



**Daffodil**  
*International*  
**University**

## **Project On**

**Survey on common eye disorder in Bangladesh**

### **Submitted To**

The Department of Pharmacy,  
Faculty of Allied Health Sciences,  
Daffodil International University

In the partial fulfillment of the requirements for the degree of Bachelor of Pharmacy

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June, 2021

# Survey on common eye disorder in Bangladesh

## APPROVAL

This project, Survey on “Survey on common eye disorder in Bangladesh” submitted to the Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Pharmacy and approved as to its style and contents.

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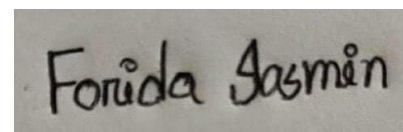
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# Survey on common eye disorder in Bangladesh

## Acknowledgement

All praise is for almighty Allah who has given me ability to complete my BPharm project work and the opportunity to study in this subject.

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Cordial thanks to my family and friend and to all well-wisher for their wholehearted inspiration and open ended support throughout the period of the project work.

# **Survey on common eye disorder in Bangladesh**

## **DEDICATION**

I would like to dedicate my work to my parents for their never-ending support in my life.

# Survey on common eye disorder in Bangladesh

## DECLARATION

I hereby declare that; I completed this project report under the direct supervision of **Md. Kamrul Hasan, Lecturer**, Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University in partial fulfillment of the requirements for the degree of Bachelor of Pharmacy. I declare that this project work is entirely original to me. This project work does not include any previously published content.

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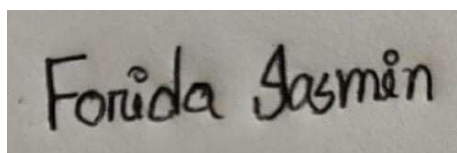
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# **Survey on common eye disorder in Bangladesh**

## **Abstract**

The rate and treatment of typical eye issues in Bangladesh are ineffectually seen. Awareness of ordinary eye contaminations and their underlying area can accept a major part in asking people to search for ideal eye care and consequently help in diminishing the heaviness of visual shortcoming. This examination was proposed to uncover the evaluation of thoughtfulness regarding eye issue among the quantity of occupants in Bangladesh. The study is driven with online survey. around 183 people are partaken here. Around 57.8% people groups have eye issue in bangladesh and 38.9% individuals have no issue on eye From my investigation results, it will in general be recommended that the level of care and data about ordinary eye ailments among the quantity of occupants in Bangladesh was not satisfactory.

**Key words:** Eye, Eye disorder, Cataract, Refractive error, Diabetic retinopathy

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# **CHAPTER ONE**

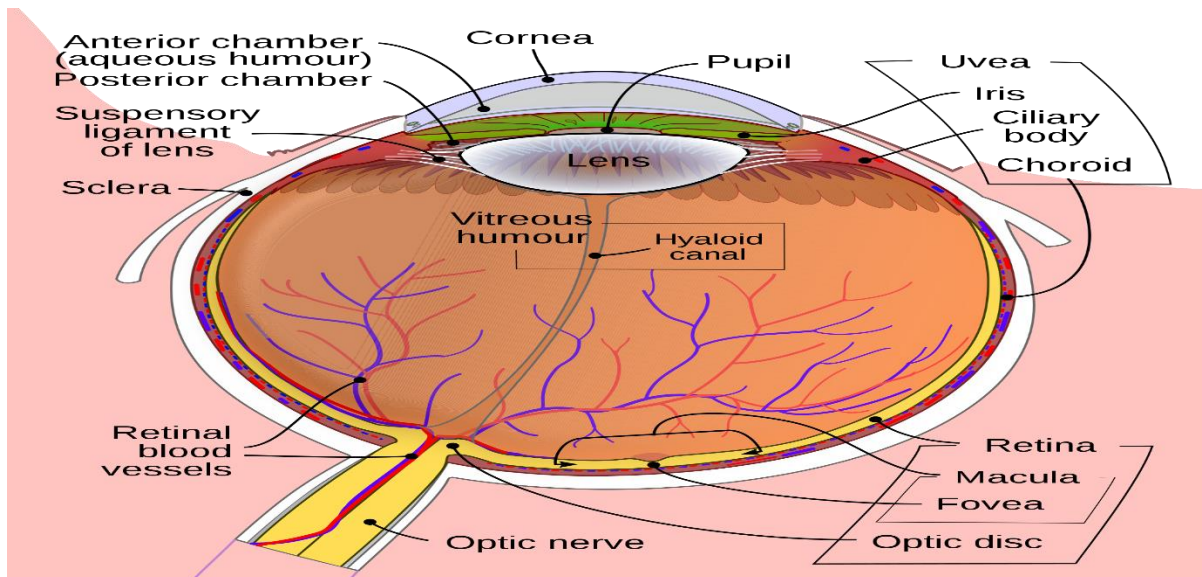
## **INTRODUCTION**

## 1.Introduction:

Eyes are organs of the visual system. They outfit animals with vision, the ability to get and deal with visual detail, similarly as engaging a couple of photo response works that are self-ruling of vision. Eyes perceive light and convert it into electro-compound main impetuses in neurons. In higher living creatures, the eye is a complex optical structure which assembles light from the overall environment, guides it's anything but's a stomach, focuses it's anything but's an adaptable social affair of central focuses to shape an image, changes over this image into a lot of electrical signals, and imparts these signs to the psyche through complex neural pathways that partner the eye through the optic nerve to the visual cortex and various spaces of the frontal cortex. Eyes with settling power have come in ten from an overall perspective different constructions, and 96% of animal species have a complex optical system.[Land et al,The evolution of eyes,Annual Review of Neuroscience,1992] Image-settling eyes are accessible in molluscs, chordates and arthropods.[Frentiu et al, A butterfly eye's view of birds, BioEssays,2008] The most direct eyes, pit eyes, are eye-spots which may be set into a pit to lessen the places of light that enters and impacts the eye-spot, to allow the animal to discover the purpose in drawing nearer light. From more eccentric eyes, retinal photosensitive ganglion cells pass on messages along the retinohypothalamic part to the suprachiasmatic centers to affect circadian change and to the pretectal district to control the pupillary light reflex. The vital proto-eyes created among animals 600 million years earlier about the hour of the Cambrian explosion.[Breitmeyer et al, Blindspots: The Many Ways We Cannot See,New York: Oxford University Press,2010] The last ordinary forerunner of animals had the biochemical instrument compartment essential for vision, and further created eyes have progressed in 96% of animal species in six of the ~35 guideline phyla.In numerous vertebrates and a couple of molluscs, the eye works by allowing light to enter and project onto a light-tricky layer of cells close to the completion of the eye, known as the retina. The cone cells (for concealing) and the shaft cells (for low-light separations) in the retina perceive and convert light into neural finishes paperwork for vision. The visual signs are then shipped off the frontal cortex through the optic nerve. Such eyes are routinely commonly round, stacked up with a clear gel-like substance called the shiny humor, with a focusing point of convergence and much of the time an iris; the loosening up or fixing of the muscles around the iris change the size of the understudy, appropriately coordinating the proportion of light that enters the eye,[Nairne et al, Psychology,Belmont:Wadsworth Publishing,2005] and diminishing contortions when there is

adequate light.[ Bruce et al, Visual Perception: Physiology, Psychology and Ecology, Psychology Press,1996] The eyes of most cephalopods, fish, animals of land and water and snakes have fixed point of convergence shapes, and focusing vision is cultivated by broadening the point of convergence—like how a camera focuses.[ BioMedia Associates Educational Biology Site,What animal has a more sophisticated eye, Octopus or Insect?,2008]

Compound eyes are found among the arthropods and are made out of various essential angles which, dependent upon the nuances of life structures, may give either a single pixelated picture or various pictures, per eye. Each sensor has its own point of convergence and photosensitive cell(s). A couple of eyes have up to 28,000 such sensors, which are arranged hexagonally, and which can give a full 360° field of vision. Compound eyes are sensitive to development. A couple of arthropods, including various Strepsiptera, have compound eyes a few highlights, each with a retina prepared for making an image, making vision. With each eye seeing something substitute, a merged picture from all of the eyes is made in the psyche, giving through and through various, significant standard pictures



**Fig 01:Eye** [Courtesy:Google]

Disorder – An illness that disturbs typical physical or mental capacities. An issue could be characterized as a bunch of issues, which bring about causing critical trouble, misery, debilitation and additionally enduring in an individual's every day life.

### 1.1. What is eye disorder?

The principle wellsprings of visual disability and low vision in the United States are basically age-related eye infections, for instance, age-related macular degeneration, cataract, diabetic retinopathy, and glaucoma. Other ordinary eye issues join amblyopia and strabismus.



**Fig 02: Eye disorder** [Courtesy: Google]

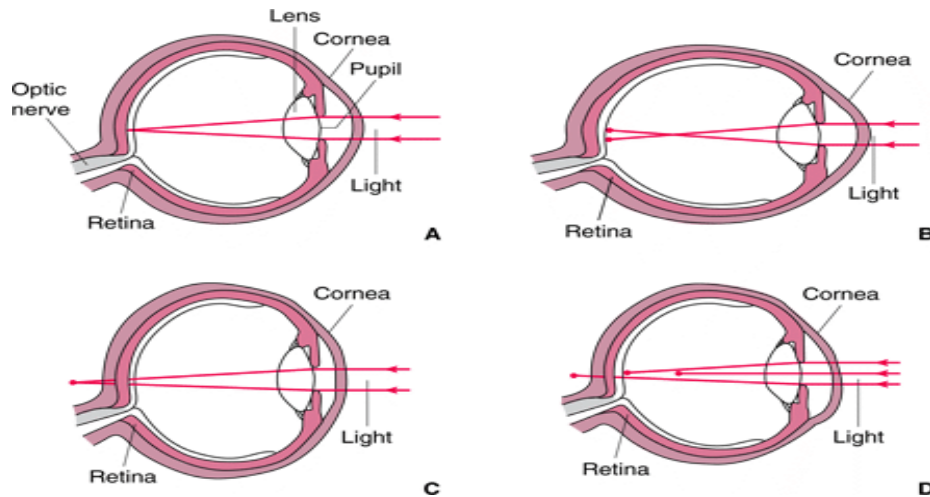
### 1.2. Common Eye Disorders and Diseases

- Refractive error
- Conjunctivitis
- Cataract
- Hypermetropia
- Glaucoma

- Myopia
- Migraine

### **1.2.1.Refractive error**

Refractive error, in any case called refraction botch, is an issue with focusing light decisively on the retina in view of the condition of the eye. The most notable kinds of refractive mix-up are fractional visual impairment, far-sightedness, astigmatism, and presbyopia. Near-sightedness results in far away things being murky, far-sightedness and presbyopia achieve close articles being hazy, and astigmatism causes objects to appear to be released up or blurry. Other signs may consolidate twofold vision, cerebral torments, and eye strain. Nearsightedness is a result of the length of the eyeball being too long, far-sightedness the eyeball unreasonably short, astigmatism the cornea being some unsuitable shape, and presbyopia developing of the point of convergence of the eye so much that it can't change shape sufficiently. Some refractive bumbles happen even more routinely among those whose gatekeepers are affected. Diagnosis is by eye examination. Refractive slip-ups are reexamined with eyeglasses, contact central focuses, or surgery. Eyeglasses are the easiest and most secure strategy for correction. Contact central focuses can give a more broad field of vision; at any rate they are connected with a peril of infection. Refractive operation forever changes the condition of the cornea. [Facts About Refractive Errors, NEI, 2016] The amount of people generally with refractive mix-ups has been evaluated at one to two billion. Rates change between areas of the world with about 25% of Europeans and 80% of Asians affected. Near-sightedness is the most notable disorder. Rates among adults are between 15-49% while rates among youths are between 1.2-42%. Far-sightedness even more ordinarily impacts little children and the elderly. Presbyopia impacts by far most throughout the hour of 35. The amount of people with refractive slip-ups that have not been helped was surveyed at 660 million (10 for every 100 people) in 2013. [Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, a systematic analysis for the Global Burden of Disease Study, 2013] Of these 9.5 million were outwardly weakened due to the refractive error. It is perhaps the most generally perceived purposes behind vision adversity close by cascades, macular degeneration, and supplement A deficiency.



**Fig 03: Refractive error** [Courtesy:Google]

### Classification

An eye that has no refractive mistake when seeing far off objects is said to have emmetropia or be emmetropic importance the eye is in a state where it can shine equal beams of (light from far off objects) on the retina, without utilizing any convenience. A far off object, for this situation, is characterized as an article situated past 6 meters, or 20 feet, from the eye, since the light from those items shows up as basically equal beams while considering the restrictions of human perception.[ Pan et all, The age-specific prevalence of myopia in Asia: a meta-analysis, Optometry and Vision Science,2015] An eye that has refractive mistake when seeing far off objects is said to have ametropia or be ametropic. This eye can't shine equal beams of (light from far off objects) on the retina, or necessities convenience to do as such. "Ametropia" can be utilized conversely with "refractive blunder". Sorts of ametropia incorporate nearsightedness, hyperopia and astigmatism. They are as often as possible classified as round blunders and tube shaped mistakes: Round blunders happen when the optical force of the eye is either excessively huge or too little to even consider shining light on the retina. Individuals with refractive mistake much of the time have foggy vision.

**Nearsightedness:** When the optics are excessively amazing for the length of the eyeball one has nearsightedness or myopia. This can emerge from a cornea or translucent focal point with a lot of shape (refractive nearsightedness) or an eyeball that is excessively long (pivotal nearsightedness).

Nearsightedness can be remedied with an inward focal point, which causes the difference of light beams before they arrive at the cornea.

**Farsightedness:** When the optics are excessively frail for the length of the eyeball, one has hyperopia or farsightedness. This can emerge from a cornea or translucent focal point with insufficient curve (refractive hyperopia) or an eyeball that is excessively short (hub hyperopia). This can be amended with raised focal points, which cause light beams to meet before hitting the cornea.

**Presbyopia:** When the adaptability of the focal point decays, regularly because old enough. The individual would encounter trouble in close to vision, frequently calmed by understanding glasses, bifocal, or reformist focal points. Round and hollow blunders cause astigmatism, when the optical force of the eye is excessively amazing or excessively powerless across one meridian, for example, if the corneal arch tends towards a tube shaped shape. The point between that meridian and the level is known as the hub of the chamber.

**Astigmatism:** An individual with astigmatic refractive blunder sees lines of a specific direction less plainly than lines at right points to them. This deformity can be revised by refracting light more in one meridian than the other. Round and hollow focal points fill this need. Other phrasing incorporate anisometropia, when the two eyes have inconsistent refractive power[ Anisometropia - American Association for Pediatric Ophthalmology and Strabismus,aapos.org,2020] and aniseikonia which is the point at which the amplification power between the eyes differ.

Refractive error might be evaluated as the blunder of a wavefront emerging from an individual's far point, contrasted and a plane, or zero vergence, wavefront looked at a suitable reference plane. The reference plane might be a genuine plane, for example, the scene plane or the corneal plane, or a fanciful plane, for example, the main chief plane or the passage student plane. In diopters, round refractive mistakes can be communicated as  $K=1/k$ , where  $k$  is the distance in meters from the reference plane to an eye's far point, and  $K$  is the refractive blunder in diopters.[ Millodot M et al, In: Dictionary of Optometry and Vision Science 8th ed,Elsevier, 2017] Thus, an individual with nearsightedness would have a contrary refractive mistake, an individual with emmetropia would have zero refractive mistake and an individual with hyperopia would have a positive refractive blunder. On account of customary astigmatism, refractive blunder should be communicated as 3 qualities: traditionally as circle, chamber and pivot. Nonetheless, it can



likewise be communicated in vector terms, for instance, M (mean circle), J0 (With the standard/Against the standard astigmatism), J45 (angled astigmatism). Refractive mistakes containing higher request deviations (once in a while alluded to as unpredictable astigmatism) can be communicated for a given understudy size utilizing wavefront blunders or optical way contrasts, regularly as coefficients for Zernike polynomials. A more emotional amount visual sharpness (communicated as a small portion) might be utilized, however there is no immediate or precise transformation between the two.[Converting Vision Between Diopters and 20/xx". [www.iblindness.org](http://www.iblindness.org), 2020.]

### **What are the symptoms of refractive errors?**

- Double vision.
- Hazy vision.
- Seeing a glare or halo around bright lights.
- Squinting.
- Headaches.
- Eye strain (when your eyes feel tired or sore)
- Trouble focusing when reading or looking at a computer.

### **1.2.2. Conjunctivitis**

Conjunctivitis, in any case called pinkeye, is a disturbance of the conjunctiva. The conjunctiva is the slim clear tissue that lies over the white piece of the eye and lines inside the eyelid. .[ Facts About Age-Related Macular Degeneration, National Eye Institute,2015]Children get it an incredible arrangement. It will in general be incredibly irresistible (it spreads rapidly in schools and day cares), anyway it's rarely huge. It's most likely not going to hurt your vision, especially if you find it and treat it quickly. Exactly when you take care to thwart its spread and do all of the things your PCP recommends, pinkeye clears up with no drawn out issues .[ Evans JR et al,Antioxidant vitamin and mineral supplements for preventing age-related macular degeneration, The Cochrane Database of Systematic Reviews,2017]

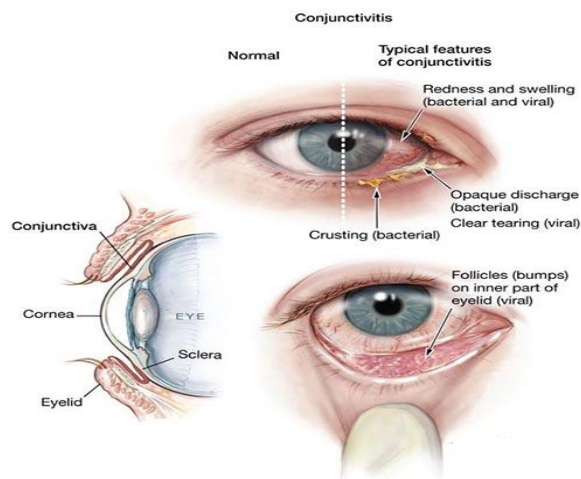
### **What Causes Conjunctivitis?**

A couple of things could be to be blamed, including:

## Survey on common eye disorder in Bangladesh

- Viruses, including the sort that causes the typical infection
  - Bacteria
  - Irritants like shampoos, soil, smoke, and pool chlorine
  - A reaction to eyedrops
- An easily affected reaction to things like residue, buildup, or smoke. Or on the other hand it might be a result of an uncommon sort of affectability that impacts a couple of gathering who wear contact central focuses.
- Fungi, single versatile cells, and parasites [Facts About Cataract, 2015]

Conjunctivitis to a great extent results from an actually sent ailment (STD ). Gonorrhea can welcome on a remarkable yet unsafe sort of bacterial conjunctivitis. It can provoke vision disaster if you don't treat it. Chlamydia can cause conjunctivitis in adults. If you have chlamydia, gonorrhea, or various organisms in your body when you consider a posterity, you can pass pinkeye to your youngster through first experience with the world channel. Pinkeye achieved by certain minuscule life forms and diseases can spread successfully starting with one individual then onto the next, anyway is definitely not a certifiable prosperity risk at whatever point dissected right away. If it's anything but's a baby, in any case, tell an expert quickly, as it might be a pollution thahe youngster's vision.



**Fig 4: Conjunctivitis** [Courtesy:Google]

### **What Are the Symptoms of Conjunctivitis?**

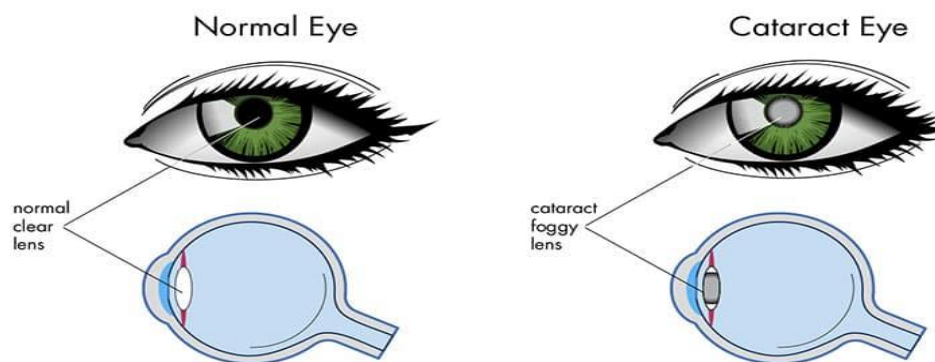
They depend on the cause of the inflammation, but may include:

- Redness in the white of the eye or inner eyelid
- Swollen conjunctiva
- More tears than usual
- Thick yellow discharge that crusts over the eyelashes, especially after sleep. It can make your eyelids stick shut when you wake up.
- Green or white discharge from the eye
- Itchy eyes
- Burning eyes

### **1.2.3.Cataract**

A cataract is an overcast region in the focal point of the eye that prompts a lessening in vision. Cataracts frequently grow gradually and can influence one or both eyes. Symptoms may incorporate blurred shadings, foggy or twofold vision, radiances around light, issue with brilliant lights, and inconvenience seeing at night. This may bring about inconvenience driving, perusing, or perceiving faces. Poor vision brought about by waterfalls may likewise bring about an expanded danger of falling and depression. [Gimbel et al, Consequences of waiting for cataract surgery". Current Opinion in Ophthalmology, 2019] Cataracts cause half of all instances of visual impairment and 33% of visual weakness worldwide. Cataract are most regularly because of maturing yet may likewise happen because of injury or radiation openness, be available from birth, or happen following eye a medical procedure for other problems. [H Brwn et al, Priority eye diseases, 2015] Risk factors incorporate diabetes, longstanding utilization of corticosteroid prescription, smoking tobacco, delayed openness to daylight, and alcohol. The hidden system includes amassing of bunches of protein or yellow-earthly colored shade in the focal point that lessens transmission of light to the retina at the rear of the eye. Diagnosis is by an eye examination. Anticipation incorporates wearing shades, a wide overflowed cap, eating verdant vegetables and natural products, and keeping away from smoking. Early on the indications might be improved with glasses. If this doesn't help, medical procedure to eliminate the shady focal point and supplant it's anything but a counterfeit focal point is the just compelling treatment. Cataract

medical procedure isn't promptly accessible in numerous nations, and medical procedure is required just if the waterfalls are causing issues and by and large outcomes in an improved nature of life. Around 20 million individuals overall are visually impaired due to cataracts. It is the reason for roughly 5% of visual deficiency in the United States and almost 60% of visual impairment in pieces of Africa and South America. [GN et al, The global burden of cataract, Current Opinion in Ophthalmology, 2009] Blindness from waterfalls happens in around 10 to 40 for each 100,000 kids in the creating scene, and 1 to 4 for every 100,000 youngsters in the created world. Cataracts become more normal with age. In the United States, waterfalls happen in 68% of those beyond 80 years old years. Additionally they are more normal in ladies, and more uncommon in Hispanic and Black people. [Cataract Data and Statistics |National Eye Institute, [www.nei.nih.gov](http://www.nei.nih.gov), 2019]



**Fig 05: Cataract eye** [Courtesy: Google]

### Signs and symptoms

Signs and symptoms fluctuate contingent upon the sort of cataract, however impressive cover happens. Individuals with atomic sclerotic or brunescient waterfalls frequently notice a decrease of vision. Atomic waterfalls ordinarily cause more noteworthy hindrance of distance vision than of close to vision. Those with back subcapsular waterfalls ordinarily grumble of glare as their major symptom. [Posterior Supcapsular Cataract, Digital Reference of Ophthalmology, Edward S. Harkness Eye Institute, Department of Ophthalmology of Columbia University, 2003] The seriousness of cataract arrangement, expecting no other eye sickness is available, is judged basically by a visual sharpness test. Different manifestations incorporate incessant changes of glasses and hued radiances because of hydration of focal point. Innate cataract can bring about

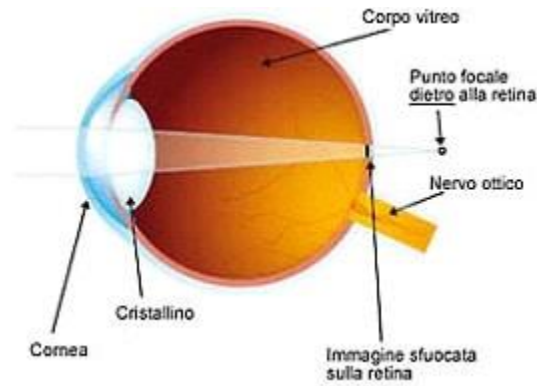
amblyopia if not treated in an opportune manner[Mohammadpour et al, Updates on managements of pediatric cataract". Journal of Current Ophthalmology,2019].

### **1.2.4. Hypermetropia**

Hypermetropia (long-sightedness) is a typical eye condition where close by objects seem obscured, yet your vision is more clear when taking a gander at things further away. In the event that you feel your eyes are regularly drained and you have issues zeroing in on objects near your eyes, you may have hypermetropia [Li Jeany Q et al, Prevalence, incidence and future projection of diabetic eye disease in Europe:a systematic review and meta-analysis,European Journal of Epidemiology,2020]

#### **Causes**

Your eye resembles a camera. It shines light on the rear of your eye (on a spot called the retina), which gives you clear vision. Long-sight is brought about by light not being accurately engaged, with light going behind the retina. One reason might be that your eyeballs are more limited than expected. This implies that the retina is nearer to the student, making light travel past the retina. A typical eye is generally around 23mm long, so an eye that is hypermetropic will be more limited than 23mm. On the other hand you can likewise have hypermetropia if your cornea is level .[Tapp RJ et al,The prevalence of and factors associated with diabetic retinopathy in the Australian population, Diabetes Care,2003]. The cornea ought to be bended to coordinate light onto the retina. Both of these components cause long-sightedness, as they cause light to go past the retina. This outcomes in foggy vision, and can influence your day by day life.Hypermetropia in youngsters. Hypermetropia is normally hereditary. Infants and little youngsters may experience the ill effects of hypermetropia, yet this should in the long run right itself. This occurs as the eyeballs extend as they develop. In any case, a languid eye may create accordingly. This is on the grounds that the eye with the most vulnerable vision is overlooked by the cerebrum, and doesn't gain proficiency with the right method to see. On the off chance that this isn't rectified in little youngsters, there is a danger that the more vulnerable eye won't ever see just as the other eye[Nairne et al,Psychology,Belmont:Wadsworth Publishing,2005].



**Fig 06: Hypermetropia**[Courtesy:Google]

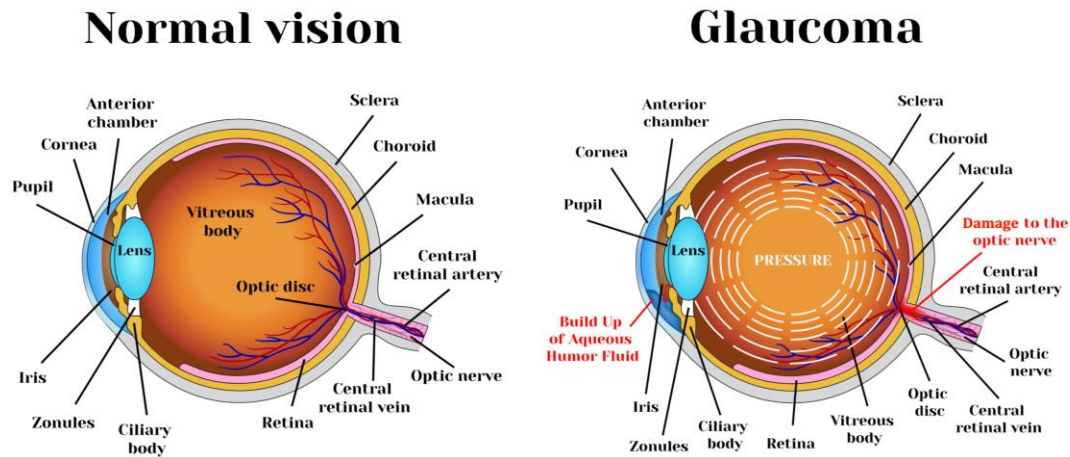
### Treatments for hypermetropia

On the off chance that you figure you might be longsighted, told your optician. They will actually want to analyze this in an eye assessment and furnish you with a solution in the event that you need one.

### 1.2.5.Glaucoma

Glaucoma is a social occasion of eye diseases which achieve mischief to the optic nerve (or retina) and cause vision loss. The most notable sort is open-point (wide point, determined fundamental) glaucoma, in which the leakage plot for fluid inside the eye stays open, with more surprising sorts including shut point (restricted point, serious congestive) glaucoma and average strain glaucoma. Open-point glaucoma develops continuously after some time and there is no pain. Peripheral vision may begin to lessen, followed by central vision, achieving visual inadequacy if not treated.[ Facts About Glaucoma, National Eye Institute, 2016.] Closed-point glaucoma can present gradually or suddenly. The unexpected show may incorporate outrageous eye torture, clouded vision, mid-broadened understudy, redness of the eye, and nausea. Vision setback from glaucoma, at whatever point it has occurred, is permanent. Eyes impacted by glaucoma are suggested as being glaucomatous. Peril factors for glaucoma consolidate extending age, high squeezing factor in the eye, a family foundation of glaucoma, and usage of steroid medication. For eye pressures, a value of more noticeable than 21 mmHg or 2.8 kPa is every now and again used,

with higher squeezing factors provoking a more vital risk.[However, some may have high eye pressure for a significant long time and never make damage.Conversely, optic nerve mischief may occur with average squeezing factor, known as would be normal strain glaucoma.The arrangement of open-point glaucoma is acknowledged to be moderate exit of liquid humor through the trabecular meshwork, while in shut point glaucoma the iris hinders the trabecular meshwork.Diagnosis is by an enlarged eye examination. Often, the optic nerve shows a peculiar proportion of cupping.At whatever point treated early, it is practical to direct or stop the development of disease with drug, laser treatment, or surgery.The goal of these treatments is to reduce eye pressure.different classes of glaucoma medication are available.Laser treatments may be effective in both open-point and shut point glaucoma.different sorts of glaucoma operations may be used in people who don't respond satisfactorily to other measures. Treatment of shut point glaucoma is a clinical emergency.Around 70 million people have glaucoma globally. The ailment impacts around 2 million people in the United States.It happens even more ordinarily among more prepared people.Closed-point glaucoma is more typical in women.Glaucoma has been known as the "peaceful cheat of sight," in light of the fact that the inadequacy of vision generally speaking happens step by step over a broad stretch of time.Worldwide, glaucoma is the second-driving justification visual impedance after cataracts.Cataracts caused 51% of visual insufficiency in 2010, while glaucoma caused 8%.[ Leffler CT et al, Evolution and impact of eye and vision terms in written English,JAMA Ophthalmology, 2015] "glaucoma" is from Ancient Greek glaukos, which means "shimmering." In English, the word was used as early as 1587 yet didn't end up being consistently used until after 1850, when the headway of the ophthalmoscope allowed people to see the optic nerve damage.



**Fig 07: Glaucoma** [Courtesy:Google]

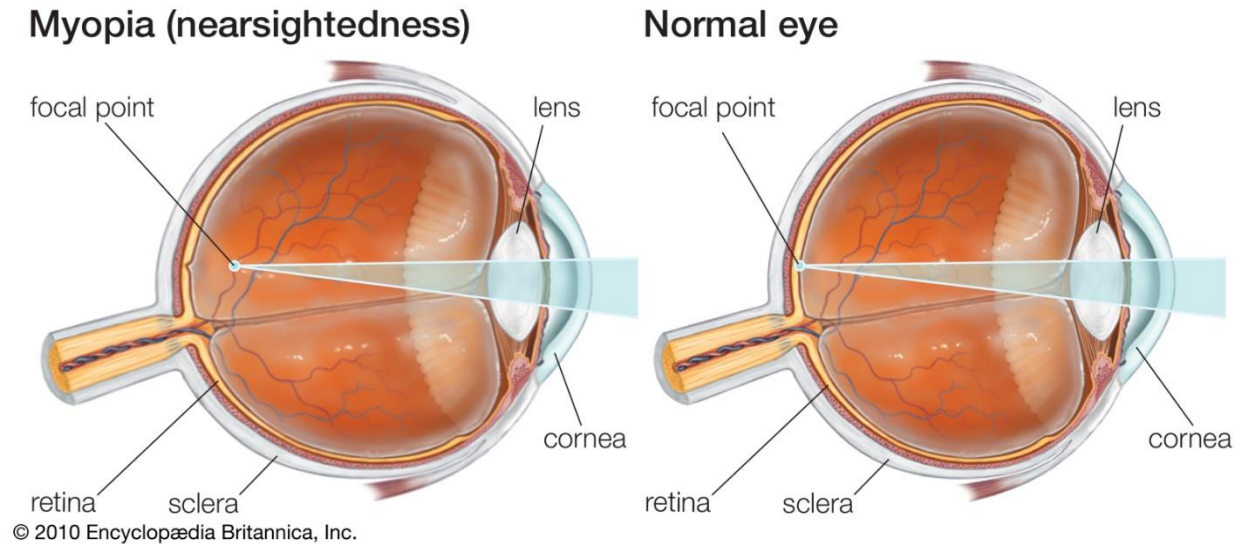
### Signs and symptoms

Open-point glaucoma is generally easy without any indications from the get-go in the sickness interaction, subsequently screening through ordinary eye registration is significant. The solitary signs are slowly reformist visual field misfortune, and optic nerve changes (expanded cup-to-plate proportion on fundoscopic assessment). About 10% of individuals with shut points present with intense point conclusion portrayed by abrupt visual torment, seeing coronas around lights, red eye, high intraocular pressure ( $>30$  mmHg (4.0 kPa)), sickness and retching, out of nowhere diminished vision, and a fixed, mid-enlarged understudy. It is additionally connected with an oval understudy now and again. Intense point conclusion is a crisis. Dark spots may happen in the focal point in glaucoma, known as glaukomflecken.[ Schwartz MW, The 5-minute pediatric consult (3rd ed.). Philadelphia: Lippincott Williams & Wilkins, 2002].

### 1.2.6. Myopia

Is it difficult to see far off objects, similar to expressway signs, until you're a couple of feet away, however simple to peruse a book very close? Odds are you're nearsighted, otherwise called astigmatic. It's a lovely normal condition that your eye specialist ordinarily can fix with eyeglasses, contacts, or eye a medical procedure).[ Facts About Amblyopia, National Eye Institute, 2013.].





**Fig 08: Myopia** [Courtesy:Google]

### What Causes Myopia?

The construction of your eye is to nearsightedness vision versus typical vision. At the point when your eyeball is too long or the cornea - the defensive external layer of your eye - is too bended, the light that enters your eye will not concentrate effectively. Pictures center before the retina, the light-delicate piece of your eye, rather than straightforwardly on the retina. This causes obscured vision. Specialists call this a refractive mistake [Jefferis JM et al, Amblyopia, 2015].

**High nearsightedness:** It's a more significant type of the condition, where the eyeball develops more than it should and turns out to be extremely long front to back. Other than making it difficult to see things a ways off, it can likewise raise your shot at having different conditions like a disengaged retina, waterfalls, and glaucoma.

**Degenerative nearsightedness:** Also called neurotic or threatening nearsightedness, it's anything but an uncommon kind you typically acquire from your folks. Your eyeball gets longer rapidly and causes serious nearsightedness, generally by the adolescent or early grown-up years. This kind of nearsightedness can deteriorate far into adulthood. Other than making it difficult to see things a good ways off, you may have a higher shot at having a disengaged retina, unusual vein development in the eye (choroid neovascularization), and glaucoma. [ Bianchi PE et al, Chapter 2: Visual Development in Childhood, Visual Impairments and Developmental Disorders: From diagnosis to rehabilitation Mariani Foundation Paediatric Neurology. John Libbey Eurotext, 2016].

## Symptoms

Odds are the lone manifestation is that more far off objects are obscured. You may likewise take note:

- Migraines
- Squinting
- Eye strain
- Eye exhaustion when you attempt to see protests in excess of a couple of feet away

## Diagnosis and Treatment

An eye test can show you on the off chance that you're nearsighted. Glasses, contacts, or refractive medical procedure can typically address the issue. At the point when you have nearsightedness, your solution for glasses or contact focal points will be a negative number. The more adverse the number, the more grounded your focal points will be. For instance, - 3.00 is more grounded than - 2.50. Eye a medical procedure can improve your vision such a lot of you may presently don't have to wear glasses or contacts.[Online Etymology Dictionary, [www.etymonline.com](http://www.etymonline.com), 2017]The most well-known strategies for nearsightedness are:

**Photorefractive keratectomy:** Also called PRK, this medical procedure utilizes a laser to shape the center layer of your cornea. That levels the cornea's bend and allows light beams to zero in nearer to or on your retina.

**LASIK:** This is the most well-known a medical procedure for nearsightedness. The specialist utilizes a laser or another instrument to make a dainty fold on the top layer of your cornea. They shape the cornea with another laser and moves the fold once again into the right spot. Study treating astigmatism with LASIK eye a medical procedure.

### 1.2.7 Migraine

A headache is a solid cerebral pain that regularly accompanies queasiness, regurgitating, and affectability to light. It can last hours or days.[Polat U, Ma-Naim T, Belkin M, Sagi D, Improving

vision in adult amblyopia by perceptual learning, Proceedings of the National Academy of Sciences of the United States of America, 2004] .

## **Migraine Symptoms**

Headaches are distinctive in everybody. In numerous individuals, they occur in stages. These stages may include:

### **Prodrome**

Hours or days before a cerebral pain, about 60% of individuals who have headaches notice indications like:

- Being touchy to light, sound, or smell
- Exhaustion
- Food longings or absence of hunger
- State of mind changes
- Extreme thirst
- Swelling
- Clogging or loose bowels

### **Atmosphere**

These indications come from your sensory system and frequently include your vision. They typically start steadily, over a 5-to 20-minute time frame, and last not exactly 60 minutes. You may:

- See dark specks, wavy lines, glimmers of light, or things that aren't there (pipedreams)
- Have limited focus
- Not have the option to see by any means
- Have shivering or deadness on one side of your body
- Not have the option to talk unmistakably
  
- Have a substantial inclination in your arms and legs
- Have ringing in your ears

- Notice changes in smell, taste, or contact .[ Simons K et al,Amblyopia characterization, treatment, and prophylaxis". Survey of Ophthalmology,2005]

## **Treatment:**

There's no answer for migraine cerebral torments. Regardless, various prescriptions can treat or even prevent them. Ordinary migraine drugs include:

Help with inconvenience. Over-the-counter (OTC) sedates routinely work outstandingly. The rule trimmings are acetaminophen, hostile to inflammatory medication, caffeine, and ibuprofen. Never offer ibuprofen to anyone more youthful than 19 considering the peril of Reye's condition. Be wary when you take OTC torture drugs, since they may moreover add to a headache. If you use them to a limit, you can get ricochet back headaches or become subject to them. If you take any OTC torture relievers more than 2 days consistently, banter with your PCP about expertly endorsed meds that may work better. They may suggest specialist endorsed medications that may work commendably to end your migraine torture, including triptans, similarly as the more state-of-the-art ditans and gepants essential consideration doctor can prompt you if these are fitting for you. Nausea prescription PCP can embrace medication if you get ailment with your cerebral pain.

**Triptans.** These drugs balance the engineered materials in your frontal cortex. You may get a pill to swallow, tablets you break down on your tongue, a nasal sprinkle, or a shot. Models join almotriptan (Axert), eletriptan (Relpax), sumatriptan (Imitrex), rizatriptan (Maxalt), and zolmitriptan (Zomig).

**Ergotamine** (Cafergot, Ergomar, Migergot). This in like manner works on the artificial materials in your frontal cortex.

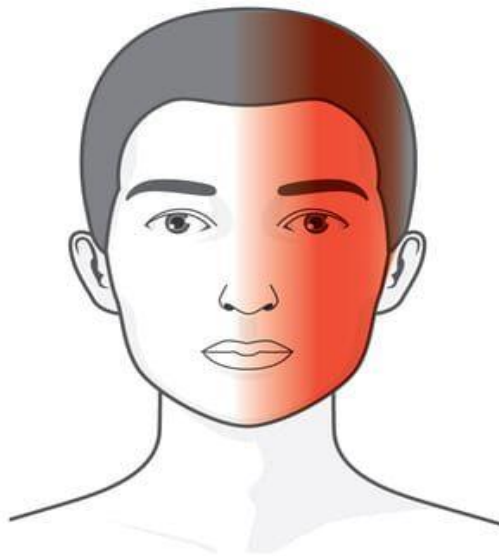
**Lasmiditan** (Reyvow). This medicine works with torture, squeamishness, and affectability to light or sound.

**CGRP receptor enemies.** essential consideration doctor may give you rimegepant (Nurtec) or ubrogepant (Ubrelvy) if various meds don't help.

**Preventive medications.** If various meds don't work, your cerebral agonies are not kidding, or you have in any event four migraine days a month, your essential consideration doctor may suggest these. You take them reliably to make your cerebral agonies less limit or ceaseless. They fuse seizure drugs, beat solutions (like beta-blockers and calcium channel blockers), a couple of antidepressants, and shots of botulinum toxin type A (Botox). CGRP rivals, for instance, eptinezumab (Vyepti), erenumab (Aimovig), fremanezumab (Ajovy), and galcanezumab (Emgality) can similarly prevent cerebral pains.

**Single-beat transcranial alluring actuation (sTMS).** You place this contraption on the back of your head around the start of a cerebral pain with spread. It's anything but's a beat of alluring energy to part of your psyche, which may stop or decrease torture.

**Neuromodulation contraptions.** Various devices can impact the vagus nerve and the trigeminal nerve to give mitigation from or thwart cerebral pains[Tyler CW et al,Binocular Vision In, Duane's Foundations of Clinical Ophthalmology. 2. Philadelphia: J.B. Lippincott Co,2004]



**Fig 9: Migraine** [Courtesy:Google]

## **CHAPTER TWO**

## **LITERATURE REVIEW**

**2.1.Title: Eye disorders in bangladesh: A hospital-based descriptive study. Journal of Biomedical Analytics, 2(1), 27-40.**

**Author: Hossain, M. A., Asa, T. A., Huq, F., & Moni, M. A. (2019).**

**Abstract:**

The incidence and treatment of common eye disorders in Bangladesh are poorly understood. This study aims to provide a comprehensive overview of this clinical challenge to better enable the design of appropriate healthcare strategies. Different types of eye disorder data were collected from patients aged 1 to 96 years admitted for eye surgery from March 2016 to October 2016 (N = 2390) at the Bangladesh Eye Hospital in Dhaka, Bangladesh. Patient age distribution and types of treatment received were analysed, and incidence rates calculated. Patients (58% male) underwent a total of 43 different types of eye surgeries. Among the surgeries reported 32.8% were Avastin intravitreal injections, 25.5% were Phaco with IOL, 14.6% were retinal laser therapies, 7.5% were YAG Laser and 6.5% were VR surgery. It is notable that higher number of people suffered in ocular, cataract and retinal disorder respectively among all the eye disorders. With increasing patient age, the number of eye disorder treatments increased and it reached to peak number in the age group 56-60 years, although numbers varied greatly across age groups.

**2.2. Title: Pharmacovigilance study on the different drugs used for the management of eye disorders in Bangladesh. The Pharma Innovation, 6(4, Part C), 173.**

**Author: Rubel, M. R. I., Ashrafudoulla, M., Mizan, M. F. R., Fuad, F., Islam, M. S., & Parvin, S. (2017).**

**Abstract:**

At present, pharmacovigilance (PV) study is one of a key way to improve and ensure drug safety and health care sectors in the whole world including Bangladesh. Both primary and secondary data were collected for this study from two different hospitals in Dhaka and rural eye hospital in different district of Bangladesh. Results show that among 500 eye diseases patients, 20% patients were affected by cataracts, 10% are glaucoma, 5% are Blepharitis, 10% are Blindness, 5% are Presbyopia, 10% are Myopia, 10% are Allergic conjunctivitis, 5% are Dry eye, 15% are Blurry vision and others 10%. These results vary from rural to urban area in Bangladesh. The common drugs are used for the treatment of that patients are, Ciprofloxacin 0.3%, Optadin 0.1%, Prochlorperazine Maleate, Lemefloxacin 0.3%, Ascorbic acid+Copper + Lutein +Vitamin E + Zinc, Dexamethasone 0.1%, Fexofenadine hydrochloride, Olopatadine 0.1%, Vitamin C, Hypromellose 0.5%, Loteprednol Etabonate, Olopatadine 0.2%, Dexomethasone 0.1%+ Tobramycin 0.3%, Hypromellose 2%, Rupatadine, Multivitamin pediatric preparation, Polyethylene glycol 0.4%, Flunarizine, Moxifloxacin 0.5%, Esomeprazole+ Naproxen, Polyethylene glycol 0.3%, Fexofenadine Hydrochloride, Dexamethasone sodium phosphate, Fluromethalone 0.1%, Gentamycin 0.3%, Carbomer 0.3%, Multivitamin, Artificial tear, Rupatadine. Among these drugs there are some eye drops and some tablets and some capsules and multivitamins. In 500 ophthalmic patients there are some common adverse effects are obtain. The percentage of that adverse effect is, Allergy 15%, Dizziness 13%, Fatigue 10%, nausea 8%, Diarrhea 13%, Blurred vision 7%, Itching eye 15%, Redness of eye 8%, Swelling of eye 17%, Dry eye 9%, Edema 5%, Headache 15%, GI disturbance 8%, Gastric pain 6%, Dry mouth 10%, Inflammation 20%, Back pain 6%, Dyspepsia 8%, Glaucoma 15%, Discomfort 20%.



**2.3. Title: Developmental eye disorders. Current opinion in genetics & development, 15(3), 348-353.**

**Author: FitzPatrick, D. R., & van Heyningen, V. (2005).**

**Abstract :**

Multiple sclerosis (MS) is a demyelinating disease of the central nervous system and leading cause of disability in young adults. Vision impairment is a common component of disability for this population of patients. Injury to the optic nerve, brainstem, and cerebellum leads to characteristic syndromes affecting both the afferent and efferent visual pathways. The objective of this review is to summarize the spectrum of eye disorders in patients with MS, their natural history, and current strategies for diagnosis and management. We emphasize the most common disorders including optic neuritis and internuclear ophthalmoparesis and include new techniques, such as optical coherence tomography, which promise to better our understanding of MS and its effects on the visual system.

**2.4. Title: The importance of mitochondria in age-related and inherited eye disorders. Ophthalmic research, 44(3), 179-190.**

**Author: Jarrett, S. G., Lewin, A. S., & Boulton, M. E. (2010).**

**Abstract :**

Mitochondria are critical for ocular function as they represent the major source of a cell's supply of energy and play an important role in cell differentiation and survival. Mitochondrial dysfunction can occur as a result of inherited mitochondrial mutations (e.g. Leber's hereditary optic neuropathy and chronic progressive external ophthalmoplegia) or stochastic oxidative damage which leads to cumulative mitochondrial damage and is an important factor in age-related disorders (e.g. age-related macular degeneration, cataract and diabetic retinopathy). Mitochondrial DNA (mtDNA) instability is an important factor in mitochondrial impairment culminating in age-related changes and pathology, and in all regions of the eye mtDNA damage is increased as a consequence of aging and age-related disease. It is now apparent that the mitochondrial genome is a weak link in the defenses of ocular cells since it is susceptible to oxidative damage and it lacks some of the systems that protect the nuclear genome, such as nucleotide excision repair. Accumulation of mitochondrial mutations leads to cellular dysfunction and increased susceptibility to adverse events which contribute to the pathogenesis of numerous sporadic and chronic disorders in the eye.

**2.5. Title: Eye disorders in old people. Global journal of health science, 5(1), 79.**

**Author : Khalaj, M., Barikani, A., & Ghasemi, H. (2013).**

**Abstract :**

In this study 446 patients were examined that 54.7% were male. Mean age of study population was 62+-9.3 years old. 96.4% of participants had refractory disorder. Prevalence of myopia, hyperopia and astigmatism were 33.6%, 45.9% and 16.8% respectively. Of patients 17.4% had diabetes. Of participants 28.9% had temporal headache, 37% red eye, 41.2% flashing, 27.3% and 28% had dryness and discharge of eye respectively. 31.1% of participants had eyelid problem, 4.7% Color Vision Deficiency (CVD) and 3.8% had family history of CVD. Of total 4.5% had glaucoma, 3.3% macular degeneration and 21.7% had hypertension. 0.6% of population had macular degeneration, 0.4% of population had glaucoma Of 892 eyes (446 individuals), 36.2% had visual acuity less than 7/10, 1.7% light perception (LP) and 0.22% no light perception (NLP) and 2.7% finger count.

**2.6. Title: Risk factors for eye disorders caused by paclitaxel: a retrospective study. Biological and Pharmaceutical Bulletin, 41(11), 1694-1700.**

**Author: Noguchi, Y., Kawashima, Y., Maruyama, M., Kawara, H., Tokuyama, Y., Uchiyama, K., & Shimizu, Y. (2018).**

**Abstract :**

Paclitaxel and nanoparticle albumin-bound paclitaxel are known to cause adverse events of eye disorders, such as cystoid macular edema. However, at present, the risk factors remain unclear. Therefore, risk factors for eye disorders caused by paclitaxel and nanoparticle albumin-bound paclitaxel were studied. This retrospective study targeted patients who were newly administered paclitaxel or nanoparticle albumin-bound paclitaxel at Kyoto Okamoto Memorial Hospital between April 1, 2012, and March 31, 2017. Eye disorder occurrence was defined as an event in which the pharmacist confirmed the symptoms in a patient interview and the ophthalmologist diagnosed the disorder. To analyze the risk factors, logistic regression analysis using 41 factors was performed. Of 128 subjects, 13 (10.2%) had eye disorders with symptom degrees of Grades 1 and 2. The symptoms were conjunctivitis or subconjunctival hemorrhage (3.1%), visual acuity reduction (2.3%), blurred vision and eye pain (1.6% each), eye mucus, blepharitis, stye, watering eyes, photopsia, and muscae volitantes (0.8% each). In eight patients, the conditions patients improved with spontaneously or with medication use; no improvements were observed the cases of visual acuity reduction, blurred vision, or muscae volitantes. Multivariate logistic regression analysis revealed that a cumulative dose of  $\geq 819$  mg/m<sup>2</sup> (odds ratio: 5.34, 95% confidence interval: 1.32–21.60,  $p=0.019$ ) and baseline alkaline phosphatase  $\geq 256$  U/L (odds ratio: 3.74, 95% confidence interval: 1.02–13.70,  $p=0.046$ ) were significant risk factors associated with eye disorders. In conclusion, it was determined that paclitaxel- and nanoparticle albumin-bound paclitaxel-related eye disorders might be influenced by cumulative dose and baseline alkaline phosphatase.

**CHAPTER THREE**  
**GOAL OF MY STUDY**

**Goal of my study:**

My aim of the study is,

- To see the ratio of eye disorder problem in general people.
- To know ,how much people have parents eye sight problem
- To see , how much people fell pressure or pain on eyes for using smart gadget or reading books for a long time.
- To see their food habit and lifestyle.

## **CHAPTER FOUR**

## **METHODOLOGY**

## **Methodology:**

### **4.1. Introduction:**

The examination is led with online study. Around 183 individuals are taken part to a great extent were 27 inquiries. The reactions were reach by some undergrad and graduate understudies among the general population and private colleges of Bangladesh.

### **4.2. Research Design:**

This exploration was plan through the google structure comprise of 27 inquiries initial five inquiry was configuration to know data of member like name, age sexual orientation and level of schooling.

### **4.3. Study Population:**

The examination is led with informal community. Facebook is the significant part to get member and impact to finish this review. Around 183 individuals are taken an interest here a large portion of them understudies 51.4% female and 49.6% male and 80% member are youthful their age 21 to 40 years of age.

### **4.4. Data Collection Procedure:**

The information of this study gathered by google structure and members are get this google structure connect through web-based media like Facebook, WhatsApp, Messenger however Facebook is the superb organization to get member reaction.

### **4.5. Research Instrument**

A bunch of organized polls was created and arrangement in Google structure.

### **4.6 Method of Data Analysis**

After assortment of information, all talked with polls were checked for precision and internal consistency to deny missing or clashing data and those were discarded. Information investigation was done through Microsoft dominate refreshed rendition.



## 4.7 Ethical Considerations

#### 4.8.Survey form

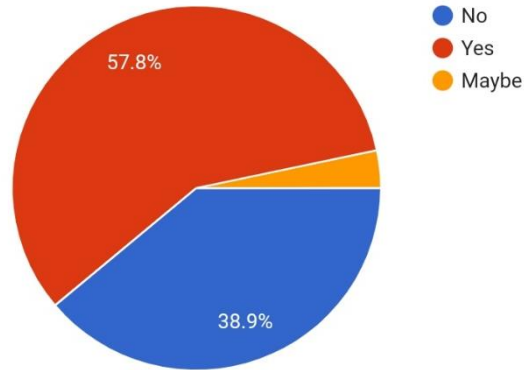
Fig 10: Survey form

## **CHAPTER FIVE**

### **RESULT & DISCUSSION**

**Result:**

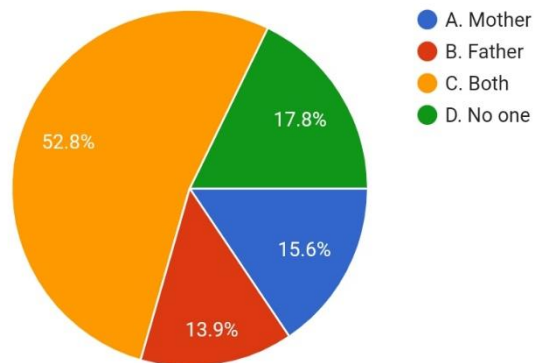
**5.1.Eye Disorder**



**Fig 11: Eye disorder**

In this survey, 57.8% peoples have eye disorder.38.9% people have no problem on eye disorder. Others people have no idea about this. So these results show that eye disorders are very common in adults.

**5.2.Parents Eye Sight Problem:**

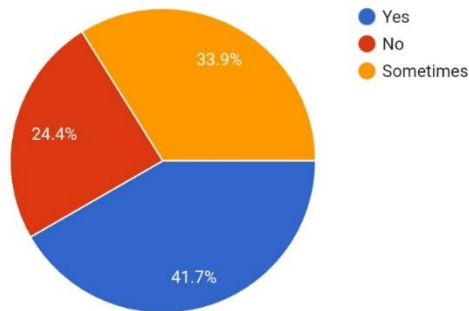


**Fig 12: eye sight problem**

According to this result,13.9% peoples father have eye sight problem. 15.6% peoples mother have eye sight problem.52.8% peoples both father & mother have eye sight problem.17.8% peoples

parents have no problem on eye. This chart represent that those who have eye problems have got it from their parents.

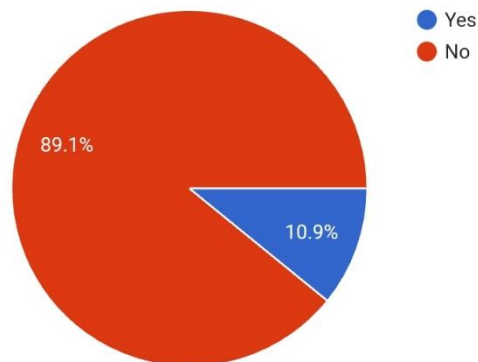
### 5.3.Using Smart Gadget Or Reading Books For A Long Time, Fell Pressure Or Pain Eyes:



**Fig 13: Using smart gadget or reading books for a long time fell any pressure or pain in eyes**

According to this survey, 41.7% people always fell pressure or pain on eyes when using smart gadget or reading books for a long time. 24.4% people never fell any pressure or pain on eyes when using smart gadget or reading books for a long time. 33.9% people sometimes fell pressure or pain on eyes when using smart gadget or reading books for a long time.

### 5.4.Medicine:

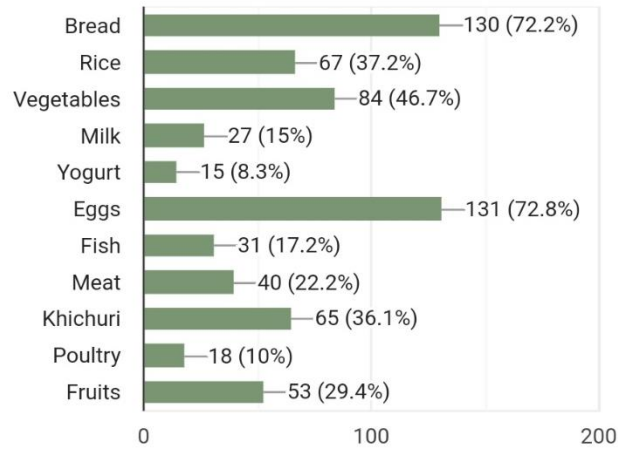


**Fig 14: Are taking any medicine right now for solving eye sight problem**

## Survey on common eye disorder in Bangladesh

In this survey, 89.1% people don't taking medicine right now for solving their eye sight problem. 10.9% people taking any medicine right now for solving their eye sight problem. So we can say very few people have needed to take medicine.

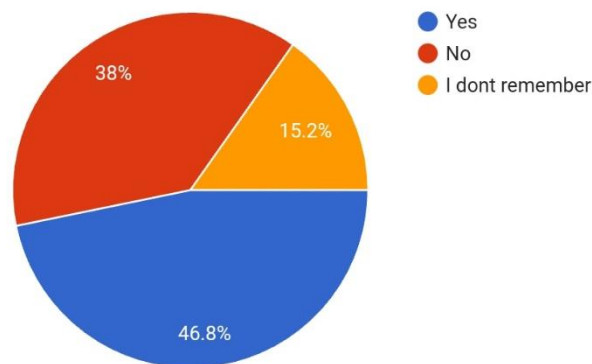
### 5.5.Breakfast:



**Fig 15: following foods for breakfast**

According to this survey, 72.2% people take bread in their breakfast. 72.8% people take eggs in their breakfast. 46.7% people eat vegetables in their breakfast. 37.2% people eat rice in their breakfast. 29.4% people eat fruits in their breakfast. 17.2% people eat fish in their breakfast. 15% people eat milk in their breakfast. This result shows that maximum people are unconcerned to take vegetables in their breakfast.

### 5.6.Headache:

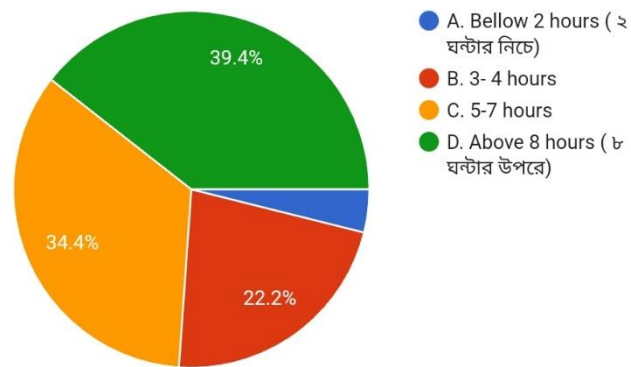


**Fig 16: Type of headache when problem**

## Survey on common eye disorder in Bangladesh

In this survey, 46.8% people have headache who have eye disorder. 38% have no headache and 15.2% people don't remember it. It represents that headache is the common symptom for eye disorder.

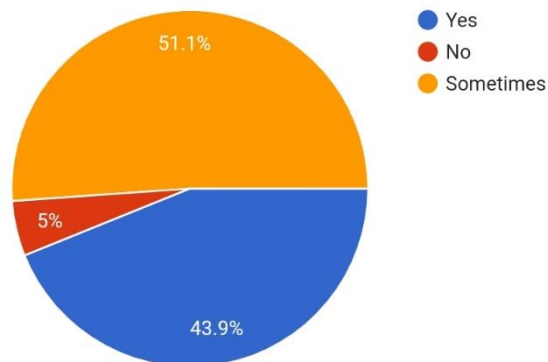
### 5.7. Use Those Smart Gadget In A Day:



**Fig 17: Duration of use smart gadget in a day**

According to this survey, 39.4% people use gadget more than 8 hours in a day. 34.4% people use gadget 5-7 hours in a day. 22.2% people use it 3-4 hours in a day. So we can realize that most people use smart gadgets for a long time, which is very harmful to their eyes.

### 5.8. Vitamin 'A' In Food:

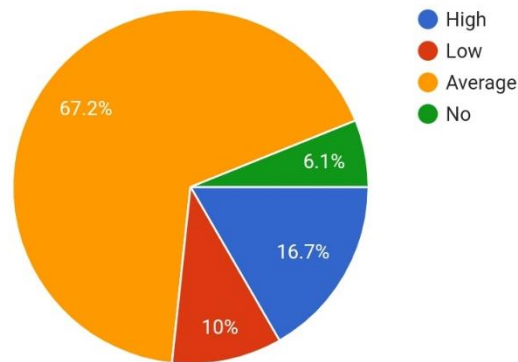


**Fig18: Vitamin 'A' quantitatively in your food**

## Survey on common eye disorder in Bangladesh

According to this survey, 43.9% people take food which contain vitamin A. 51.1% people sometimes take food vitamin A. and 5% people don't take vitamin A food. That's why we can understand that most of the people are not eating enough Vitamin 'A' in their daily diet.

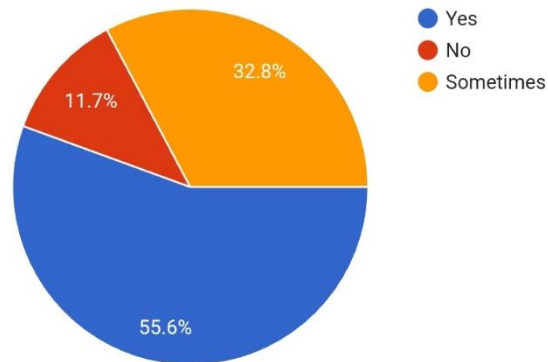
### 5.9. Vegetable:



**Fig 19: Intake vegetable daily**

In this survey, 67.2% people eat vegetable average in a day. 10% people eat vegetable low in a day. 16.7% people eat vegetable high in a day. 10% people don't take vegetable everyday.

#### 5.10.Smart Gadget In The Dark Room:



**Fig 20: Use smart gadget in the dark room**

According to this result, 55.6% people use smart gadget in dark room always. 32.8% people use it sometimes. 11.7% people never use it. Because of this bad habit their eye problem will get worse in the future.



## **CHAPTEER SIX**

## **CONCLUSION**

**Conclusion:**

The fundamental wellsprings of visual lack and low vision in overall are essentially age-related eye sicknesses, for instance, age-related macular degeneration, cascade, and glaucoma. Other ordinary eye issues fuse myopia and migraine. To hinder it, first know family's heritage for any eye issues. Follow a strong lifestyle. Eat a nutritious eating routine for visual discernment. Wear extreme eye protection when related with practices that could make repulsive threat your vision, similar to games, overseeing firearms, playing paintball.

## **CHAPTER SEVEN**

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