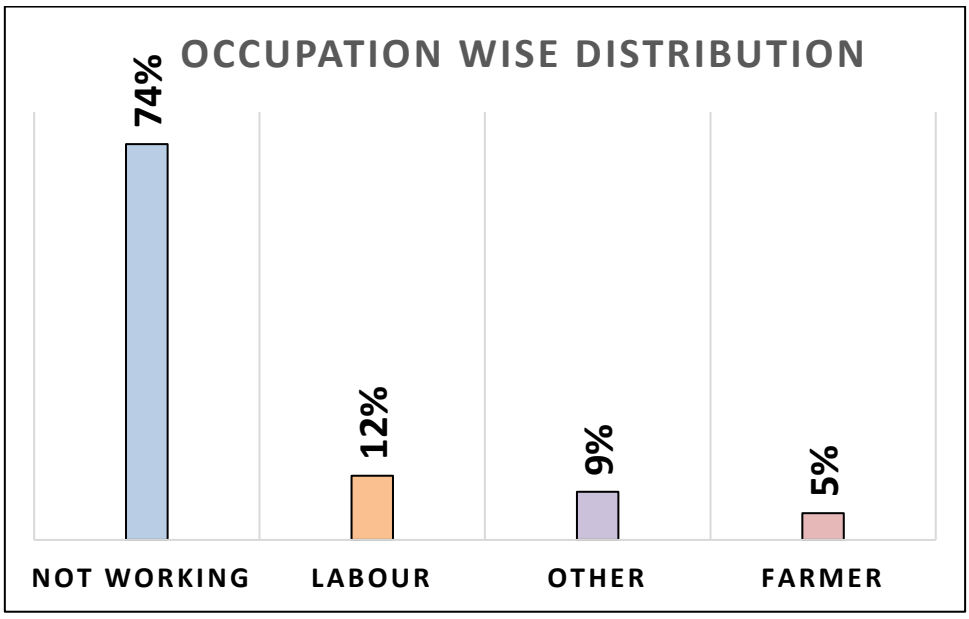


Figure 2.1

As seen in above figure 2.1, shows the distribution of respondents by occupation. 74% of people with cataracts did not have a job, making up the majority of the population. This shows that since cataracts are most common in old age and are one of the risk factors, they may be more common in retirees, the unemployed, or people who are not now employed. 12% were workers and 5% were farmers, as well. The remaining 9% of them worked in other fields, such as business, driving, and hotels. This finding may imply that occupational risks, such as exposure to chemicals, dust, or strenuous physical labour, may have a role in the onset of cataracts in this particular population.

3. Distribution according to income

Range of Income	Count
0-3000	80
3000-5000	7
5000-10000	9
10000-15000	4

Analysis:

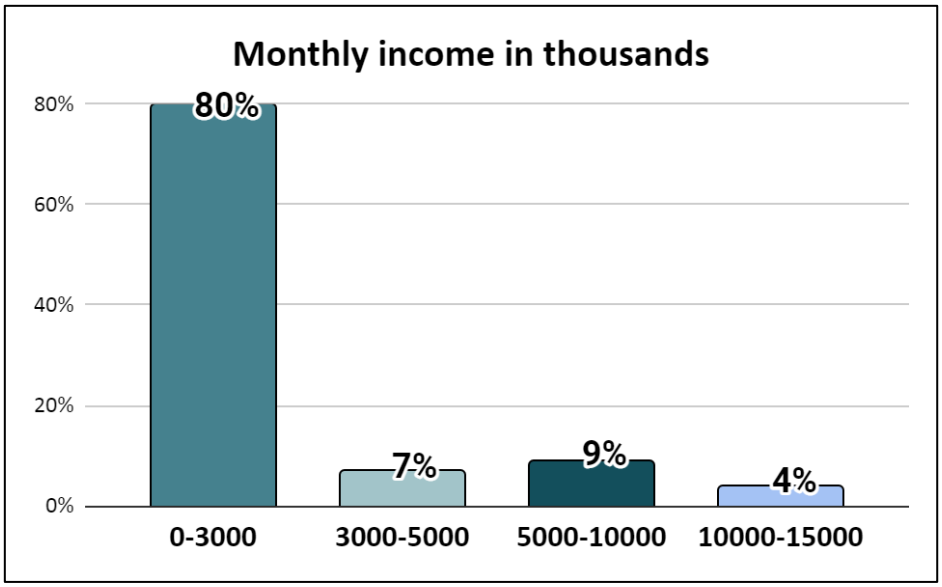


Figure 3.1

The bar chart shows that a significant proportion of cataract patients, accounting for 80% of the population, had an income in the range of 0 Rs - 3000 Rs. This indicates that cataracts may be prevalent among individuals with lower income levels. 7 % of the patients had an income between 3000 Rs - 5000 Rs, 9% fell in the range of 5000 Rs - 10000 Rs, and 4% had an income of 10000 Rs - 15000 Rs. This suggests that cataracts may be less prevalent among individuals with higher incomes. The income distribution among cataract patients reflects the influence of socioeconomic factors on the prevalence of the condition. Limited financial resources might hinder access to healthcare, including timely diagnosis and treatment of cataracts.

Pre surgery

Q. 4. How challenging is it for you to locate something on a crowded shelf due to your eyesight?

None ( ) Mild do ( ) Moderate ( ) Severe ( ) Extreme/cannot ( )

None	2
Mild do	13
Moderate	8
Severe	47
Extreme/cannot	30
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing Data	0
Mean		3.90
Std. Dev.		1.040

		Freq.	Percentage	Cumulative Percentage
None	1	2	2.0	2.0
Mild do	2	13	13.0	15.0
Moderate	3	8	8.0	23.0
Severe	4	47	47.0	70.0
Extreme/cannot	5	30	30.0	100.0
Total	Total	100	100.0	

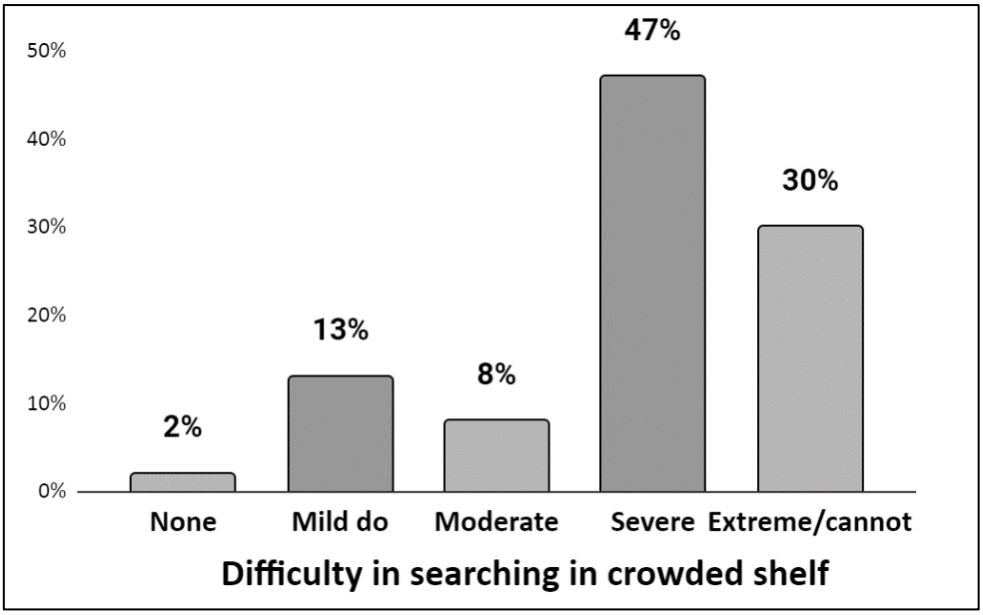


Fig 4.1 Difficulty in searching in crowded shelf

Plots show the distribution of respondents by occupation. 74% of people with cataracts did not have a job, making up the majority of the population. This shows that since cataracts are most common in old age and are one of the risk factors, they may be more common in retirees, the unemployed, or people who are not now employed. 12% were workers and 5% were farmers, as well. The remaining 9% of them worked in other fields, such as business, driving, and hotels. This finding may imply that occupational risks, such as exposure to chemicals, dust, or strenuous physical labour, may have a role in the onset of cataracts in this particular population.

According to the report, 30% of patients had a very tough time looking for something on a crowded shelf. This indicates that they are either completely unable to perform it or can only do it very difficultly. To find what they're looking for, some patients may need help from others.

Among the remaining 21% of patients, finding something on a cluttered shelf is a mild to moderate challenge. This indicates that while they might have some trouble, they can still accomplish it with some effort.

Overall, the survey's findings indicate that a person's ability to see clearly may be significantly impacted by cataracts. Daily actions like looking for something on a cluttered shelf may become challenging as a result.

Q. 5 To what extent do you experience difficulty in recognizing the faces of individuals, such as your family members, who are standing close to you due to your eyesight?

None ( ) Mild do ( ) Moderate ( ) Severe ( ) Extreme/cannot ( )

None	3
Mild do	13
Moderate	20
Severe	40
extreme/cannot	24
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing Data	0
Mean		3.69
Std. Dev.		1.070

		Freq.	Percentage	Cumulative Percentage
None	1	3	3.0	3.0
Mild do	2	13	13.0	16.0
Moderate	3	20	20.0	36.0
Severe	4	40	40.0	76.0
extreme/cannot	5	24	24.0	100.0
Total	Total	100	100.0	

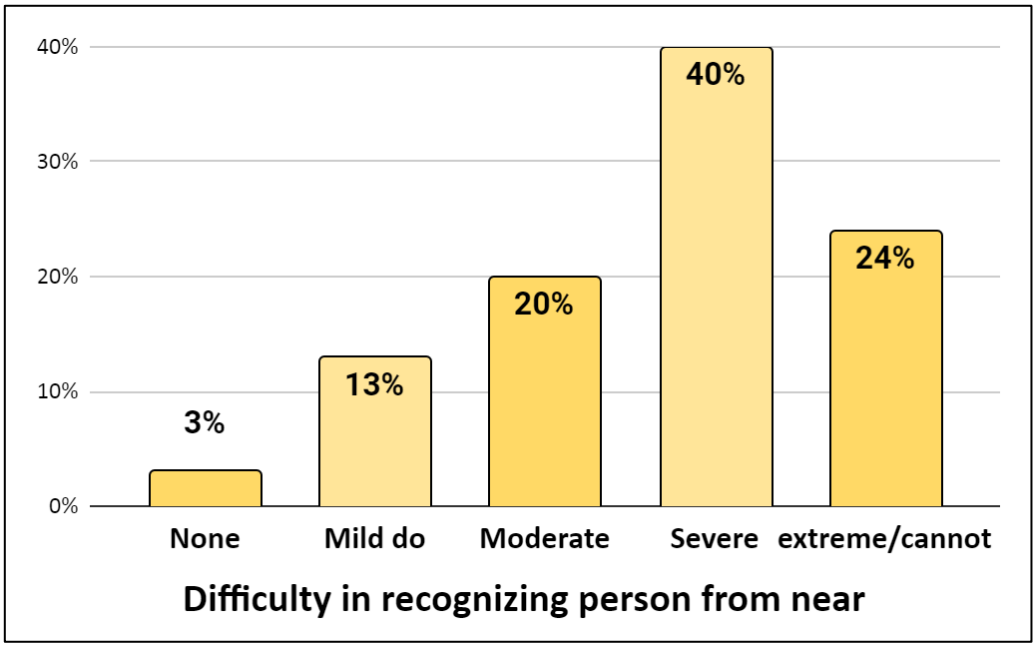


Fig 5.1 Difficulty in recognizing person from near

The table shows that before surgery, 3% cataract patients exhibited effortless recognition of the face of a person in close proximity, without any discernible difficulty, 13% have mild difficulty, 20% have moderate difficulty, 40% have severe difficulty, and 24% have extreme difficulty or cannot recognize faces at all.

This data suggests that cataracts can have a significant impact on a person's ability to see faces. The clouding of the lens that is characteristic of cataracts can make it difficult to see fine details, such as facial features. This can make it difficult to recognize people, especially if they are not familiar to the patient.

The severity of the difficulty in recognizing faces can vary depending on the severity of the cataracts. Patients with mild cataracts may only have difficulty recognizing faces in low light or at a distance. Patients with moderate or severe cataracts may have difficulty recognizing faces even in bright light and up close.

Q.6 How frequently do you find yourself hesitant to engage in social gatherings or events due to your eyesight?

Never ( ) Rarely ( ) Sometimes ( ) Often ( ) Very Often ( )

Never	6
Rarely	42
Sometimes	44
Often	7
Very Often	1
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		2.55
Std. Dev.		0.757

		Freq.	Percentage	Cumulative Percentage
Never	1	6	6.0	6.0
Rarely	2	42	42.0	48.0
Sometimes	3	44	44.0	92.0
Often	4	7	7.0	99.0
Very Often	5	1	1.0	100.0
Total	Total	100	100.0	

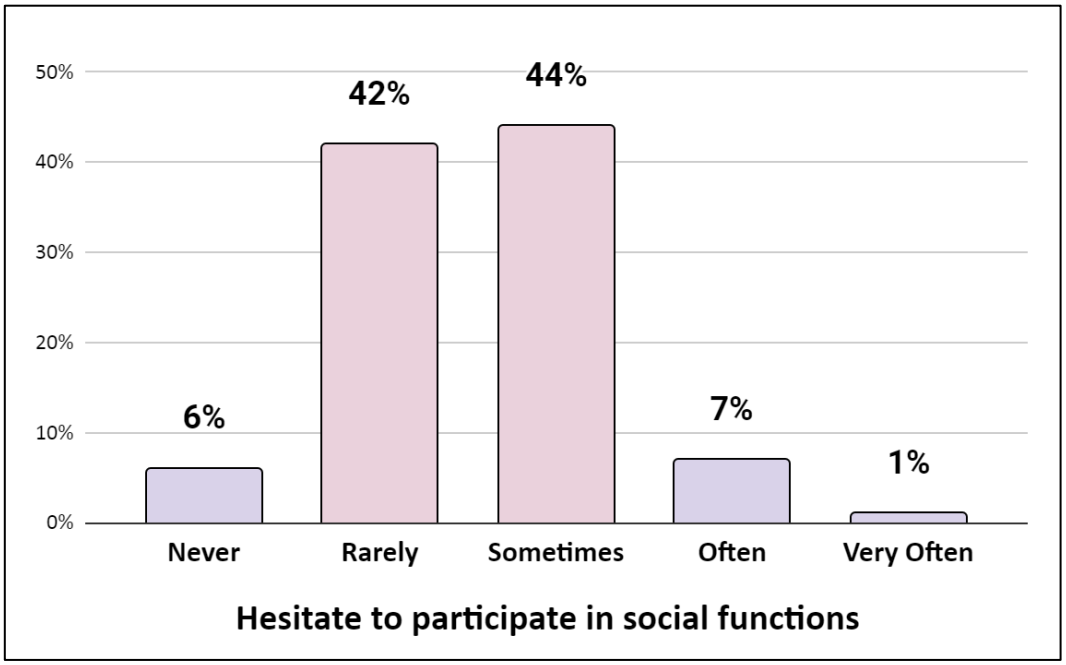


Fig 6.1 Hesitate to participate in social functions

The survey's findings indicate that many cataract patients are hesitant to attend social events since their vision is impaired. Due to their poor vision, 42% of patients indicated they rarely participated in social activities, and 44% said they occasionally did.

This shows that a person's social life may be significantly impacted by cataracts. Cataracts may make it challenging to engage in social activities for a variety of reasons. Vision blurriness, glare, and light sensitivity can all be brought on by cataracts. These issues might make it challenging to read signs, recognize faces, or engage in other activities that call for clear vision.

Q. 7 How frequently do you experience feelings of shame or embarrassment as a result of your eyesight?

Never ( ) Rarely ( ) Sometimes ( ) Often ( ) Very Often ( )

Never	21
Rarely	23
Sometimes	36
Often	17
Very Often	3
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		2.58
Std. Dev.		1.093

		Freq.	Percentage	Cumulative Percentage
Never	1	21	21.0	21.0
Rarely	2	23	23.0	44.0
Sometimes	3	36	36.0	80.0
Often	4	17	17.0	97.0
Very Often	5	3	3.0	100.0
Total	Total	100	100.0	

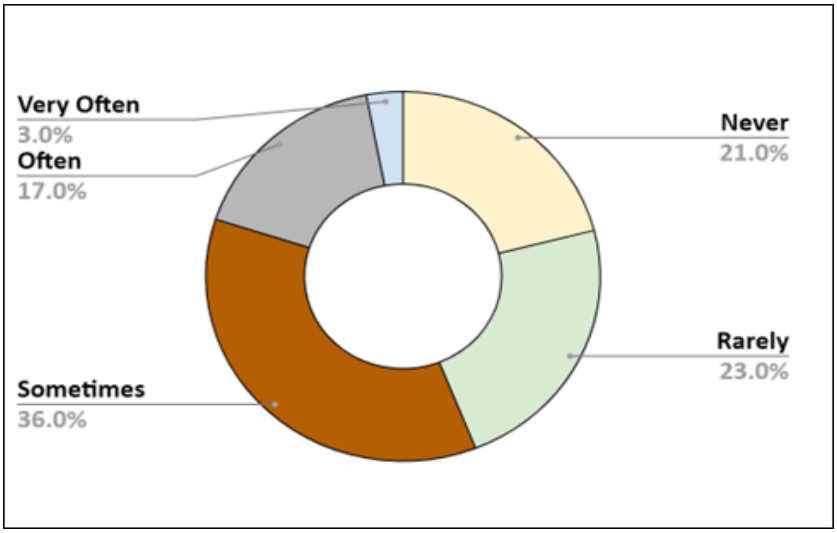


Fig 7.1 Ashamed or embarrassed because of eyesight

According to the poll findings, a sizable percentage of cataract patients (36%) have occasional or frequent feelings of embarrassment or shame regarding their vision. This makes sense given that cataracts can significantly impair eyesight, making it challenging to carry out daily activities like reading, cooking, and watching television. Additionally, because they can make the eyes appear foggy or milky, cataracts can cause people to feel self-conscious about their appearance.

Q. 8 How frequently do you experience the feeling of being a burden on others due to your eyesight?

Never ( ) Rarely ( ) Sometimes ( ) Often ( ) Very Often ( )

Never	26
Rarely	20
Sometimes	36
Often	15
Very Often	3
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		2.49
Std. Dev.		1.124

		Freq.	Percentage	Cumulative Percentage
Never	1	26	26.0	26.0
Rarely	2	20	20.0	46.0
Sometimes	3	36	36.0	82.0
Often	4	15	15.0	97.0
Very Often	5	3	3.0	100.0
Total	Total	100	100.0	

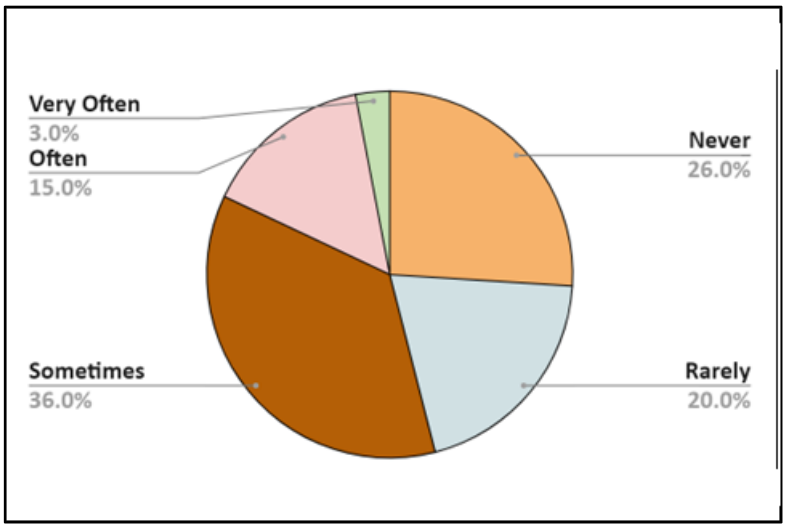


Fig 8.1 How often felt burden on others

According to the survey's findings, 36% of cataract sufferers believe that their condition makes them a burden on others. This is hardly surprising given how significantly cataracts can reduce eyesight and make it challenging to carry out daily chores.

The survey also reveals that older patients are more likely to experience feeling like a burden. This is probably due to the higher likelihood of retirement and lower social support among older persons.

Q.9 How frequently do you experience concerns or worries about potentially losing your remaining eyesight due to your current visual condition?

Never ( ) Rarely ( ) Sometimes ( ) Often ( ) Very Often ( )

Never	0
Rarely	5
Sometimes	15
Often	45
Very Often	35
Total	100

Analysis:

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		4.10
Std. Dev.		0.835

		Freq.	Percentage	Cumulative Percentage
Never	1	0	0	0
Rarely	2	5	5.0	5.0
Sometimes	3	15	15.0	20.0
Often	4	45	45.0	65.0
Very Often	5	35	35.0	100.0
Total	Total	100	100.0	

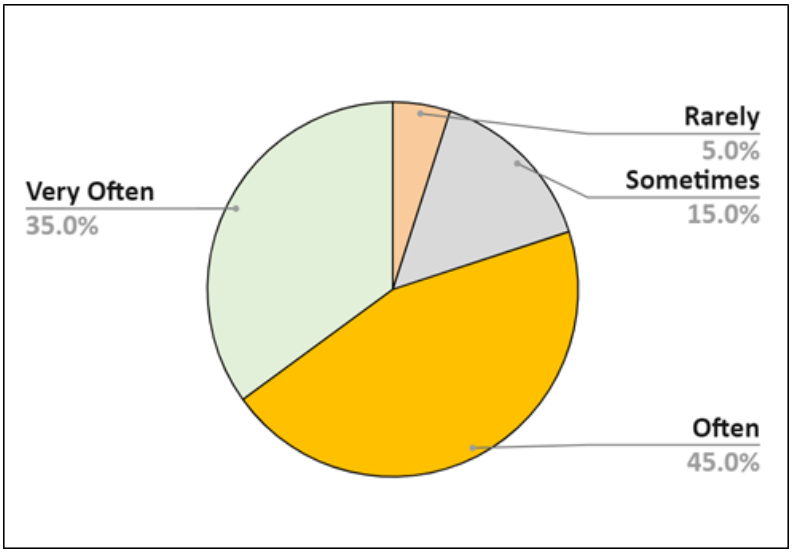


Fig 9.1 Fear of losing remaining eyesight

The survey's findings indicate that many cataract patients are concerned about losing their residual vision. A whopping 45% of those polled indicated they worry about losing their vision frequently, and another 35% said they worry about it a lot. This implies that persons who have cataracts are a group who are highly worried about their vision.

Patients with cataracts may worry about losing their sight for a variety of reasons. The vision loss brought on by cataracts can make it challenging to carry out daily chores. In addition, untreated cataracts might result in blindness. For cataract patients, this worry about going blind can be extremely stressful and anxiety-inducing.

Post-Surgery

Q.4 To what extent do you encounter challenges in detecting obstacles, such as animals or vehicles, while walking alone?

Responses	Count
None	96
Mild do	3
Moderate	1
Total	100

Analysis:

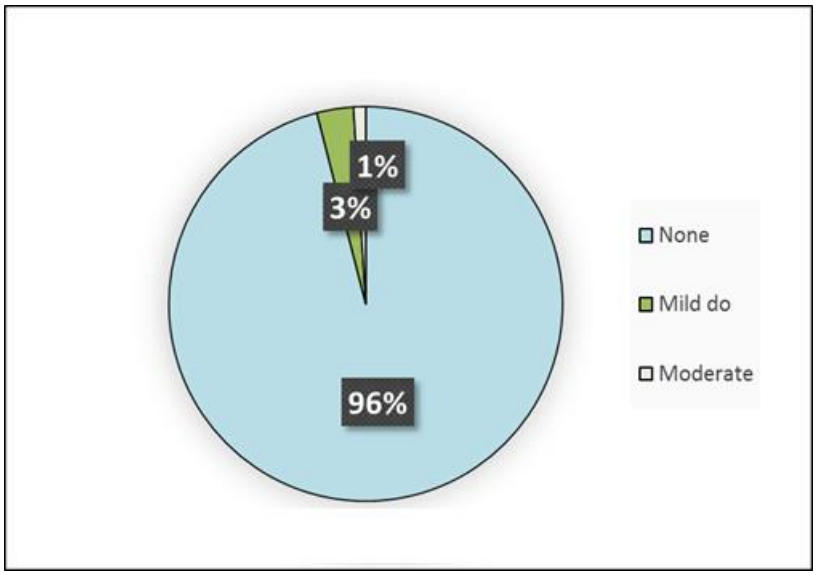


Figure 4.1

		Freq.	Percentage	Cumulative Percentage
None	1	96	96.0	96.0
Mild do	2	3	3.0	99.0
Moderate	3	1	1.0	100.0
Total	Total	100	100.0	

Table 4.2

N	**Total**	**100**
	Missing data	0
Mean		1.05
Std. Dev.		0.261

Table 4.3

As seen from figure 4.1, the majority of respondents (96%) reported no difficulty in noticing obstacles while walking alone. This indicates that a significant proportion of individuals do not face challenges in detecting potential obstacles during their walks.

Only a small percentage of respondents reported experiencing mild (3%) or moderate (1%) difficulty in noticing obstacles.

From table 4.2, the mean difficulty rating was 1.05, which suggests a relatively low average difficulty level in noticing obstacles while walking alone among the respondents.

The standard deviation was 0.261, indicating a moderate level of variability in the difficulty ratings. This suggests that while the majority of respondents reported no difficulty, some individuals experienced slightly higher levels of difficulty.

Q 5. To what extent do you experience difficulty in seeing due to glare from bright lights?

Responses	Count
None	87
Mild do	12
Moderate	1
Total	100

Analysis:

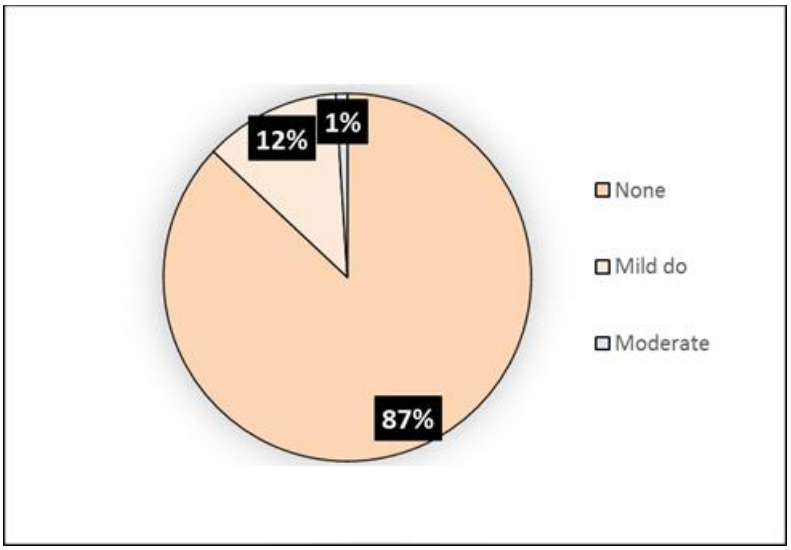


Figure 5.1

Statistics		
N	**Total**	**100**
	Missing	0
Mean		1.14
Std. Dev.		0.377

Table 5.2

		Freq.	Percentage	Cumulative Percentage
None	1	87	87.0	87.0
Mild do	2	12	12.0	99.0
Moderate	3	1	1.0	100.0
Total	Total	100	100.0	

Table 5.3

As seen in **figure 5.1**, the majority of respondents (87%) reported no difficulty in seeing due to glare from bright lights. This suggests that a significant proportion of individuals do not face significant challenges in vision impairment caused by glare.

A small percentage of respondents reported experiencing mild (12%) or moderate (1%) difficulty in seeing due to glare. This indicates that while some individuals may face minor challenges, the overall difficulty level in this aspect is relatively low.

From **Table 5.2**, it can be seen that the mean difficulty rating was 1.14, indicating a relatively low average difficulty level in seeing due to glare from bright lights among the respondents.

The standard deviation was 0.377, suggesting a moderate level of variability in the difficulty ratings. This implies that while the majority of respondents reported no difficulty, there were some individuals who experienced slightly higher levels of difficulty.

Q 6. How challenging is it for you to locate an item on a crowded shelf due to your eyesight?

Responses	Count
None	98
Mild	2
Moderate	0
Severe	0
Extreme	0

Analysis:

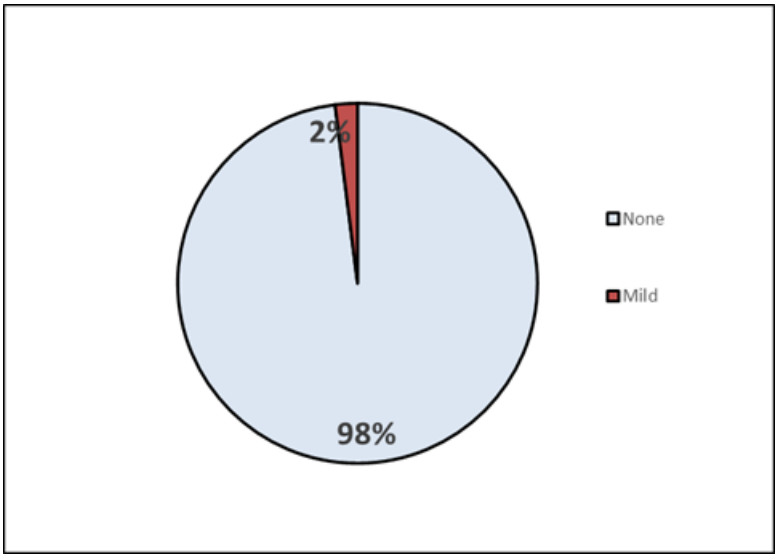


Figure 6.1

N	**Total**	**100**
	Missing	0
Mean		1.02
Std. Dev.		0.141

Table 6.2

		Freq.	Percentage	Cumulative Percentage
None	1	98	98.0	98.0
Mild	2	2	2.0	100.0
Total	Total	100	100.0	

Table 6.3

From the **figure 6.1,** it can be seen that the majority of respondents (98%) reported no difficulty in searching for something on crowded shelf due to their eyesight. This indicates that the overall impact of their eyesight on this task is minimal, with most individuals not facing any challenges.

only a small percentage of respondents reported experiencing mild (2%), and no respondents reported moderate, severe, or extreme difficulty.

From **table 6.2**, The mean difficulty rating of 1.02 reflected a minimal level of challenge when attempting to locate items on a densely populated shelf, taking into account the limitations of one's eyesight.

The standard deviation was calculated as 0.141, indicating a low level of variability in the difficulty ratings. This further supports the finding that the majority of respondents reported no difficulty, with very few reporting any level of difficulty.

Q 7. To what extent do you experience difficulty in perceiving differences in color?

Responses	Count
None	99
Mild	1
Moderate	0
Severe	0
Extreme	0

Analysis:

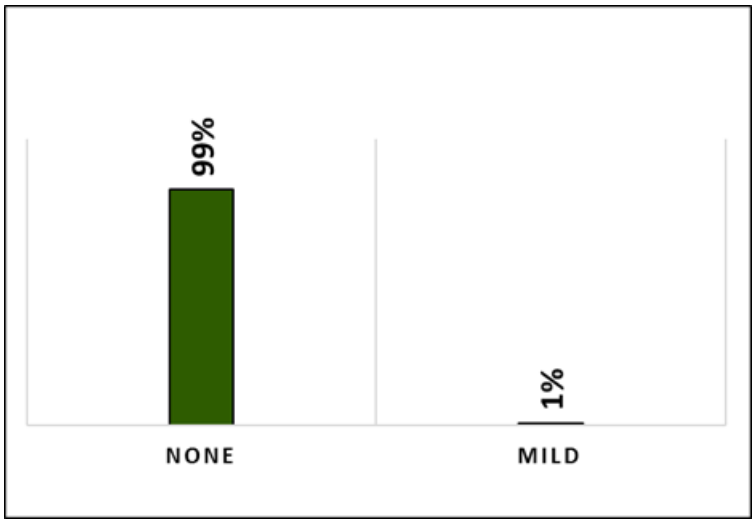


Figure 7.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.01
Std. Dev.		0.100

Table 7.2

		Freq.	Percentage	Cumulative Percentage
None	1	99	99.0	99.0
Mild	2	1	1.0	100.0
	Total	100	100.0	

Table 7.3

As shown in the **figure 7.1**, The vast majority of respondents (99%) reported no difficulty in seeing differences in colours. A very small percentage of respondents reported experiencing mild difficulty (1%), while no respondents reported moderate, severe, or extreme difficulty.

From **table 7.2**, the mean difficulty in seeing the differences in colour is 1.01, representing a low average difficulty level.

The standard deviation was calculated as 0.100, indicating a low level of variability in the difficulty ratings. This further supports the finding that the majority of respondents reported no difficulty, with very few reporting any level of difficulty.

Q 8. How challenging is it for you to recognize the face of a person standing in close proximity to you due to your eyesight?

Responses	Count
None	98
Mild	2
Moderate	0
Severe	0
Extreme	0

Analysis:

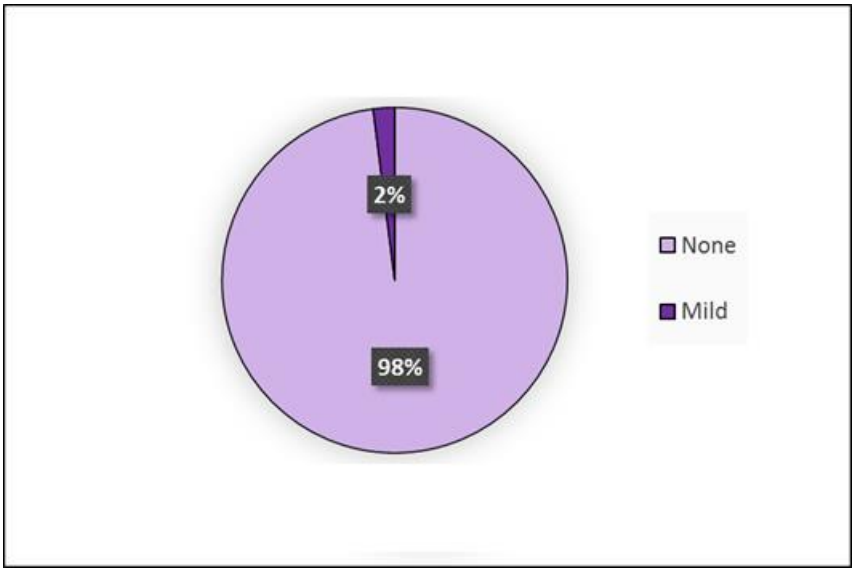


Figure 8.1

N	**Total**	**100**
	Missing data	0
Mean		1.02
Std. Dev.		0.141

Table 8.2

		Freq.	Percentage	Cumulative Percentage
None	1	98	98.0	98.0
Mild	2	2	2.0	100.0
	Total	100	100.0	

Figure 8.1 shows that 98% of respondents said they had no trouble recognising the face of someone who was standing close by. This shows that their capacity to recognise familiar faces, particularly those of family members, is not severely hampered by their vision.

Only 2% of respondents said they had slight trouble identifying people, while none said they had moderate, severe, or great problems. Given that the vast majority of respondents said there was no difficulty or only minor difficulty, this suggests that the general level of difficulty in this element is relatively low.

Table 8.2 shows that the mean grade for difficulty was estimated as 1.02, indicating a very low average level of difficulty in recognising the face of someone standing close to the respondents.

Q 9.? To what extent do you encounter difficulty in visually determining the level of a container while pouring something?

Responses	Count
None	97
Mild	3
Moderate	0
Severe	0
Extreme	0

Analysis:

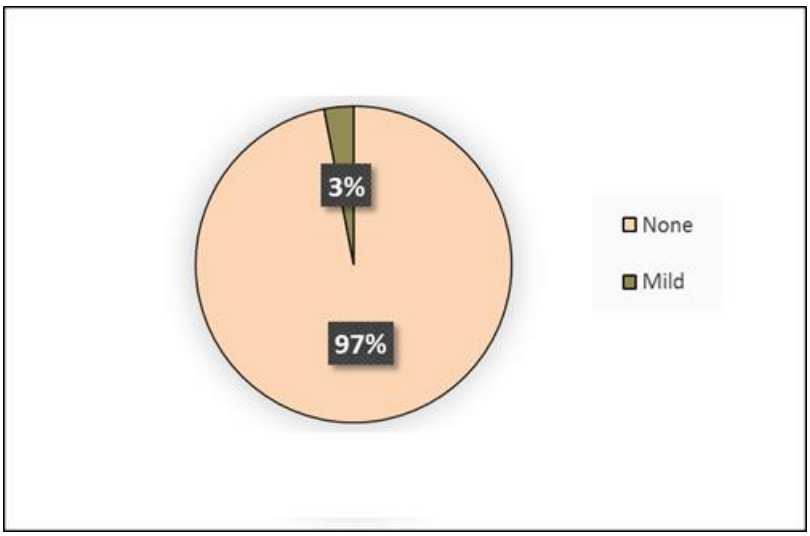


Figure 9.1

N	**Total**	**100**
	Missing data	0
Mean		1.03
Std. Dev.		0.171

Table 9.2

		Freq.	Percentage	Cumulative Percentage
None	1	97	97.0	97.0
Mild	2	3	3.0	100.0
	Total	100	100.0	

Table 9.3

Figure 9.1 shows that a significant number of cataract patients (97%) said they had no trouble seeing the level of the container when pouring following the procedure. Only 3% of respondents said they had mild difficulty.

The calculated mean difficulty level was 1.03, as shown in table 9.2, which denotes a low average level of difficulty. The fact that most cataract patients had little to no trouble seeing the container's level when pouring following surgery is further supported by this value.

The standard deviation of 0.171 indicates that the responses were consistent across patients' experiences, indicating that they were close to the mean. This suggests that, with little difference in their stated levels of difficulty, the surgical outcome was consistent across the majority of the individuals.

Q 10. How challenging is it for you to participate in activities outside of your house due to your eyesight?

Responses	Count
None	88
Mild	7
Moderate	5
Severe	0
Extreme	0

Analysis:

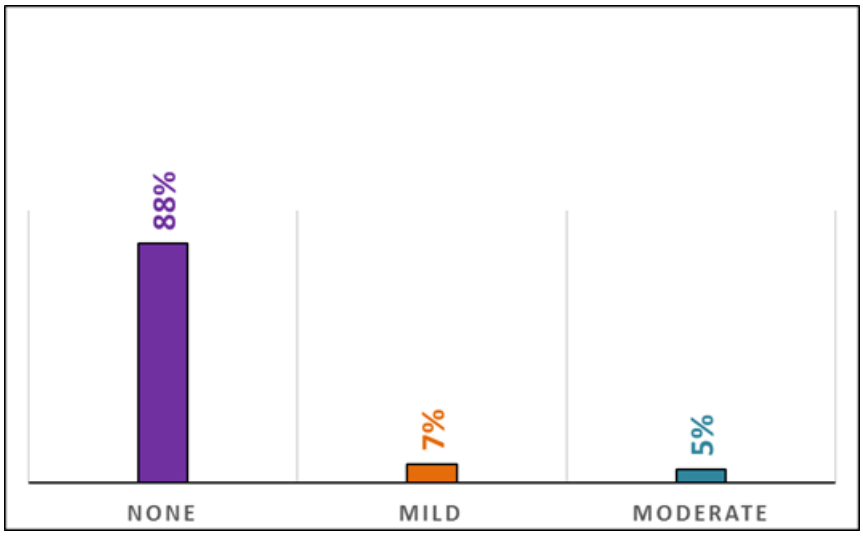


Figure 10.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.17
Std. Dev.		0.493

Table 10.2

		Freq.	Percentage	Cumulative Percentage
None	1	88	88.0	88.0
Mild	2	7	7.0	95.0
Moderate	3	5	5.0	100.0
	Total	100	100.0	

Table 10.3

• 88% of cataract patients have no trouble leaving the house to participate in activities.

• 7% of cataract patients report having some difficulty leaving the house to participate in activities.

About 5% of cataract sufferers find it moderately difficult to leave the house for activities.

• 0% of cataract patients have extreme difficulty leaving the house for activities.

• 0% of cataract sufferers are unable to participate in outdoor activities.

These findings imply that the majority of cataract patients have no trouble engaging in activities outside the home. Nevertheless, a tiny proportion of individuals can have some trouble, depending on how severe their cataracts are.

Q 11. How challenging is it for you to recognize people you know from a distance of 20 meters due to your eyesight?

Responses	Count
None	95
Mild	5
Moderate	0
Severe	0
Extreme	0

Analysis:

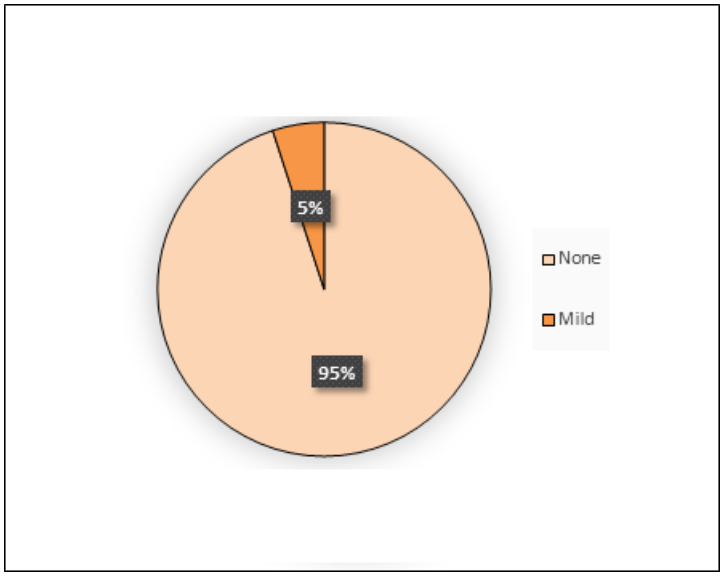


Figure 11.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.05
Std. Dev.		0.219

Table 11.2

		Freq.	Percentage	Cumulative Percentage
None	1	95	95.0	95.0
Mild	2	5	5.0	100.0
	Total	100	100.0	

Table 11.3

• None: In 95% of cases, the patient has no trouble identifying people they are familiar with at a distance of 20 metres.

• Mild: In 5% of cases, the patient has minor trouble identifying people they are familiar with at a distance of 20 metres.

• Moderate: The patient has a 0% success rate in recognising people they are familiar with at a distance of 20 metres.

• Severe: In 0% of cases, the patient has extreme trouble identifying people they are familiar with at a distance of 20 metres.

• Extreme/cannot: In 0% of cases, the patient is unable to identify individuals they are familiar with at a distance of 20 metres.

Overall, the patient has no trouble identifying people they are familiar with at a distance of 20 metres. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, the patient might still have some trouble identifying people in dim light or when there are a lot of glares. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Q 12 To what extent do you experience difficulty in seeing objects up close, such as distinguishing differences in coins or notes?

Responses	Count
None	97
Mild	3
Moderate	0
Severe	0
Extreme	0

Analysis:

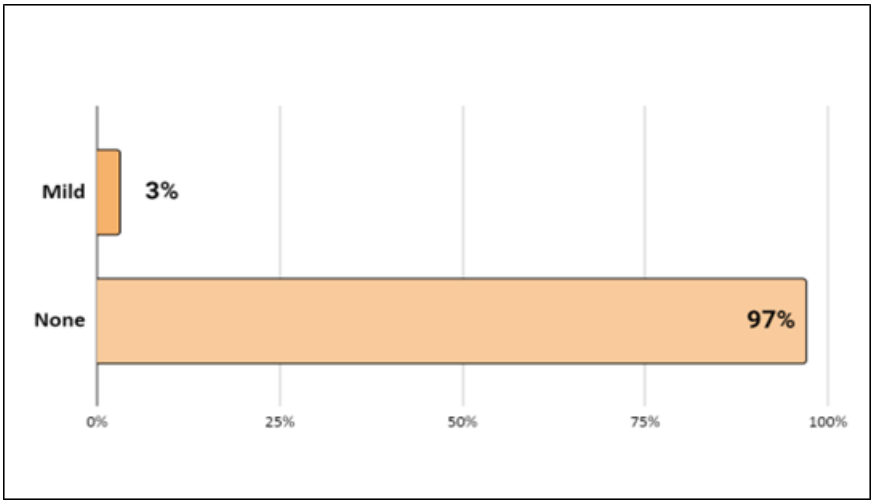


Figure 12.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.03
Std. Dev.		0.171

Table 12.2

		Freq.	Percentage	Valid Percentage	Cumulative Percentage
None	1	97	97.0	97.0	97.0
Mild	2	3	3.0	3.0	100.0
	Total	100	100.0	100.0	

Table 12.3

- None: The patient has no trouble seeing up-close items 97% of the time.
- Mild: The patient has mild trouble seeing close things 3% of the time.
- Moderate: The patient has moderate difficulties seeing up near things 0% of the time.
- serious: The patient has serious difficulties seeing close objects 0% of the time.
- Extreme/cannot: The patient cannot see nearby things 0% of the time.

In general, the patient has very little trouble focusing on nearby items. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, the patient can still have some trouble focusing on close things in dim light or under strong glare. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Q 13. To what extent do you encounter difficulty in perceiving irregularities in the path while walking, such as potholes?

Responses	Count
None	99
Mild	1
Moderate	0
Severe	0
Extreme	0

Analysis:

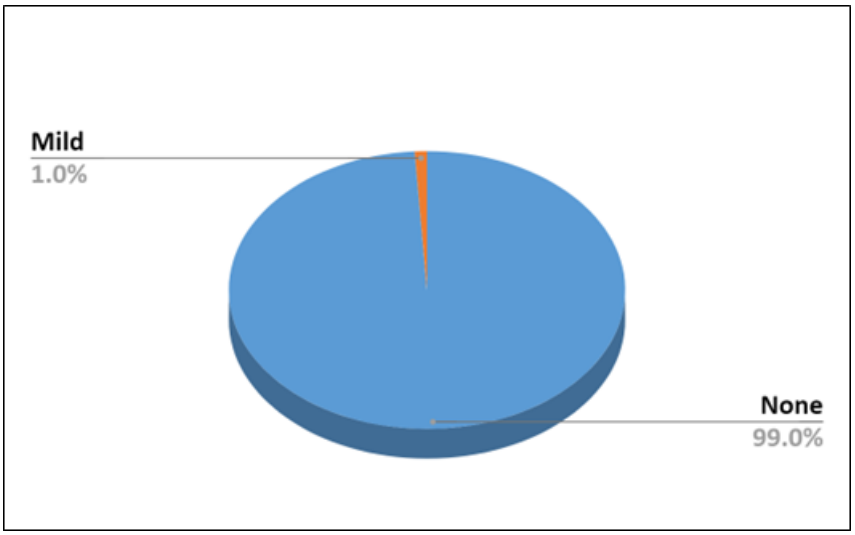


Figure 13.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.01
Std. Dev.		0.100

Table 13.2

		Freq.	Percentage	Cumulative Percentage
None	1	99	99.0	99.0
Mild	2	1	1.0	100.0
	Total	100	100.0	

Table 13.3

• None: In 99% of cases, the patient has no trouble spotting deviations in the course while walking.

• Mild: In 1% of cases, the patient has minor trouble spotting path abnormalities while walking.

• Moderate: The patient has moderate difficulty seeing path abnormalities when walking 0% of the time.

• Severe: In 0% of cases, the patient has extremely trouble spotting path abnormalities when walking.

• Extreme/cannot: The patient cannot perceive path abnormalities when walking 0% of the time.

Overall, the patient has very little trouble while walking noticing deviations in the path. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, in dimly lit areas or when there are many glares, the patient may still have some trouble spotting path abnormalities. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Q 14 To what extent do you experience difficulty in seeing when transitioning from bright sunlight to indoor lighting?

Responses	Count
None	84
Mild	16
Moderate	0
Severe	0
Extreme	0

Analysis:

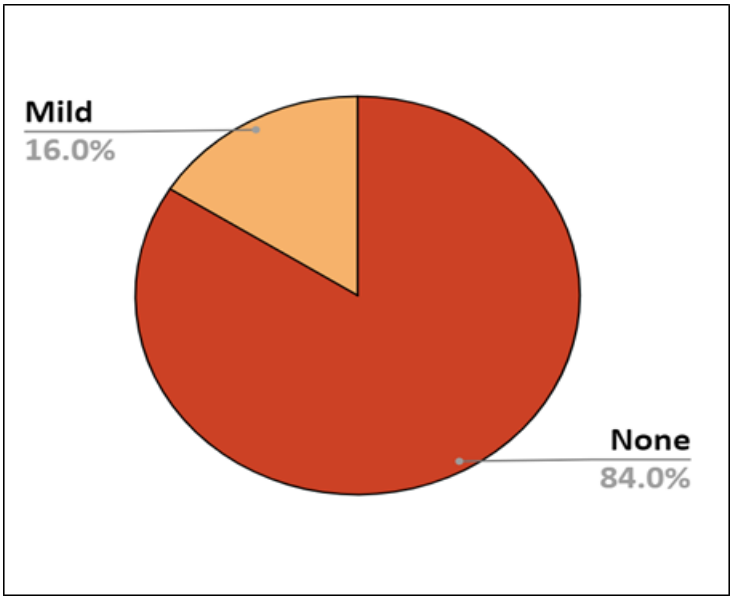


Figure 14.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.16
Std. Dev.		0.368

Table 14.2

		Freq.	Percentage	Cumulative Percentage
None	1	84	84.0	84.0
Mild	2	16	16.0	100.0
	Total	100	100.0	

Table 14.3

• None: In 84% of cases, the patient has no trouble seeing after spending time in the sunshine.

• modest: 16% of the time, the patient experiences modest vision problems after spending time outside in direct sunshine.

• Moderate: 0% of the time, the patient experiences moderate vision problems after spending time in the sunshine.

• serious: 0% of the time, the patient experiences serious vision problems after spending time in the sunshine.

• Extreme/cannot: 0% of the time the patient cannot see after spending time in the sunshine.

In general, the patient has very little trouble seeing after spending time in the sunshine. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, the patient might still have some trouble seeing after spending time outside in direct sunshine, in low light, or when there are a lot of glares. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Q 15. To what extent do you encounter difficulty in engaging in activities that require clear near vision, such as sewing or using hand tools?

Responses	Count
None	87
Mild	13
Moderate	0
Severe	0
Extreme	0

Analysis:

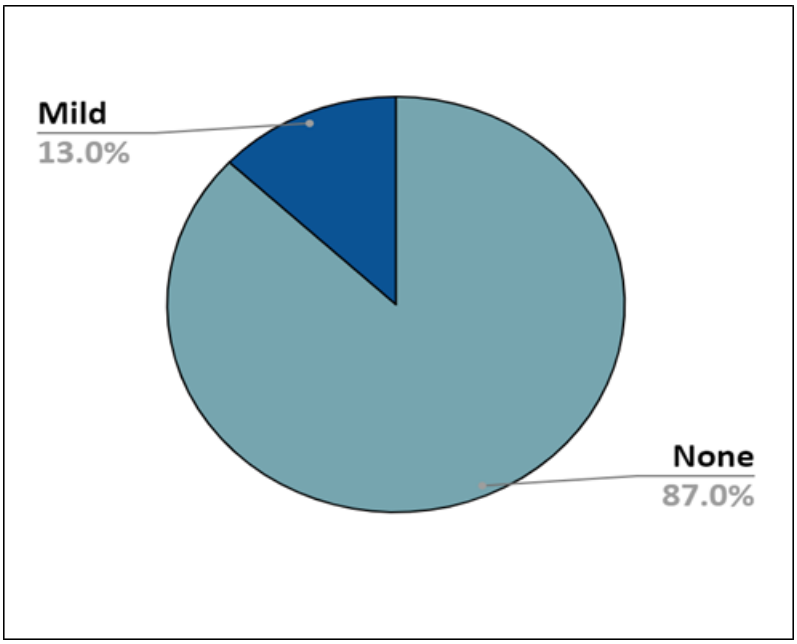


Figure 15.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.13
Std. Dev.		0.338

Table 15.2

		Freq.	Percentage	Cumulative Percentage
None	1	87	87.0	87.0
Mild	2	13	13.0	100.0
	Total	100	100.0	

Table 15.3

• None: 87% of the time, the patient has no trouble performing tasks that call for good up-close vision.

• Mild: 13% of the time, the patient has mild difficulty performing tasks that call for close-up vision.

• Moderate: The patient has moderate difficulty performing tasks that call for good close-up vision 0% of the time.

• Severe: The patient has severe difficulties performing tasks that call for clear close-up vision 0% of the time.

• Extreme/cannot: 0% of the time, the patient is unable to perform tasks that call for good up-close vision.

Overall, the patient has very little trouble performing tasks that call for close-up vision. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, the patient might still have some trouble performing tasks that call for close-up vision in low light or when there are a lot of glares. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Q 16. To what extent do you experience difficulty in carrying out your regular work due to your eyesight?

Responses	Count
None	82
Mild	18
Moderate	0
Severe	0
Extreme	0

Analysis:

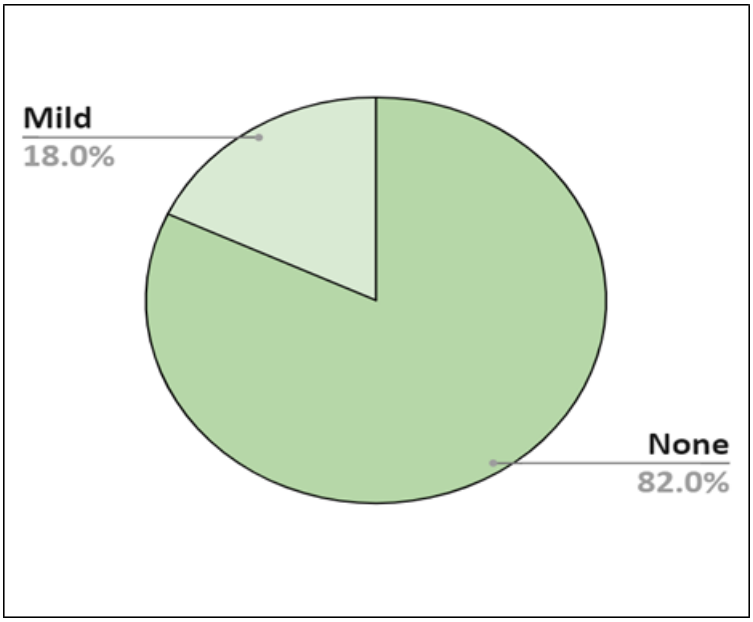


Figure 16.1

Statistics		
N	**Total**	**100**
	Missing data	0
Mean		1.18
Std. Dev.		0.386

Table 16.2

		Freq.	Percentage	Cumulative Percentage
None	1	82	82.0	82.0
Mild	2	18	18.0	100.0
	Total	100	100.0	

Table 16.3

- None: 82% of the time, the patient has no trouble performing their regular duties.
- Mild: The patient has mild difficulties performing their regular work 18% of the time.
- Moderate: The patient has moderate difficulties performing their regular work 0% of the time.
- Severe: In 0% of cases, the patient has extreme difficulty performing their regular job.
- Extreme/cannot: The patient is unable to perform their regular job 0% of the time.

Overall, the patient has very little trouble performing their regular duties. This is encouraging because it shows that the cataracts are not seriously impairing vision. However, the patient can still have some trouble performing their regular tasks in dim light or during periods of intense glare. The patient may eventually need to think about having cataract surgery if their vision continues to deteriorate.

Pre and post-surgery comparison

1. Overall rating of eyesight before and after cataract surgery

Q. Overall, how would you rate your eyesight using both eyes – with glasses or contact lenses if you wear them?

Before surgery	
very good	0
Good	0
Bad	71
very bad	24
Moderate	5
Total	100

After surgery	
very good	64
Good	36
Moderate	0
Bad	0
very bad	0
Total	100

Analysis:

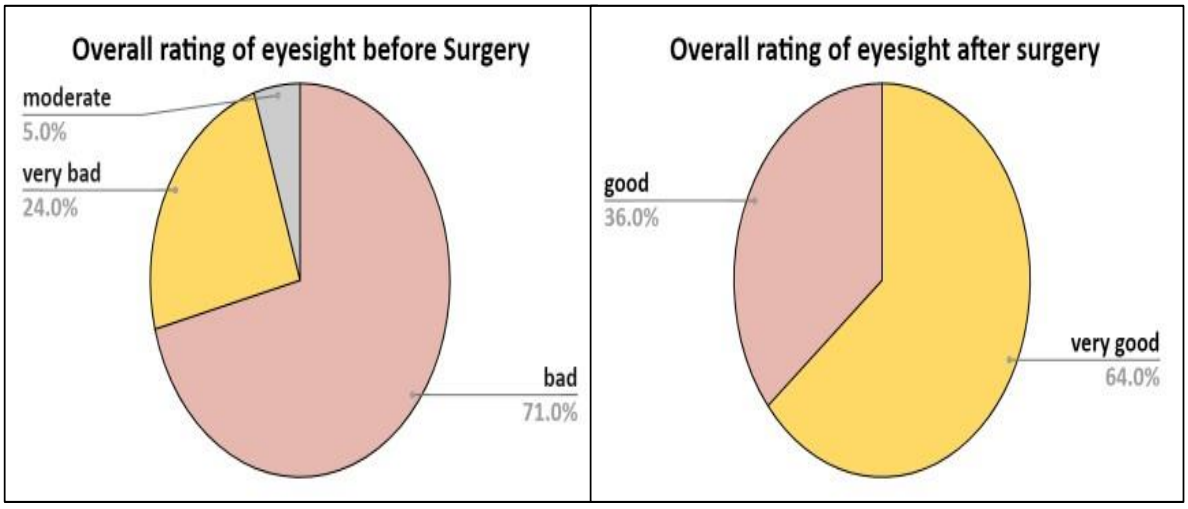


Figure 1.1

According to the **figure 1.1**, the distribution of overall eyesight ratings among cataract patients before surgery is as follows:

It can be seen from chart that there was high Proportion of Patients with bad eyesight. The majority of cataract patients, accounting for 71% of the respondents, rated their eyesight as "bad" before the surgery. This indicates that cataracts significantly affected their visual acuity and quality of life. Also, rest of 24% and 5% respondents rated their eyesight as “very bad” and “moderate” respectively.

After surgery,

With the majority of respondents (64%) rating their eyesight as very good. This suggests that the surveyed individuals have a generally positive perception of their visual capabilities with both eyes, possibly aided by the use of glasses or contact lenses if applicable. 36% of the respondents rated their eyesight as good, suggesting that a significant portion of the sample population considers their eyesight to be satisfactory, with minor visual issues that may not significantly affect their daily activities.

2. Pain and discomfort in eyes

Q. What is the intensity of discomfort or pain you experience in your eyes (e.g., burning, itching, aching)?

Before surgery	
None	60
Mild	29
Moderate	11
Severe	0
Extreme	0
Total	100

After Surgery	
None	81
Mild	18
Moderate	1
Severe	0
Extreme	0
Total	100

Analysis:

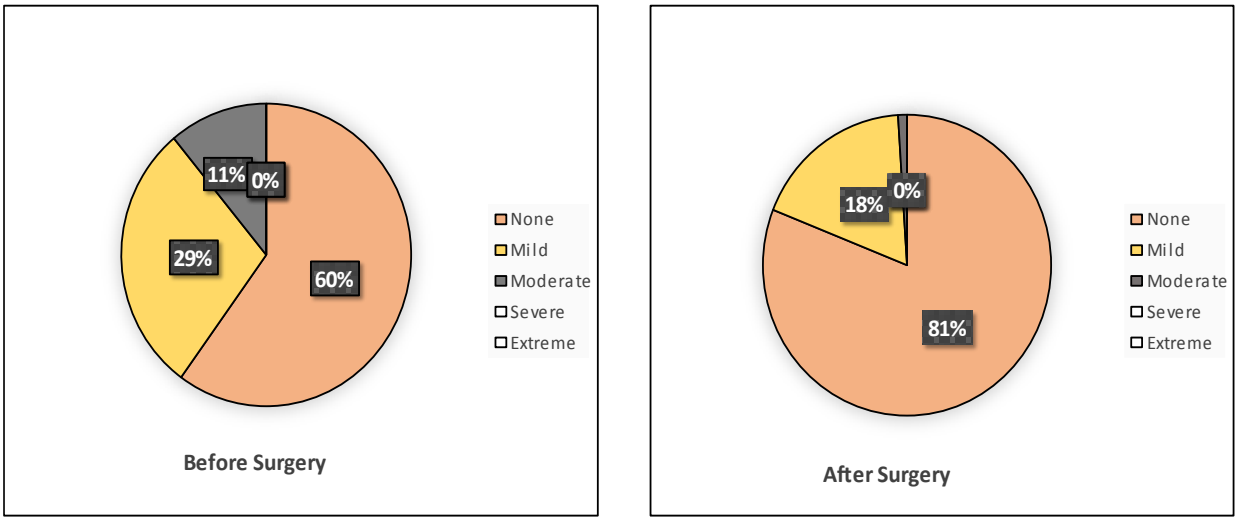


Figure 2.1

From figure 2.1, the majority of respondents reported experiencing no pain or discomfort after the surgery (81%) compared to before (60%). The data indicates a significant improvement in the level of pain or discomfort experienced by individuals after the surgery. This suggests that the surgery was successful in alleviating eye-related pain or discomfort.

The percentage of individuals reporting mild pain or discomfort decreased from 29% before surgery to 18% after surgery. Also, there was a slight decrease from 11% before surgery to 1% after surgery. This indicates that the surgery had a positive impact even on individuals with moderate pain or discomfort.

In conclusion, the analysis of the responses before and after surgery indicates a significant reduction in pain or discomfort in the eyes of the respondents.

3. Difficulty in going down stairs

Q. Because of your eyesight, how much difficulty do you have in going down steps or stairs?

Before surgery	
None	9
Mild	34
Moderate	30
Severe	20
Extreme	7
Total	100

After surgery	
None	90
Mild	9
Moderate	1
Severe	0
Extreme	0
Total	100

Analysis:

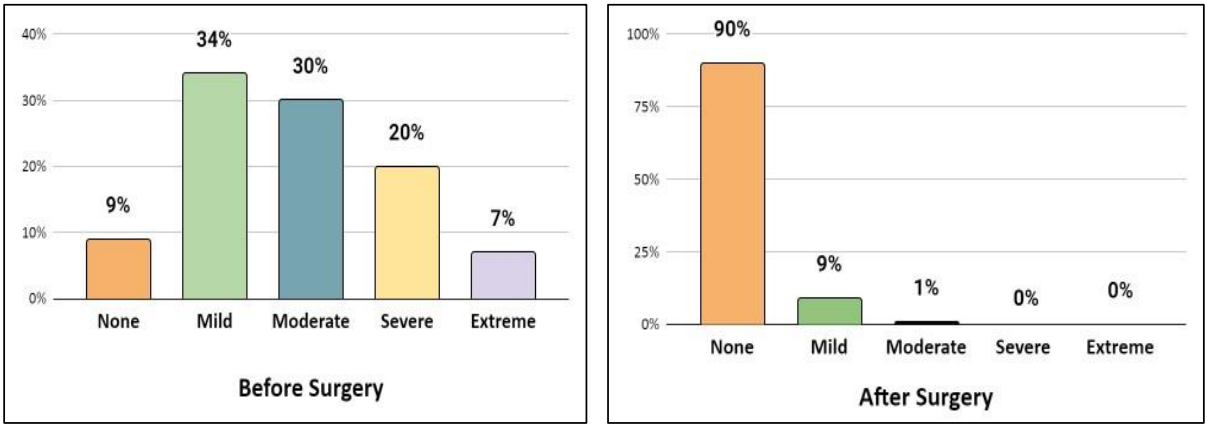


Figure 3.1

As seen in figure 3.1, The data indicates a substantial improvement in difficulty levels after surgery. Before the surgery, the majority of respondents experienced some degree of difficulty, where only 9% reporting no difficulty, 34% had mild difficulty and 30% had moderate difficulty. However, after the surgery, 90% of respondents reported no difficulty in going down steps or stairs, signifying a significant improvement.

The proportions of individuals experiencing mild, moderate, severe, and extreme difficulty decreased substantially after surgery. The highest reduction was observed in the severe and extreme difficulty categories, with both dropping to 0% after the surgery.

4. The degree of challenge in identifying the face of an individual standing in close proximity both before and after the surgical procedure.

Q. Due to your visual impairment, how significant is the challenge you face in recognizing the face of a person standing in close proximity to you? (e.g., family members)

Before surgery	
None	3
Mild	13
Moderate	20
Severe	40
Extreme	24
Total	76

After surgery	
None	98
Mild	2
Moderate	0
Severe	0
Extreme	0
Total	100

Analysis:

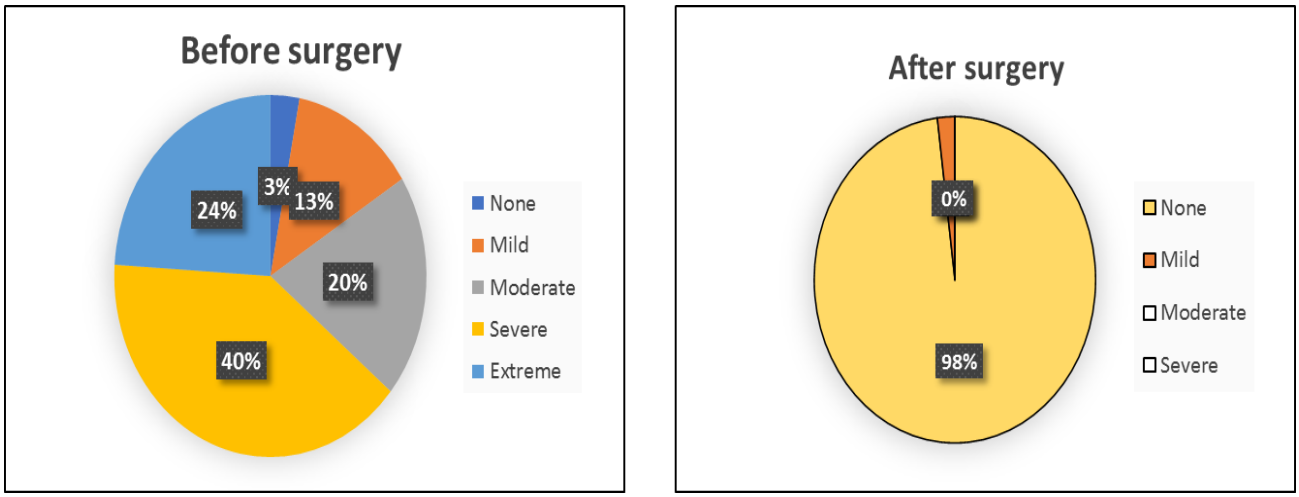


Figure 4.1

	Mean	N	Std. Dev.	Std. Error Mean
Before	3.69	100	1.070	0.107
After	1.02	100	0.141	0.014

Table 4.2

The data indicates a significant reduction in the severity of the condition after surgery. Before surgery, the majority of patients exhibited moderate to extreme levels of severity, with 40% classified as severe and 24% as extreme while recognizing face of a person standing in front. However, after surgery, a substantial improvement is observed, with 98% of patients categorized as having no severity.

5. Crowded Shelf: Challenges in Locating Items

Q. Due to your visual impairment, how significantly does it impede your ability to search for items on a crowded shelf?

Before surgery

None	2
Mild do	13
Moderate	8
Severe	47
Extreme/cannot	30
Total	100

After surgery

None	98
Mild	2
Moderate	0
Severe	0
Extreme	0

Analysis:

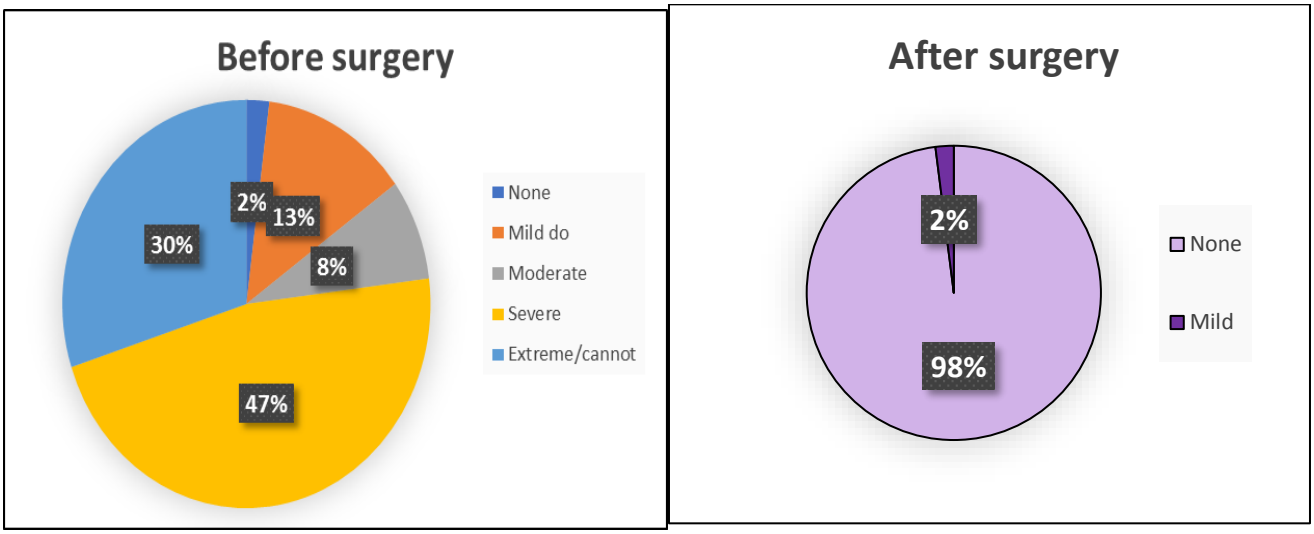


Figure 5.1

From figure 5.1, it can be seen that there is a significant reduction in the severity of the condition after surgery. Before surgery, a large portion of patients experienced severe (47%) and extreme/cannot (30%) levels of severity. Also 13% experienced mild difficulty and 8% said they have moderate difficulty while searching for something in a crowded shelf.

However, after surgery, a significant improvement is observed, with 98% of patients categorized as having no severity.

DISCUSSION

The previous study shows that majority of the participants were female (52.3%) (Amedo AO et al, 2016) and the majority of cataract patients in this study were males, comprising 60% of the total sample, while females constituted the remaining 40%.

The income distribution among the cataract patients reveals that there is a higher prevalence of cataracts among individuals with lower income levels.

The findings indicate varying degrees of difficulty in recognizing faces among cataract patients. A small percentage (3%) reported no difficulty in recognizing faces, while a significant proportion experienced moderate (20%), severe (40%), or extreme difficulty (24%) in this regard. These results highlight the impact of cataracts on facial recognition abilities, which can have significant social implications for individuals affected by this condition.

The study reveals that a substantial proportion of cataract patients (42%) reported rarely participating in social functions due to their eyesight, while 44% mentioned occasional participation. This indicates that cataracts can have a notable impact on a person's social life, potentially leading to reduced engagement and isolation.

In terms of mobility and obstacle detection, the majority of respondents (96%) reported no difficulty in noticing obstacles while walking alone. Only a small percentage experienced mild (3%) or moderate (1%) difficulty in this aspect. This suggests that the majority of cataract patients in the study did not face significant challenges in detecting potential obstacles during their walks.

The vast majority of respondents (99%) reported no difficulty in perceiving differences in colors. A small percentage mentioned mild difficulty (1%), while no respondents reported moderate, severe, or extreme difficulty in this aspect. This indicates that cataract patients in the study generally retained their ability to perceive colors accurately, suggesting that color vision is less affected by cataracts compared to other visual functions.

CONCLUSION

- There are significant gender disparities among cataract patients, with males being more affected.
- Lower-income individuals were more likely to have cataracts, reflecting the impact of socioeconomic factors on the prevalence of the condition.
- Before surgery, majority of cataract patients had difficulties in recognizing the faces, searching something in crowded shelf, and also, they were hesitant to participate in any social functions.
- Also, about 36% of patients felt ashamed and burden on others because of their poor eyesight.
- Many cataract patients (45%) worry often about losing their remaining eyesight, indicating significant concerns about their vision.
- The analysis reveals a positive outcome after cataract surgery, with a significant improvement in the perceived quality of eyesight. The majority of respondents reported very good eyesight, indicating successful visual restoration and enhanced quality of life for cataract patients.
- Post-surgery, patient had no any difficulties in noticing obstacles while walking alone, searching for something in a crowded shelf, navigate steps or stairs and also, the surgery has significantly improved facial recognition. Patients successfully restored the colour vision and along with there is improvement in their near and distant vision.
- A significant reduction in pain or discomfort in the eyes of respondents after cataract surgery, highlighting the success of the surgical intervention in improving their well-being.
- The patient experiences no significant difficulty in carrying out their usual work, indicating successful restoration of vision and minimal impact on occupational tasks after the cataract surgery.

LEARNINGS

1. Formation of operational manual for preventive blindness program

2. BLS training

3. Field experience and data collection

4. SPSS

RECOMMENDATIONS

1. Raise awareness: Launch extensive public education programmes to inform people about cataracts, their effects on quality of life, and the availability of surgical solutions.

2. Appropriate screening programmes: Implement frequent screening programmes to spot cataract cases early and ensure prompt treatment.

3. Patient counselling and support: Give cataract patients thorough counselling services, addressing their worries, hopes, and needs for post-operative care.

REFERENCES

1. https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

2. https://npcbvi.mohfw.gov.in/Home

3. Kapoor H, Chatterjee A, Daniel R, Foster A. Evaluation of visual outcome of cataract surgery in an Indian eye camp. Br J Ophthalmol 1999;83:343-6

4. https://npcbvi.mohfw.gov.in/Home

5. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2478719/

6. https://apps.who.int/iris/handle/10665/68601

7. https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment

8. Kumar A, Vashist P. Indian community eye care in 2020: Achievements and challenges. Indian J Ophthalmol. 2020 Feb;68(2):291-293. doi: 10.4103/ijo.IJO_2381_19. PMID: 31957710; PMCID: PMC7003597.

9. Amedo AO, Koomson NY, Pascal TM, Kumah DB, Ocansey JN, Asare-Bediako B. Quality of life of cataract patients before and after surgery-evidence from four rural communities in Ghana. Mathews Journal of Ophthalmology. 2016 Jun 13;1(1):1-7.

10. Gothwal VK, Reddy SP, Sumalini R, Bharani S, Bagga DK. National Eye Institute Visual Function Questionnaire or Indian Vision Function Questionnaire for visually impaired: a conundrum. Invest Ophthalmol Vis Sci. 2012 Jul 18;53(8):4730-8. doi: 10.1167/iovs.11-8776. PMID: 22700705.

ANNEXURE

SURVEY QUESTIONNAIRES

Hello!!

My name is Dr. Minal Tembhurne. I am working with Tata Steel Foundation. We are conducting a survey about the post operative impact of cataract surgery particularly the reintegration of the daily activities in the districts of Jharkhand. The information we collect from individuals will help TATA Steel Foundation in improving the services. I want to ask you a few questions about experiences after the cataract surgery. The questions usually take about 15-20 minutes. All answers you give will be confidential and will not be shared with anyone other than members of our survey team. Your participation in the survey is voluntary. If I ask you a question you do not want to answer, just let me know and I'll move on to the next question or you can stop the interview at any time. If you have any questions about this survey, you can ask me. If you have any further questions about this survey, you can contact team members. Do you agree to participate in this survey?

DEMOGRAPHIC DETAILS

1.	Name of Patient	
2.	Age of patient	
3.	Gender	
4.	Address	
5.	Occupation	
6.	Income	
7.	Contact no.	
8.	Date of surgery done	
9.	Date of 1st follow up	
	Date of 2nd follow up	
10.	Name of hospital under which surgery has done	

Before Surgery Questions

1	Overall, how would you rate your eyesight using both eyes – with glasses or contact lenses if you wear them?	1. very good	2. good	3. moderate	4. bad	5. very bad
2	How much pain or discomfort do you have in your eyes (e.g. burning, itching, aching)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
3	Because of your eyesight, how much difficulty do you have in going down steps or stairs?	1. None	2. Mild do	3. Moderate	4. Severe	5. Extreme/ Cannot
4	Because of your eyesight, how much difficulty do you have in searching for something on a crowed shelf?	1. None	2. Mild do	3. Moderate	4. Severe	5. Extreme/ Cannot
5	Because of your eyesight, how much difficulty do you have in recognizing the face of a person standing near you? (e.g family members)	1. None	2. Mild do	3. Moderate	4. Severe	5. Extreme/ Cannot

6	Because of your eyesight, how often have you been hesitant to participate in social functions?	1. Never	2. Rarely	3. Sometimes	4. Often	5. Very often
7	Because of your eyesight, how often have you found that you are ashamed or embarrassed?	1. Never	2. Rarely	3. Sometimes	4. Often	5. Very often
8	Because of your eyesight, how often have you felt that you are a burden on others?	1. Never	2. Rarely	3. Sometimes	4. Often	5. Very often
9	Because of your eyesight, how often do you worry that you may lose your remaining eyesight?	1. Never	2. Rarely	3. Sometimes	4. Often	5. Very often

After Surgery Questions

1	Overall, how would you rate your eyesight using both eyes – with glasses or contact lenses if you wear them?	1. very good	2. good	3. moderate	4. bad	5. very bad
2	How much pain or discomfort do you have in your eyes (e.g. burning, itching, aching)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
3	Because of your eyesight, how much difficulty do you have in going down steps or stairs?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
4	How much difficulty do you have in noticing obstacles while you are walking alone (e.g. animals or vehicles)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme

5	How much difficulty do you have in seeing because of glare from bright lights?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
6	Because of your eyesight, how much difficulty do you have in searching for something on a crowed shelf?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
7	How much difficulty do you have in seeing differences in colours?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
8	Because of your eyesight, how much difficulty do you have in recognizing the face of a person standing near you? (e.g. family members)	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
9	How much difficulty do you have in seeing the level in a container when pouring?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme

10	Because of your eyesight, how much difficulty do you have in going to activities outside of the house (e.g. shopping, religious events)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
11	Because of your eyesight, how much difficulty do you have in recognizing people you know from a distance of 20 metres?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
12	How much difficulty do you have in seeing close objects (e.g. making out differences in coins or notes)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
13	How much difficulty do you have in seeing irregularities in the path when walking (e.g. potholes)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
14	How much difficulty do you have in seeing when coming inside after being in bright sunlight?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme

15	How much difficulty do you have in doing activities that require you to see well close up (e.g. sewing, using hand tools)?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme
16	Because of your eyesight, how much difficulty do you have in carrying out your usual work?	1. None	2. Mild	3. Moderate	4. Severe	5. Extreme

Pictorial journey


TATA STEEL FOUNDATION
TATA
नि:शुल्क
शन शिविर
सहयोगी संस्था
नेत्र जाँच
मोतियाबिंद ऑपरेशन
शिविर का स्थान

Minal D report

ORIGINALITY REPORT

6%	6%	4%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	louisdl.louislibraries.org Internet Source	1%
2	1library.net Internet Source	1%
3	researchonline.lshtm.ac.uk Internet Source	<1%
4	Seyithan Taysi, Ramazan Memisogullari, Mehmet Koc, Ahmet Taylan Yazici et al. "Melatonin reduces oxidative stress in the rat lens due to radiation-induced oxidative injury", International Journal of Radiation Biology, 2009 Publication	<1%
5	www.mathewsopenaccess.com Internet Source	<1%
6	auachsr.com Internet Source	<1%
7	www.ncbi.nlm.nih.gov Internet Source	<1%

8	www.food.gov.uk Internet Source	<1 %
9	link.springer.com Internet Source	<1 %
10	kupdf.net Internet Source	<1 %
11	"South-East Asia Eye Health", Springer Science and Business Media LLC, 2021 Publication	<1 %
12	H. Kapoor, A. Chatterjee, R. Daniel, A. Foster. "Evaluation of visual outcome of cataract surgery in an Indian eye camp", British Journal of Ophthalmology, 1999 Publication	<1 %
13	www.dovepress.com Internet Source	<1 %
14	journal.fk.unpad.ac.id Internet Source	<1 %
15	www.fhs.mcmaster.ca Internet Source	<1 %
16	www.science.gov Internet Source	<1 %
17	Isabel Signes-Soler, Jaime Javaloy, Robert Montés-Micó, Gonzalo Muñoz et al. "Vision-related Quality of Life After Cataract Surgery	<1 %

	in West Africa", Research Square Platform LLC, 2022 Publication	
18	atrium.lib.uoguelph.ca Internet Source	<1 %
19	www.mcser.org Internet Source	<1 %
20	Jessica Raque, Adam Goble, Veronica M. Jones, Lindsey E. Waldman, Erica Sutton. "The Relationship of Endoscopic Proficiency to Educational Expense for Virtual Reality Simulator Training Amongst Surgical Trainees", The American Surgeon, 2015 Publication	<1 %
21	repository.out.ac.tz Internet Source	<1 %
22	www.researchgate.net Internet Source	<1 %
23	www.ukessays.com Internet Source	<1 %
24	idoc.pub Internet Source	<1 %
25	iovs.arvojournals.org Internet Source	<1 %
26	mhealth.jmir.org Internet Source	<1 %

27	pure.uva.nl Internet Source	<1 %
28	unsworks.unsw.edu.au Internet Source	<1 %
29	www.longdom.org Internet Source	<1 %
30	www.openaccessgovernment.org Internet Source	<1 %
31	Lachlan Farmer, Cecilia Innes-Wong, Caroline Bergman-Hart, Robert J. Casson, John Crompton. "Visual Acuity, Quality of Life and Visual Function Outcomes after Cataract Surgery in Bali", Ophthalmic Epidemiology, 2015 Publication	<1 %
32	Praveen Vashist, Suraj Singh Senjam, Vivek Gupta, Noopur Gupta et al. "Blindness and visual impairment and their causes in India: Results of a nationally representative survey", PLOS ONE, 2022 Publication	<1 %
33	publications.aston.ac.uk Internet Source	<1 %