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In



(10th February 2020 to 15th May 2020)

A Report on

BARRIERS TO CATARACT SURGERY IN ELDERLY PATIENTS

By Komal Bharti (PG/18/031)

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Post-graduate Diploma in Hospital and Health Management

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INTERNATIONAL INSTITUTE OF
HEALTH MANAGEMENT RESEARCH

Certificate from Dissertation Advisory Committee

This is to certify that **Ms. Komal Bharti**, a graduate student of the **Post- Graduate Diploma in Health IT Management** has worked under our guidance and supervision. She is submitting this dissertation titled '**Barriers to Cataract Surgery in Elderly Patients**' of Eye-Q Vision" at Eye-Q vision Pvt. Ltd. in partial fulfillment of the requirements for the award of the **Post- Graduate Diploma in Health IT Management**.

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

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Certificate of Approval

The following dissertation titled **"BARRIERS TO CATARACT SURGERY IN ELDERLY PATIENTS"** at **"Eye-Q Vision Pvt. Ltd."** 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 **Post Graduate Diploma in Health and Hospital 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.

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Date:10th February 2020 to 15th May 2020

Place:Gurgaon, Haryana

The certificate is awarded to

Komal Bharti

in recognition of having successfully completed her
Internship at

Eye-Q Vision Pvt. Ltd.

and has successfully completed her Project on

Barriers to Cataract Surgery in Elderly Patients

Date- 15th May 2020

Organization: Eye-Q Vision Pvt. Ltd.

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

We wish her all the best for future endeavors.

Training & Development

Zonal Head-Human Resources

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KOMAL BHARTI

(PG/18/031)

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1. ABOUT THE ORGANIZATION



The Eye-Q hospital chain is committed to providing best quality eye care at affordable cost across India. We are an ISO 9001-2015 registered organization operating under the leadership of our Founder and CMD- Dr. Ajay Sharma- one of the most renowned eye surgeons in India, aided by a team of specialists with rich experience in their respective specialties from top hospitals across the country.

Established in 2007, Eye-Q is today a chain of 37 super speciality eye hospitals with centres in Delhi-NCR, Haryana, Uttar Pradesh, Uttarakhand and Gujarat. It has recently extended its services in Maharashtra and is soon going to launch its operations in Africa with a centre in Lagos, Nigeria.

VISION

To be India's foremost chain of eye hospitals in terms of both Quality of eye care and the Number of patients handled.

MISSION

To make every patient an Ambassador for Eye-Q through a combination of

- Highest level of quality and technology in eye care.
- Exceptional personal care.
- Complete integrity to the patient and his/her needs.

VALUES

- Be honest and open in my communication and do what I say I will do
- I accept our individual & team responsibility and meet my commitments each & every time
- Our clinical & non clinical team is supportive of each other's efforts and care for each other
- Give care, compassion & respect to patients and colleagues as I expect for myself
- Will make conscious effort to contribute in creating a social impact
- Will embrace and drive positive change

EYE-Q CLINICAL SPECIALTIES

CATARACT SURGERY

Cataract is a disease which mostly occurs in the elderly population. Cataract requires immediate doctor advice to get the treatment. EYE-Q offers laser automated technology for Cataract surgery which is a bladeless and painless method. EYE-Q doctors have successfully treated cataract patients and again brought back life to their vision.

LASIK SURGERY

Lasik surgery is the best way to get rid of the eyeglasses. EYE-Q hospitals offer comprehensive detailed eye check up to check whether the patient is suitable for LASIK surgery or not. The check-up ensures that the patient is completely fit to undergo treatment. EYE-Q doctors have a decade of experience in performing surgery.

RETINA TREATMENT

Retinal tearing and retinal detachment are treated using retinal surgery which is combined using laser photocoagulation and retinal freezing cryopexy techniques. EYE-Q offers treatment which is best suited to patient requirements. EYE-Q eye doctors have successfully performed retinal surgeries without any complications.

PEDIATRIC SERVICES

Squint and Amblyopia fall under paediatric eye disease which requires early treatment. EYE-Q eye specialists are trained for paediatric eye care which is generally different in approach with respect to the adult patients. Best technological equipment is present for visual evaluations of children and its correction.

OPTICAL SERVICES

Optical services are offered at EYE-Q hospitals. Our experienced optometrists are professionally qualified to deliver quality services to the clients. EYE-Q has invested in faster glazing machines to offer the best spectacles and contact lenses for the patient with vision problems. Eye-Q has collaborated with Pinnacle optical Pvt Ltd.

GENERAL EYE CARE

General eye care deals with a routine check-up and common eye problems such as dry eyes, conjunctivitis etc. EYE-Q hospitals have a world-class infrastructure to cater to the needs of the patients. Doctors have vast experience in offering solutions to patients for eye care and treating general eye problems.

DIABETES EYE CARE

Diabetic retinopathy is a serious condition of the retina that could lead to blindness in diabetic patients. Our hospitals across India cater to the eye care of diabetic patients which is focused on early diagnosis and management of disease by our experienced doctors who have more than decade of experience in serving diabetic patients.

REFRACTIVE SERVICES

Refractive defects include myopia, hypermetropia, and astigmatism which generally occurs due to refractive errors leading to vision defects. Refractive services include Lasik surgery which is a tried and tested method for refractive errors. EYE-Q dedicated team of doctors have years of experience in treating the patients.

CONTACT LENSES

Contact lenses are alternative to Eyeglasses which offer great relief to the people with refractive error defects. Contact lenses are hassle free and offer crystal clear vision. Our experienced optometrists evaluate and provide lenses for correcting refractive errors such as myopia, hyperopia, and astigmatism.

OCULOPLASTY SERVICES

Oculoplasty surgery is offered as a cosmetic, corrective and reconstructive eye surgery in cases of retinoblastoma and ocular-orbital eye defects. EYE-Q offers comprehensive and contemporary approaches for diagnosing and treating eye defects. EYE-Q surgeons have more than a decade of experience for treating eye patients and providing them with post-operative care.

SQUINT SURGERY

Squint (Strabismus) is a condition which arises due to an incorrect balance of muscles, refractive errors, nerve palsy, and several other reasons. Our hospitals have experienced eye doctors for child's evaluation and treatment. Squint Surgery is day-care surgery with no hospitalization. Our paediatric ophthalmologist have extensive experience in treating children with the squint.

[GLAUCOMA TREATMENT](#)

Glaucoma occurs when the optic nerve gets damaged due to intraocular pressure which can result in vision loss also depending on the severity. Doctors need to be consulted immediately for better chances of recovery. Eye-Q specialist doctors have a wide range of experience in dealing with Glaucoma which requires treatment combined with psychological counselling.

[BASIC EYE CARE](#)

Lifestyle changes and increased pollution has led to an increase in Eye problems among the population. General eye care demands regular health check-ups, wearing protective eyeglasses, wash eyes thoroughly with water and rest to eyes after television.

[COMPLETE EYE CARE](#)

Comprehensive eye care aims to provide people access to eye care services that meet their needs at every stage of life. This doesn't only include prevention and treatment but also vision correction. EYE-Q offers comprehensive eye care treatment to patients with eye defects.

[ICL SURGERY](#)

Implantable Collamer lens surgery is the procedure in which contact lenses are implanted into the eyes. The ICL lens works with the natural eye lens for correcting refractive errors.

2. ABOUT CATARACT

A cataract is an opacification of the lens of the eye which leads to a decrease in vision. Cataracts often develop slowly and can affect one or both eyes. Symptoms may include faded colours, blurry or double vision, halos around light, trouble with bright lights, and trouble seeing at night. This may result in trouble driving, reading, or recognizing faces. Poor vision caused by cataracts may also result in an increased risk of falling and depression. Cataracts cause half of all cases of blindness and 33% of visual impairment worldwide.

Cataracts are most commonly due to aging but may also occur due to trauma or radiation exposure, be present from birth, or occur following eye surgery for other problems. Risk factors include diabetes, smoking tobacco, prolonged exposure to sunlight, and alcohol. The underlying mechanism involves accumulation of clumps of protein or yellow-brown pigment in the lens that reduces transmission of light to the retina at the back of the eye. Diagnosis is by an eye examination.

Prevention includes wearing sunglasses, a wide brimmed hat, eating leafy vegetables and fruits, and avoiding smoking. Early on the symptoms may be improved with glasses. If this does not help, surgery to remove the cloudy lens and replace it with an artificial lens is the only effective treatment. Cataract surgery is not readily available in many countries, and surgery is needed only if the cataracts are causing problems and generally results in an improved quality of life.

About 20 million people are blind due to cataracts. It is the cause of approximately 5% of blindness in the United States and nearly 60% of blindness in parts of Africa and South America. Blindness from cataracts occurs in about 10 to 40 per 100,000 children in the developing world, and 1 to 4 per 100,000 children in the developed world. Cataracts become more common with age. In the United States, cataracts occur in 68% of those over the age of 80 years. Additionally they are more common in women and White people.

❑ What Causes Cataracts?

You develop them when protein builds up in the lens of your eye and makes it cloudy. This keeps light from passing through clearly. It can cause you to lose some of your eyesight. There are different types of cataracts. They include:

- **Age-related.** These form as you get older.
- **Congenital.** This is what doctors call it when babies are born with cataracts. They may be caused by infection, injury, or poor development in the womb. Or, they can form in childhood.

- **Secondary.** These happen as a result of other medical conditions, like diabetes. They can also result from being around toxic substances, ultraviolet light, or radiation, or from taking medicines such as corticosteroids or diuretics.
- **Traumatic.** These form after an injury to the eye.

Other things that can increase the risk of getting cataracts include increased UV light exposure, smoking, and heavy drinking.

❑ What Are the Symptoms?

Cataracts usually form slowly. You may not know you have them until they start to block light. Then you might notice:

- Vision that's cloudy, blurry, foggy, or filmy
- Near-sightedness (in older people)
- Changes in the way you see colour
- Problems driving at night (glare from oncoming headlights, for example)
- Problems with glare during the day
- Double vision in the affected eye
- Trouble with eyeglasses or contact lenses not working well

- **Poor Night Vision:** Cataract develops gradually over time affecting eye Vision resulting in poor night vision. Over the time cataract get larger resulting in blurry vision which can affect people's ability to perform daily tasks.



- **Blurry Vision:** Blurry Vision is caused in case of severe clouding of the eye lens. Blurry and dull vision is the foremost symptom of Cataract. If the cataract is still not treated, it could to permanent Vision loss.



- **Multiple Eye Vision:** Multiple Eye Vision could occur due to improper scattering of light by Cloudy eye lens resulting in multiple incomplete images. The patient will see multiple blurry images which can lead to severe Vision defect.



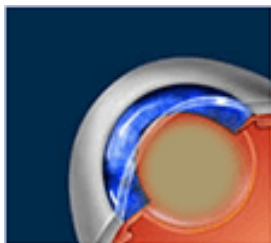
❑ How Are They Diagnosed?

Your eye doctor will give you an exam to test how well you can see. He'll also dilate your pupil to check the lens and other parts of the eye. Remember to bring your glasses or contacts to the appointment.

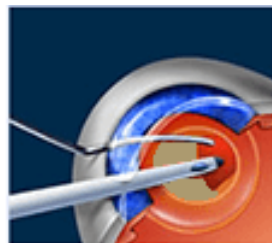
❑ What's the Treatment?

If your vision can be corrected with glasses or contacts, your doctor will give you a prescription. If it can't, and cataracts are a problem in your daily life, you may need cataract surgery.

It's done on an outpatient basis, meaning you'll go home the same day, and it's usually very successful. The surgeon will remove your lens and replace it with a man-made one. More than 95% of people who have this done say they can see better afterward.



An eye with a dense cataract



The cataract is broken up and removed from the eye.



An intraocular lens is folded and placed where the cataract was.



Eye with an intraocular lens after the surgery is complete.

3. Types of CATARACT Surgery at EyeQ Hospital

- 1) **Intra capsular cataract extraction (ICCE)**- Intracapsular cataract extraction (ICCE): this is a large-incision cataract surgery in which the opacified lens is removed completely with its capsule, leaving no support for possible posterior chamber IOL implantation.
- 2) **Extra capsular cataract extraction (ECCE)**- Extracapsular cataract extraction (ECCE) is a type of eye surgery in which the lens of the eyes are removed, leaving the elastic capsule covering the lens which is left partially attached to allow the implantation of an intraocular lens (IOL).
- 3) **Small incision cataract surgery (SCIS)**- Small-incision cataract surgery (MSICS also SICS or SECCE) is a low-cost, small-incision form of extracapsular cataract extraction (ECCE) that is principally employed in the developing world.
- 4) **Phacoemulsification (3.2mm incision size)**- Phacoemulsification is a modern cataract surgery method in which the eye's internal lens is emulsified with an ultrasonic handpiece and aspirated from the eye. Aspirated fluids are replaced with irrigation of balanced salt solution to maintain the anterior chamber.
- 5) **Micro incision cataract surgery (2.8-2.2mm incision size)**- Microincision cataract surgery (MICS) is an approach to cataract surgery through incision less than 1.8 mm with the purpose of reducing surgical invasiveness, improving at the same time surgical outcomes. The use of the modern MICS intraocular lens (IOL) requires incisions of 1.8 mm.
- 6) **High precision laser cataract surgery (Femto)**- High precision laser cataract surgery is an advanced type of cataract surgery that uses femtosecond laser technology to bring a new level of precision and accuracy to specific steps in cataract surgery that traditionally have been performed with hand-held surgical.

4. INTRODUCTION

Cataract is still the leading cause of blindness in the world and principal cause of visual impairment globally.

Its prevalence increases with age from less than 5% in persons fewer than 65 years of age to approximately 50% in those 75 years of age and older; thus, it has become a problem associated with getting old.

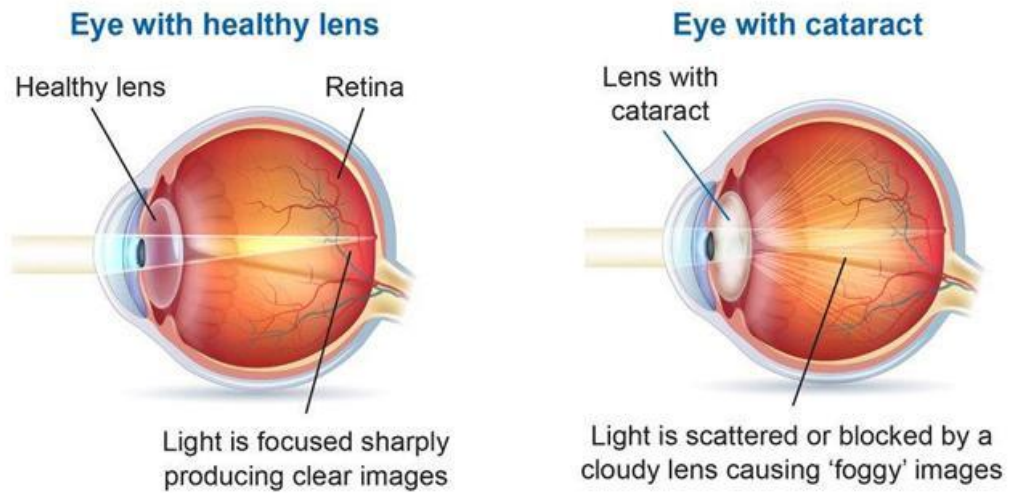
Negative aspects of treatment seeking behavior such as lack of financial support, commitments to the family, accessibility barriers, and lack of awareness on illness or on available treatments are the main reasons why people with visual impairment are not getting the treatment that they require in old age.

Cataract is reported as an important cause of low vision. It is termed as the rapid cause of avoidable blindness in India. cataract is identified as the most important and commonest cause of blindness. So, as yet it is the main cause of visual deficiency not only in India but around the world.

It generally increases with age from under 5% in people that is less than 65 years old to around half in those who are 75 years old and more, in this way it has become a major issue related with getting old.

The Adverse parts of treatment looking for conduct are, for example, lack of money related problems, accessibility, affordability and lack of awareness on disease or on accessible medicines are the principle reasons why individuals with visual disability are not getting the treatment that they require in mature and significant age. Poor visual function was associated with limitations in mobility, activities of daily living, and physical performance. Blindness and visual impairment are not only health issues for the elderly but also significant determinants for all aspects of life, including the quality of their lives. The cataract surgical rates (CSR), defined as the number of cataract surgeries done per million of the population per year, has significantly increased over the last decade in Sri. However, when compared with the prevalence of cataract blindness, it is obvious that the majority of patients are still without appropriate ophthalmologic services. Many government institutes and voluntary organizations are providing free treatment services to patients with cataract. Many people are still not patronizing the available free services; thus, they have to live with impaired vision or blindness. As cataract being one of the commonest cause of avoidable blindness in India, the study of the barriers

that delay the surgical uptake becomes important. This study been done to report the barriers delaying the surgical uptake among elderly patients of age 50 years and above. As per rapid assessment of avoidable blindness in India cataract was identified as the most important and commonest cause of blindness. As people in the world live longer, the number of people with cataract is anticipated to grow. Compared to industrialized countries it is also seen that cataract develops approximately 10 to 14 years earlier in Indian population. India is expected to see an increase in the proportion of aged population (50+years) from 8% every year. This increase will affect directly the number of people with cataract in the country. Increasing the number of cataract surgeries was adopted among the strategies to reduce the cataract backlog. Despite rapid increase in the availability of quality services, surgical acceptance is still low in some segments of elderly patients. Therefore, it becomes critical for planning strategies to determine barriers to use of eye care services in order to prevent blindness. Cataract surgical coverage is inadequate in many places, for obvious reasons such as lack of trained manpower and supplies. Even when services are available, however, there are barriers which keep patients from utilising the services. In India it has been shown that 33–92% of cataract blind patients remain cataract blind, even when surgery is available. Understanding why people do not present for surgery and modifying our programmes to reduce these barriers is critical if we are going to increase cataract surgical coverage. In this study, barriers to the uptake of cataract surgery have been well documented. A range of barriers, including fear of surgery, perceived need, lack of knowledge, attitudinal barriers, and cost, have been reported. Although cataract surgical services have been made more accessible through the provision of transportation and fee waivers, the ratio of persons seeking follow-up treatment still remains low in many of the elderly patients. This study investigated that those patients who had been advised to have cataract surgery but did not have surgery because they want to wait for the cataract to get fully matured for surgery showed that many social factors other than cost also played a role in the uptake of services.



5. OBJECTIVE

- The main objective of this study was to find the factors that are barriers to undertake cataract surgery.
- To assess the awareness and mindset towards cataract surgery among elderly patients.
- To investigate the relative importance that older people attach to these factors when given theoretical choices over options for cataract surgery

6. METHODOLOGY

- ☐ Survey using electronic questionnaire among elderly people is done which includes open and close ended questions regarding fear of side effects after the surgery, affordability, and their awareness about the surgery.
- ☐ Sample Size -70
- ☐ Sampling Technique - Convenience Sampling
- ☐ Study Design - Descriptive
- ☐ Time frame: - 10th June 2020 to 22nd June 2020

7. QUESTIONNAIRE

Do you know about cataract?

(a)Yes (b)No (c)Maybe

2. Have you ever had an eye surgery?

(a)Yes (b)No

3. Could you spend Rs 50,000 for the treatment of cataract surgery?

(a)Yes (b)No (c)Maybe

4. Will you wait for the cataract to get matured for operation?

(a)Yes (b)No (c)Maybe

5. Are you afraid of having an eye surgery?

(a)Yes (b)No (c)Maybe

6. Do you think there are risk of side effects after undergoing an eye surgery?

(a)Yes (b)No (c)Maybe

7. Will you choose laser technology for the cataract surgery?

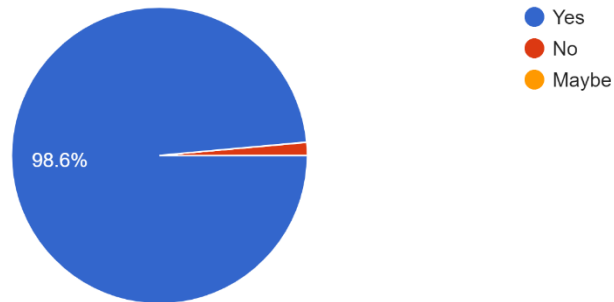
(a) Yes (b)No (c)Maybe

8. RESULTS

Demographic data

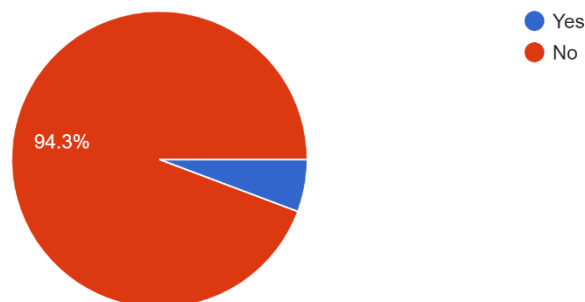
Do you know about Cataract?/ क्या आप मोतियाबिंद के बारे में जानते हैं?

70 responses



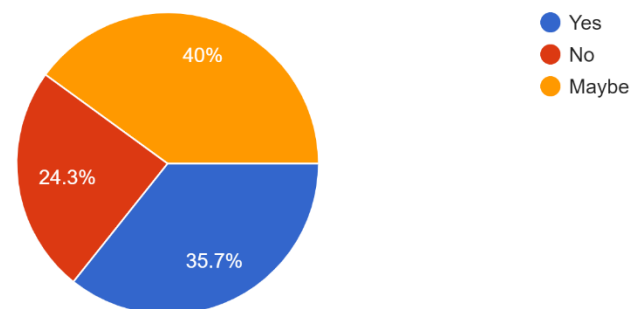
Have you ever had an eye surgery?/ क्या आपने कभी आंखों की सर्जरी करवाई है?

70 responses



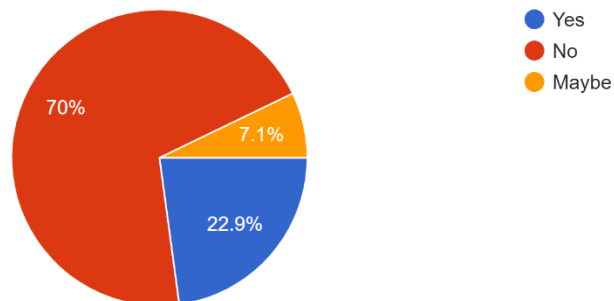
Could you spend ₹50,000 for the treatment of cataract?/ क्या आप मोतियाबिंद के इलाज के लिए ₹५०,००० खर्च कर सकते हैं?

70 responses



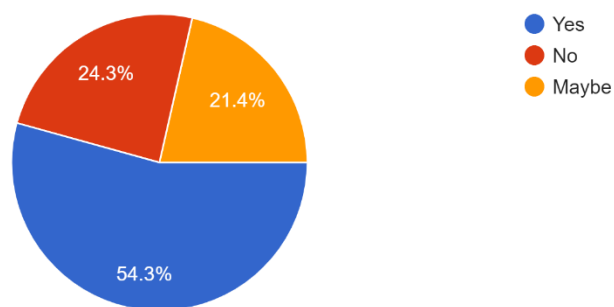
Will you wait for the cataract to get mature for operation? / क्या आप ऑपरेशन के लिए मोतियाबिंद के पकने का इंतजार करेंगे?

70 responses



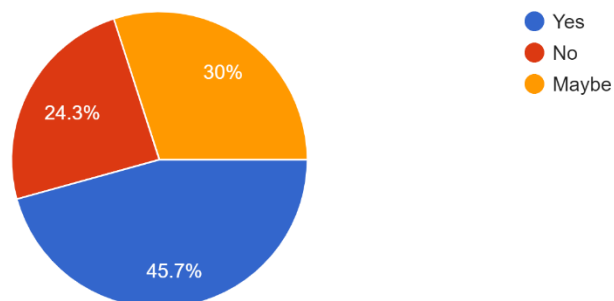
Are you afraid of having an eye surgery? / क्या आप आंखों की सर्जरी करवाने से डरते हैं?

70 responses



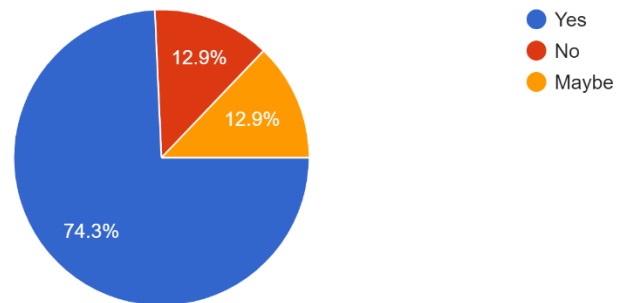
Do you think there are risk of side effects after undergoing an eye surgery? / क्या आपको लगता है कि आंखों की सर्जरी कराने के बाद साइड इफेक्ट्स का खतरा है?

70 responses



Will you choose laser technology for the cataract surgery? / क्या आप मोतियाबिंद सर्जरी के लिए लेजर तकनीक का चयन करेंगे?

70 responses



9. DISCUSSION

- Major barriers reported in the study were fear of surgery (54.3%)
 - Not able to afford treatment (70%)
 - Waiting for the cataract to get mature (35.7%)
 - Fear of side effects post-surgery (45.7%)
 - Surgery using laser technology (12.9%)
 - Significant association of the delay period reported with area, age, sex, education. The common reasons they highlighted not getting the treatment was the financial reasons, fear of surgery, and various myths regarding the procedure and side effects.
 - Subjects with less knowledge about cataract and poor perceptions of local service quality were less likely to undergo cataract operations in this population-based assessment of potential barriers to surgery in elderly patients. This finding was consistent across the elderly population of age 50 years and above that was surveyed. Knowledge about cataract and its treatment has been identified as an important factor in determining access to cataract surgical services. The study shows that 98.6% of patients were aware of cataract but not aware of the surgical methods.
 - The cost of cataract surgery varies widely and may be more than poor people, with little or no disposable income, can afford. It would be a mistake to assume, however, that providing free cataract surgery automatically leads to high cataract surgical coverage. In addition to the surgery itself, there are other costs such as transportation to the hospital, loss of work for the patient or the carer accompanying the patient, and living expenses for the carer while the patient is in the hospital. In India, reducing the cost of surgery and providing transportation expenses for the patient has significantly increased the acceptance of cataract surgery. Studies in India have demonstrated that most people are willing to pay approximately the average monthly income of their families for high quality cataract surgery. There have been innovative approaches to provide high quality services at a lower cost, and testing and implementing these in other settings should become a priority.
- ❑ Cost, as a barrier, may be reduced by:**
- Decreasing the costs of surgery by reducing the cost of supplies and equipment and improving efficiency.

- Reducing the non-surgical costs such as transportation and expenses for carers.

❑ Knowledge of services

- Community based education about cataract has not been undertaken in most areas; when it is, the demand for surgery will increase. Not only must patients be made aware of the existence of the service, but they need to know what to expect:
- How long surgery will take?
- What will it cost?
- Will it be painful?
- Health care workers at the village level must be made aware of existing services.

Lack of knowledge of services as a barrier may be reduced by:

- Using health workers (including community-based rehabilitation workers) to find, screen and educate patients about cataract surgery
- Using successfully operated patients as educators and motivators, patient to patient interaction.
- Educational campaigns using available media resources.

❑ Trust in outcome of surgery (Risk of side effects post-surgery)

Lack of trust in a good outcome as a barrier may be reduced by:

- Additional training of surgeons to ensure that cataract surgery is high quality.
- Transition to IOL surgery as soon as possible.
- Avoiding waiting lists which mean that patients have to return for surgery.
- Barriers will vary according to local conditions and customs. Conversations with patients, village leaders, and women's groups may confirm the existence of barriers such as those listed above or reveal unexpected ones. Programmes planning to increase cataract surgical rates will need to determine the barriers in each area, whether relating to costs, distance, anxiety/fear or other barriers, and find creative ways to overcome them.

10. FINDINGS

- This study investigated the preferences of members of the general public aged 50 years and above for potential options for cataract surgery.
- Complication rate appeared to be the most important factor, closely followed by waiting time.
- By comparison, delay in surgery was relatively fine.
- Individual respondents attached levels of importance to complication rates and waiting times. The importance scores for these factors were strongly negatively correlated.

11. RECOMMENDATIONS

- Counseling sessions should be conducted in which patients must be counseled about the lower risk rate and better technology.
- Testimonials and videos can be used as tool for counseling. Eye model, Testimonials, Pictures, Snellen chart, Patient to patient interaction, Videos, Lens (Monofocal, multifocal, trifocal)
- Marketing strategies should be made which targets old age population, those falling in the age range of 50 years and above.

12. CONCLUSION

In this study it is shown that there are so many barriers coming for undergoing a cataract surgery. They are Lack of awareness, not able to afford treatment, waiting for the cataract to get mature were the major barriers for first surgery and waiting period for maturation, corrected vision in the other eye (24.6%) and non-affordability for the surgery. Further expansion and strengthening of the surgical outreach programme and effective community-oriented eye health education should be undertaken to overcome the barriers. It is been seen that when older people were presented with an assessment for cataract surgery respondents thought that risk of side effects post-surgery would be the possibility to not undergoing a cataract surgery, but the risk of delay in surgery was relatively unimportant. This indicates that elderly patients prefer a greater risk of complications which includes waiting time for cataract to get matured. We can target the elderly population on an alternative of surgery techniques (Laser) Intra ocular lenses, reduce fears on their complications and affordable cost could enhance awareness and positive change for undergoing a cataract surgery.

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