

# Awareness and Knowledge of Common Eye Diseases Among Health Care Students After Intervention

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## Abstract:-

**Objective:** Awareness and knowledge of common eye diseases and their early detection can play a vital role in encouraging people to seek timely eye care and therefore help in referring the burden of visual impairment. This study was designed to reveal the pre and post assessment of eye diseases among health care students in the university.

**Methods:** It's a hospital-based questionnaire study which includes health care students of age group between 18-25 years. For this, a total of 278 respondents were selected by random sampling and were interviewed using a structured questionnaire in pre-assessment. Knowledge about common and preventable eye diseases are explained clearly and the students will be queried again on their knowledge about the common eye diseases in post assessment. The total of 278 participants 173 Males and 130 Females completed the questionnaire, The average age ( $\pm$ standard deviation) of the study participant was  $21.29 \pm 2.49$  (range 18 to 25 years old).

**Results:** When comparing pre-assessment data among common eye diseases the result and the awareness, knowledge of cataract (74%), night blindness (98%), glaucoma (76%), strabismus (82%) and systemic diseases (74.%) was increased in post-assessment respectively. Therefore, this is related to the fact that our studied cohort was likely to be educated.

**Conclusions:** Through analysis it is concluded that the awareness and knowledge of common eye diseases and their treatment and utilization for early detection and treatment, the quality of eye care facilities must be improved.

**Keywords:-** Awareness, Cataract, Glaucoma, Knowledge, Night Blindness, Strabismus.

## I. INTRODUCTICION

Common eye diseases are primary causes of visual impairments which include uncorrected Refractive errors followed by Cataracts. Other visual impairment causes include Glaucoma, Cataract, Night blindness, Strabismus, Diabetic retinopathy (DR), and Age-related macular degeneration (AMD). The following is an example of reasonable knowledge (description) about eye diseases: I Cataract — opacity of the lens; a white spot in the eye that causes blurred vision and visual loss in the elderly. (ii) Glaucoma — an eye pressure condition that results in vision loss or blindness, tunnel vision, and a problem at the back of

the eye. (iii) Diabetic retinopathy —is a diabetic condition that causes abnormalities in the retina, blurring of vision, and vision loss or blindness. Refractive errors (iv) Nearsightedness—blurred distant objects, typically noticed in childhood, progress during adolescence, and persons with high powers are at danger of retinal detachment. With an estimated 253 million individuals suffering from visual impairment globally, 36 million of whom are blind, it is one of the most pressing public health challenges. Uncorrected refractive defects and unoperated cataracts are the two most common causes<sup>1</sup>. Many ailments harm our eyes without giving us any warnings or symptoms<sup>2</sup>. As a result, increasing public knowledge of ocular disorders aids in early identification and treatment of these conditions, lowering the incidence of visual impairment<sup>4</sup>.

Many older persons are led to believe that vision degradation and blindness are a normal part of the aging process<sup>3</sup>, which is disturbing. Fortunately, in about 80% of cases, vision damage can be avoided or reversed<sup>5</sup>.

## II. MATERIALS AND METHODS

A questionnaire based study done in 278 healthy subjects include both males and females with age group ranging between (18-25) years.

This was a prospective study and data was collected between the periods of November 2021 to January 2022

A formal informed consent was obtained from all subject and this study has been approved by Institutional Ethics committee of Saveetha College of Allied Health Sciences, In this study a pre questionnaire form is given with 22 questions that includes demographic details, student's knowledge and awareness regarding eye health care and importance of common eye diseases along with the options to the students in the university and a video is shown to create awareness followed by post assessment of questionnaires.

There were different questions in questionnaire ranging from eye diseases to eye protection. The collected information was compiled and feed in Microsoft excel and data were analyzed.

### III. RESULTS

In our study among 278 participants surveyed, the most common eye-related symptoms included “burning, itching (43%), foreign body sensation (4%)”, blurring of vision(29%), while pain or sore in the eye (4%) in pre-assessment and post assessment most of them are aware of “burning, itching (47%), foreign body sensation (2%),blurring of vision (36%),and pain or sore in eye(2%)”.The level of cataract awareness in pre-assessment is (70%) which increased upto (74%) in post-assessment after giving adequate knowledge. The level of night blindness awareness was less in pre-assessment (93%) when compared to post-assessment( 98.20%), most of the students got knowledge about the cause and prevention of night blindness.

Among these 278 participants, the level of glaucoma awareness was (65%) in pre-assessment after showing the awareness video, majority of participants got awareness and the responses to the post-assessment is (75.53%). The level of strabismus awareness was (74%) and systemic diseases (67%) in pre-assessment and after awareness was created the percentage of awareness in post-assessment increased for strabismus(86%)and systemic diseases(74%).

### IV. DISCUSSIONS

Common eye diseases are primary causes of visual impairments which include uncorrected Refractive errors followed by cataracts. Other visual impairment causes include Glaucoma, Cataract, Night blindness, Strabismus, Diabetic retinopathy (DR), and Age-related macular degeneration (AMD). The majorities of people overlook early indicators of eye problems and do not seek treatment in time to avert permanent vision loss. Visual impairment represents one of the pivotal health issues of an estimated 253 million people are suffering around the world, 36 million of them are blind. Furthermore, the prevalence of diseases with a potential effect on the eye such as diabetes mellitus sustain a tremendous increase which puts more people at a higher risk of diseases such as Age-related macular degeneration, Diabetic retinopathy, and Glaucoma. In our study results shows that cataracts (70%),Glucoma (65%),Strabismus(74%) and after providing them with accurate counseling and knowledge shows an improvement in post-assesment results Cataract(74%), Glaucoma(76%), Strabismus(86%). This is related to the fact that our studied cohort was likely to be educated.

Early identification and treatment of common eye disorders and their treatment, as well as the use of eye care facilities, must be improved to reduce the burden of preventable blindness.

Kishore Khannaa A et al, had undergone a similar study in the year 2020 on public awareness of common eye diseases in South India, a cross-sectional study, and a semi-structured questionnaire. The prevalence of common eye diseases in this study was cataract(81%),diabetic retinopathy(49%),glaucoma(34%) respectively. The awareness of cataracts is better than compared to diabetic retinopathy and glaucoma.

Manal Zayed Alshammari et al, A study done by the year 2018 on Awareness and Knowledge of Poor Vision among Students in Hail University, a cross-sectional observational study, and the problem of poor vision. More than one-third (38%) of them considered poor vision a genetic disorder. Others reported errors of refraction, cataract, and senility (11%, 8%, and 7 %) respectively.

Farhan Alshammari e et al, A study done by the year 2021 on Public Awareness of Common Eye Diseases and the Role of Pharmacists in Raising This Awareness in Saudi Arabia, a cross-sectional study. Overall, 46% of the participants knew about eye problems. Hence they concluded increase public knowledge of ocular diseases can improve the effectiveness of health promotion, thereby preventing unnecessary blindness.

### V. CONCLUSIONS

This research sought to investigate the awareness and responses of common eye diseases. While most of the students are cognisant of common eye diseases, only a few of them are aware of diseases. After giving appropriate counseling and knowledge through questionnaire study results in increasing the awareness and knowledge about common eye diseases such as,Cataract(74%),Glucoma(76%),Strabismus(86%) respectively. Therefore increasing the knowledge of common eye diseases and awareness of eye can leads to increase in understanding and management of eye health, thereby reducing the visual impairment and cost of eye care.

#### TABLES:

Table-1:- Distribution of Age

	N	MINIMUM	MAXIMUM	MEAN	STD. DEVIATION
AGE	278	18	33	21.29	2.49

From the above table-I It is shown that total 278 persons were examined.148 persons were male and 130 were females. The age range of participants was 18-25 years with a mean age of 21.29 (2.49 standard deviation)

**Table- 2:- Descriptive Statistics For Age**

GENDER	NUMBER OF RESPONDENTS	PERCENTAGE
FEMALE	130	47
MALE	148	53
TOTAL	278	100

It is observed that 47% of the subjects who participated in this study are females and 53% of them are males

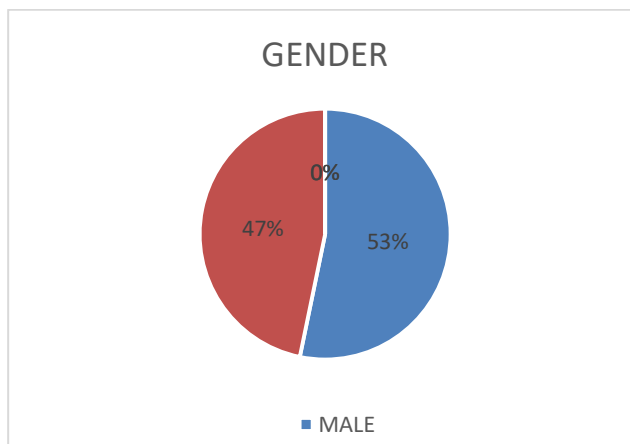


Fig 1:Distribution Of Gender

**PRE AND POST ASSESSMENT:**

A total of 278 undergraduate 130 females(47%) and 148 males(53%) participated in this study.

**PRE AND POST ASSESMENT OF QUESTIONARIES OF COMMON EYE DISEASES**

S.NO	QUESTIONS	PRE-ASSESSMENT				POST-ASSESSMENT	
		NUMBER & PERCENTAGE					
1	What are the eye illnesses?						
	a) Vision blurring	82	29.4%	101	36.3%		
	b) Red eye	21	7.5%	13	4.6%		
	c) Pain / Sore in eye	12	4.3%	06	2.1%		
	d) Burning / Itching	120	43.1%	130	46.7%		
	e) Foreign body sensation	11	3.9%	05	1.7%		
	f) Watering / Discharge	16	5.7%	12	4.3%		
	g) Others	16	5.7%	11	3.9%		
2	What are the causes of eye illnesses?						
	a) Infection /Germs	52	18.7%	53	19.0%		
	b) Environmental pollution	135	48.5%	143	51.4%		
	c) Water borne / Pollution	19	6.8%	06	2.1%		
	d) Genetic / Congenital	26	9.3%	42	15.1%		
	e) Evil / Good / Supernatural	01	0.3%	0	0.00%		
	f) Aging /nutrition	19	6.8%	13	4.6%		
	g) Don't know	25	8.9%	17	6.1%		
	h) Others	01	0.3%	04	1.4%		
3	What should you do to prevent eye illnesses?						
	a) Visit in health centres	54	19.4%	59	21.2%		
	b) Eye hygiene	148	53.2%	155	55.7%		
	c) Visit in traditional healers	0	0.00%	03	1.0%		

	d) Eat green vegetables / fruits	32	11.5%	33	11.8%
	e) Eye protection / Glasses	26	9.3%	10	3.5%
	f) Don't know	14	5.0%	16	5.7%
	h) Others	18	6.4%	02	0.7%
4	What is cataract?				
	a) A white spot in the eye	39	14.0%	42	15.1%
	b) A white opacity in the lens	194	69.7%	206	74.1%
	c) A white opacity over the cornea	22	7.9%	17	6.1%
	d) A white spot seen through the pupil	15	5.3%	08	2.8%
	e) Others	06	2.1%	05	1.7%
5	What does cataract develop / occur?				
	a) Since birth	08	2.8%	10	3.5%
	b) During childhood	13	4.7%	14	5.0%
	c) Old age	179	64.3%	195	70.1%
	d) Any age	55	19.7%	39	14.0%
	e) Don't know	23	8.2%	20	7.1%
6	What is the cause of cataract?				
	a) Age	213	76.6%	220	79.1%
	b) Trauma	07	2.5%	04	1.4%
	c) Congenital	11	3.9%	10	3.5%
	d) Malnutrition	19	6.8%	19	6.8%
	e) Don't know	23	8.2%	22	7.9%
	f) Others	05	1.7%	03	1.0%
7	How did you know about cataract?				
	a) Doctors / FCHV / paramedics / medicals	210	75.5%	230	82.7%
	b) Eye camp / Pamphlets / Brochures	18	6.4%	12	4.3%
	c) Friends / Relatives / Neighbours	32	11.5%	23	8.2%
	d) Media-TV / Radio / News papers	15	5.3%	12	4.3%
	e) Others	03	1.0%	01	0.3%
8	What is the treatment for cataract?				
	a) Medicine	28	10.0%	33	11.8%
	b) Surgery	222	79.8%	233	83.8%
	c) Don't know	27	9.7%	12	4.3%
	d) Others	01	0.3%	0	0.00%
9	Where should you go for treatment?				
	a) Hospital / Health facility	258	92.8%	267	96.0%
	b) Faith healer / traditional healer	0	0.00%	05	1.7%
	c) No idea	19	6.8%	06	2.1%
	d) Others	01	0.3%	0	0.00%
10	Difficulty to see low light/night				
	a) Yes	0	0.00%	0	0.00%
	b) No	278	100%	278	100%
11	What is the cause of night blindness?				
	a) Vitamin-A deficiency	258	92.8%	273	98.2%
	b) Malnutrition	05	1.7%	03	1.07%
	c) Others	15	5.3%	02	0.71%

12	How can we prevent night blindness?				
	a) Food-green leafy vegetables, yellow fruits	241	86.6%	267	96.0%
	b) Hospital	22	7.9%	07	2.5%
	c) Others	04	1.4%	02	0.7%
	d) Don't know	11	3.9%	02	0.7%
13	What are the sources of vitamin-A?				
	a) Food- green leafy vegetables, yellow fruits	198	71.2%	210	75.5%
	b) Food-meat and fish	58	20.8%	49	17.6%
	c) Vitamin-A capsules	07	2.5%	10	3.5%
	d) Don't know	11	3.9%	07	2.5%
	e) Others	04	1.4%	02	0.7%
14	What is glaucoma?				
	a) High pressure inside eye	181	65.1%	210	75.5%
	b) Damage to the nerve of eye	20	7.1%	13	4.6%
	c) Due to high pressure	45	16.1%	32	11.5%
	d) Age related decrease in vision	08	2.8%	05	1.7%
	e) Don't know	23	8.2%	17	6.1%
	f) Others	01	0.3%	01	0.3%
15	Is vision loss in glaucoma reversible or permanent?				
	a) Reversible	189	67.9%	215	77.3%
	b) Permanent	49	17.6%	42	15.1%
	c) Don't know	40	14.3%	20	7.1%
16	What is strabismus?				
	a) Deviation of eyes	206	74.1%	239	85.9%
	b) Squeezing of eyes in bright light	21	7.5%	08	2.8%
	c) Looking sideway	21	7.5%	16	5.7%
	d) Non parallel alignment of eyes	30	10.7%	15	5.3%
17	What can cause strabismus?				
	a) Congenital / hereditary	195	70.1%	227	81.6%
	b) Trauma to eye	25	8.9%	07	2.5%
	c) Blessings / curse / luck	07	2.5%	03	1.0%
	d) Diseases of eye	14	5.0%	10	3.5%
	e) Gazing at intense light	08	2.8%	02	0.7%
	f) Don't know	29	10.4%	28	10.0%
	g) Others	0	0.00%	01	0.3%
18	What could be the problem with strabismus				
	a) Cosmetic distortion	74	26.6%	71	25.5%
	b) Loss of confidence	10	3.5%	10	3.5%
	c) Psychological trauma	21	7.5%	05	1.7%
	d) Problem with marriage	02	0.7%	05	1.7%
	e) Decrease vision	166	59.7%	187	67.2%
	f) Other	05	1.7%	0	0.00%
19	Do you have any systemic illness?				
	a) Yes	16	5.7%	11	3.9%
	b) No	241	86.6%	249	89.5%
	c) Don't know	21	7.5%	18	6.4%

	d) Others	0	0.00%	0	0.00%
20	Do you undergo eye check-up for systemic illness?				
	a) Yes	42	15.1%	21	7.5%
	b) No	224	80.5%	244	87.7%
	c) Don't know	12	4.3%	13	4.6%
21	Could systemic illness affect eye?				
	a) Yes	187	67.2%	206	74.1%
	b) No	48	17.2%	55	19.7%
	c) Don't know	40	14.3%	17	6.1%
22	How did you come to know about effect of systemic illness in eye?				
	a) Doctors / FCHV / Paramedics / Medicals	214	76.9%	239	85.9%
	b) Eye camp / pamphlets / brochures	17	6.1%	7	2.5%
	c) Friends / relatives / neighbours	23	8.2%	14	5.0%
	d) Sufferings from systemic diseases	05	1.7%	07	2.5%
	e) Media-TV / newspaper / radio	15	5.3%	11	5.0%
	f) Others	04	1.4%	0	0.00%

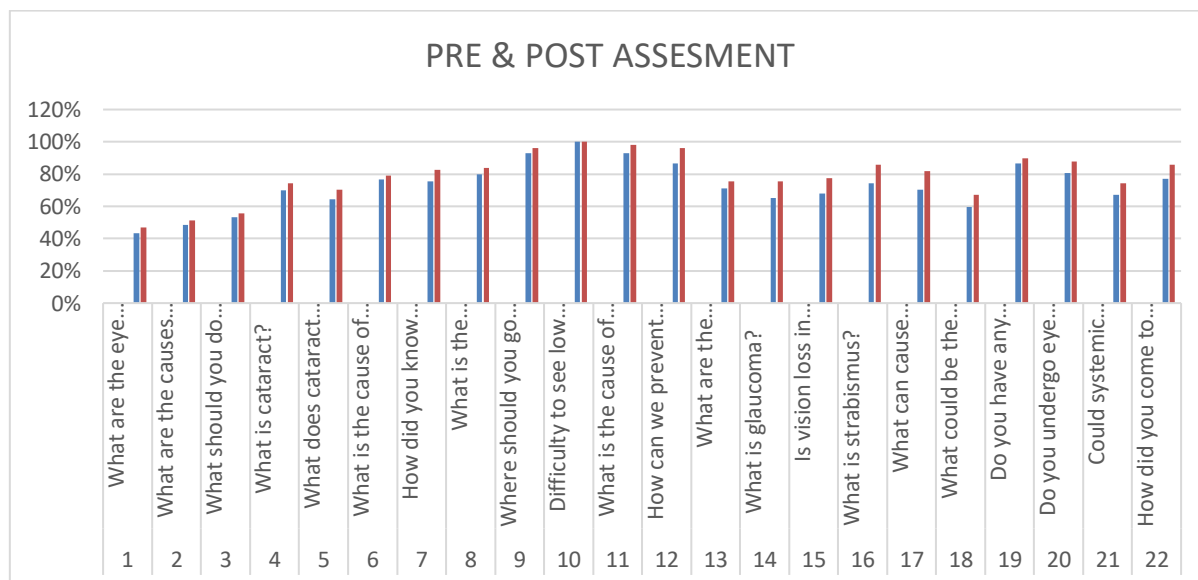


Fig 2:- Pre And Post Assesment of Questionnaires

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