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### RESEARCH ARTICLE

#### VISUAL HANDICAP CERTIFICATES: A TOOL TO EVALUATE THE CAUSES FOR PERMANENT VISUAL IMPAIRMENT IN KURNOOL DISTRICT

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#### Abstract

**Aim:** To analyze the causes of visual impairment amongst the patients coming for the visual handicap certificate and its application in eye health planning to prevent the blindness.

**Methods and Materials:** A retrospective data analysis of medical records of 1020 people who had applied for the visual handicap certification. Examination was done by the ophthalmologists appointed for the handicap board. BCVA < 20/60 to 20/120 in better eye was included in visual impairment Cat I (40%) and BCVA 20/200 or less is blindness category II to IV (75% to 100%).

**Results:** Majority of them belonged to age group of 16 year to 45 years of age, 264 cases got rejected, 530 individuals had mild visual Impairment (< 40%), in 136 individual's moderate visual impairment (40%) was found; in 90 individuals had sever visual impairment to blindness. Overall Optic Atrophy was the most common cause followed by Retinitis Pigmentosa, followed by macular pathology followed by corneal opacity followed by phthisis bulbi followed by amblyopia.

**Conclusion:** Visual handicap registers are useful for the rehabilitation of visually impaired individuals and to assess the pattern or causes of blindness in particular area. The most common etiological factors causing visual impairment in our study are preventable so we propose the empowerment of the school health system and general health delivery system.

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#### Introduction:-

Visual impairment is a major public health problem mainly in developing countries which limits social, economic, educational, and vocational development of a person. The Ministry of social justice and empowerment of Government of India given the guidelines for disability, the minimum degree of disability should be 40% for an individual to be eligible for any concessions or benefit,<sup>1</sup> for that they must apply for the visual handicap certification. Blindness registers are an important tool for public eye health programs and have been used as data sources for population-based research, mostly in the developed world.<sup>2</sup>

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## Materials And Methods:-

The retrospective observational hospital-based study of individuals attending outpatient department of Ophthalmology, Regional Eye Hospital, Kurnool medical college, Kurnool, for visual handicap certification. Records of individuals coming for visual handicap certificate were obtained from July 2020 to July 2022 and all patients were included in the study. Total 1020 people had applied for the visual handicap certification.

Examination was done by the ophthalmologists appointed for the handicap board. After a thorough examination of visual acuity, anterior segment, and posterior segment along with required investigations like tonometry, perimetry, gonioscopy, funduscopy etc. patients were diagnosed and categorized according to the criteria for visual handicap. For purpose of certification, guidelines given by Government of India were followed which say that, disability should be assessed when the specialist is satisfied that further medical treatment/intervention is not likely to reduce the extent of impairment.<sup>3</sup>

## Results:-

Total 1020 number of patients were enrolled for the visual handicap certification during study period including males 640 and 380 female. Their age group was ranging from 4 years to 80 years and significant number belong to 16 years to 45 years age group i.e., (Table 2). Distribution was done according to the categories of visual impairment, majority of applicants belonged to One-eyed category (V) which is 280 and then category IV (100% Blind) which is 24. Then Category O (20%) had 250 Category I had (40%) 136, Category II had (75%) 46, Category III had (100%) 20 applicants.

226 Applicants diagnosed with Moderate to Sever Visual impairment and blindness (40% and above) and 530 had Mild Visual Impairment and 264 applicants got rejected.

Overall Optic Atrophy was the most common cause followed by Retinitis Pigmentosa, followed by macular pathology followed by corneal opacity followed by phthisis bulbi followed by amblyopia.

**Table 1:-** Categories of visual disability (classification currently in use).

Category	All with best corrected visual acuity Better eye	Worse eye	Percentage impairment
0	6/9 to 6/18	6/24-6/36	20%
I	6/18-6/6	6/60 to PL	40%
II	6/60 to 4/60 or Field of vision 10° to 20°	3/60 to No PL	75%
III	6/60 to 4/60 or Field of vision <10°	FC 1 foot to No PL 100%	100%
IV	FC 1 foot to No PL or Field of vision <10°	FC 1 foot to No PL or Field of vision <10°	100%

V (One-eyed person) 6/6 FC 1 foot to No PL 30  
 PL - PERCEPTION OF LIGHT, FC - COUNTING FINGERS, CATEGORY I TO IV - Visually handicapped person

**Table 2:-** Category wise distribution.

S.No	Category	No of VHC
1	O (20%)	250
2	I (40%)	136
3	II (75%)	46
4	III (100%)	20
5	IV (100%)	24
6	V (30%)	280
	Total	756

**Table 3:-** Age distribution and causes of visual impairment and blindness according to age group.

	0-15	16-45	46-60	>60	Total
Pathological Myopia	04	05	02	02	13

Amblyopia	02	03	02	0	07	
Corneal Opacity	02	05	11	04	22	
Phthisis	02	07	07	04	20	
Cortical blindness	00	00	02	01	03	
Absolute Glaucoma	00	00	06	04	10	
Retinitis Pigmentosa	04	22	04	02	32	
Retinal detachment & Retinopathies	02	03	05	02	12	
Albinism	04	07	00	00	11	
Optic Atrophy	02	15	16	03	36	
ARMD	00	00	02	01	03	
Empty Socket	00	00	10	04	14	
Nystagmus	03	11	01	00	15	
Staphyloma	00	02	00	01	03	
Other Macular Pathology	03	19	02	01	25	
Total	28	99	70	29	226	

### Discussion:-

Handicapped registration in India is optional and done at Institute level either the district hospital or the medical college in that area, so persons with any disability and seeking governmental benefits apply for the handicap registration. Visual impairment is an important public health issue mainly in developing countries as it impairs the quality of life, limits the career choices and job opportunities of those affected, thus constituting a socio-economic burden on society.<sup>4,5</sup> People with disability percentage of 40% and more are considered as handicapped and entitled to lot of government benefits such as reservation in colleges and jobs, travel concession, Income tax benefits and various other disability benefits, hence there are many applicants for these certificates.<sup>3,6</sup> We assessed the application of visual handicap certificates to find out the causes and its distribution in our area.

### Conclusion:-

Visual handicap registers are useful for the rehabilitation of visually impaired individuals and to assess the pattern or causes of blindness in particular area. The most common etiological factors causing visual impairment in our study are preventable, so we propose the empowerment of the school health system and general health delivery system, early detection of amblyogenic factors and its timely treatment, applying strict safety precautions to factory workers who are prone to ocular injuries.

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### Conflict of interest:

None.

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