International Journal of Life Sciences, Biotechnology and Pharma Research Vol. 13, No. 8, August 2024 Online ISSN: 2250-3137
Print ISSN: 2977-0122

DOI: 10.69605/ijlbpr_13.8.2024.103

Original Research

A Study Of Visual Disability Certificate Issued From 2017 To 2022 In A Tertiary Care Centre In Rajkot

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Received Date: 15 July, 2024 Accepted Date: 25 August, 2024

Abstract

Introduction: India has the world's largest number of blind people, with vision impairment causing an estimated $411 billion in annual productivity losses. Around 12 billion blind people lived in India in 2007, accounting for 15% of the world blind population at the time. Registration of blond or partial sighted individuals in India requires certification by an ophthalmologist. The rights of person with disability act 2016 outlines the responsibilities of safeguarding the rights of people with disabilities in states. The minimum degree of disability for an individual should be 40%, and certification offers benefits and welfare measures. Vision loss is a major concern, with causes including eye damage and brain failure. Reduction in visual impairment from avoidable causes is due to increased eye care services and awareness. Visual rehabilitation involves assistive technology, supportive devices, and training to help individuals fulfill their lives and work in demanding roles. Material and methods:-The study, conducted at P.D.U. Government Medical College, Rajkot, was a retrospective 18-month study on visual disability certificates issued from 2017 to 2022, collected online from UDID.

Results:- The study analyzed 500 cases of visual disabled patients at G.T. Sheth Eye Hospital in Rajkot, India, seeking visual disability certificates. The majority of cases were male, with 67.6% of cases being male, compared to 32.4% for females. The study also revealed that one eyed individuals are not eligible for benefits or concessions, but one-eyed certificates are helpful in cases of multiple disabilities. The causes of visual disability were categorized into categories I (40%), II (75%), III/IV (100%), and one-eyed (30%). Causes included ocular atrophy, physical eye, retinal degeneration, macular degeneration, leukokop/adherant leucoma, old residual deattachment, glaucomatous optic atrophy, pathological myopia, chronic retinopathy, chorionicretinopathy, advanced diabeticretinopathy, colonoma, embolism, mummylomia, amyloidosis, retinal retinopathy of promaturity, microcornea, choronic uveitis, squint, anterior stomatolite, and eviscerated..

Conclusiom:- This study reveals that visual impairment is more common among males aged 21-60, with retinitis Pigmentosa being more common. Early diagnosis is crucial for patients to maximize their visual potential. Genetic counselling and testing can help identify those at risk. All patients with visual disability should undergo low vision evaluation, training, and supportive counseling. Policy makers should recognize the loss of independence related to visual disability, and continue to evolve visual rehabilitation services through education and outreach programs. The study also found that 4.6% of patients were one-eyed, suggesting the need for revising categories for visual impairment.

Introduction

India is now home to the world largest number of blind people. Vision impairment poses an enormous global financial burden with the annual global cost of productivity losses associated with vision impairment estimated to be US$ 411 billion. Globally at least 2.2 billion people have a near or distance vision impairment. In at least 1 billion or almost half of these cases, vision impairment could have prevented or yet to be addressed. (1) About 12 billion blind people were estimated to be living in India in 2007, about 15% of the world blind population at that time. Registration of blond or partial sighted in India is performed by certification by ophthalmologist. The rights of person with disability act 2016 fixes the role and responsibilities of safeguarding the rights of people with disabilities in state. According to ministry of social justice and empowerment of Government of India , the minimum degree of disability should be 40% for an individual. Upon certification by a recognized medical board of a Government hospital with benchmark disability would be several benefits

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and welfare measures. Vision is one among the five basic special senses of human being. Normal binocular vision is a dynamic process that integrates sensory and motor information to derive meaning of the surrounding. Vision loss is a dread to human being than any other disability in the present day world. There are many causes for visual disability which includes damage to the eye and the failure of the brain to interpret the information from the eye correctly. Visual disability can occur at any point of time, but more common in elderly. Inherited visual impairment are often associated with developmental delay and struggle with day to day activities. Reduction in visual impairment from avoidable cause (avoidable blindness) due to increased availability of eye care services and awareness among general population. Despite, there is an increase in visual impairment due to condition related to ageing like age related macular degeneration, diabetic retinopathy and glaucoma. Visual disability remains a key barrier to socio-economic development so it is necessary to alleviate the functional consequences of impaired vision. Visual rehabilitation is not a domain limited to improving sight but rather than it comprises number of assistive technology , supportive devices and training pertaining to fulfil every part of a person's life and work in demanding roles. It is important to register in government authority so that it can entitle visually disabled people to a range of benefits and concessions. Prevention of visual impairment and rehabilitation of visually impaired requires data regarding incidence and etiologies of blindness. The WHO recommends standard definition of blindness and visual impairment in order to define categories of visual impairment and blindness which is necessary to compare data from different countries. 4 In this study we have collected data to analyse statistical aspect of demographical, etiological age, sex and epidemiological distribution of blindness among visual disability certificate issued in department of Ophthalmology P.D.U Govt. medical college, Rajkot, Gujrat.

Material and Methods

This study was carried out in department of Ophthalmology, P.D.U. Government medical college, Rajkot under guidance of Associate Professor in duration of 18 months. It was retrospective study which included visual disability certificate issued in G T sheth eye hospital, Rajkot from 2017 to 2022. All data included collected online from UDID www.swavlambancard.gov.in Exclusion criteria There was no exclusion criteria. After collection of all the data it was arranged according to following proforma**.**

Results:

This study include 500 cases of visual disabled patient came to G.T. Sheth eye hospital, Rajkot for visual disability certificate.

Age Distribution

Table no.1 Age wise distribution.

Age in years	NO.of cases	Percentages
0-20	99	19.8
21-40	154	30.8
41-60	155	31
61-80	88	17.6
>80	4	0.8

In this study of 500 cases, maximum distribution of 155 cases were seen in 41-60 age groupaccordingabout 31% followedby154cases (30.8%) among21-40age group, 99 (19.8%)in 0-20age group,88(17.6%)in61-80 age group, 4(0.8)in >80age group.

SEXDISTRIBUTION

TABLE NO.2 SexDistribution

SEX	No.ofcases	Percentage
MALE	338	67.6
FEMALE	162	32.4

Out of 500 cases, gender difference in visual disability prevalence affects the male 67.6% asagainst 32.4% in female. Difference in gender because male being the earning member in oursocietytheydocome formedicaladvice earlier than female.

EYEINVOLVEMENT

Tableno.3 Eyeinvolvement

EYEINVOLVED	NO.OFCASES	PERCENTAGE
ONEEYE	163	32.6
BOTHEYES	337	67.4

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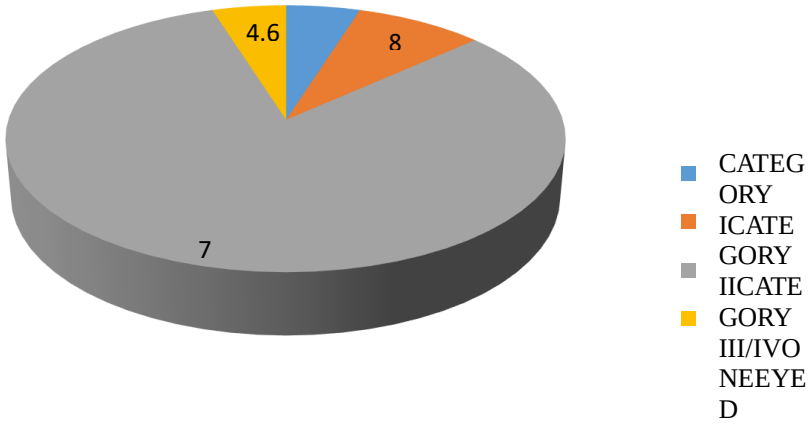
According to ministry of health's notification, one eyed person will not be eligible forbenefits/concessions. At the same time, one eyed certificate is of great help in case ofmultipledisability

Categoriesofvisualdisability:

Table no.5 category of visual disabilityaccording of WHO

CATEGORY	NO.OFCASES	PERCENTAGE
CategoryI(40%)	23	4.6
CategoryII(75%)	40	8
CategoryIII/IV(100%)	385	77
Oneeyed (30%)	23	4.6

CATEGORYOFVISUALDISABILITY



DISEASESWISEDISTRIBUTIONFORVISUALDISABILITY

TABLE NO.4 Causesofvisual disabilityin 500 patients

CAUSE	NO.OFCASES	PERCENTAGE
Optic atrophy	84	16.8
PTHYSICALEYE	76	15.2
RETINITISPIGMENTOSA	75	15
MACULAR DEGENRATION	45	9
LEUCOKOP/ADHERANT LEUCOMA	48	9.6
OLDRETINAL DEATTACHMENT	28	5.6
GLAUCOMATOUSOPTIC ATROPHY	21	4.2
PATHOLOGICALMYOPIA	19	3.8
CHORIO ETINALDEGENRATION	17	3.4
ADVANCEDDIABETIC RETINOPATHY	12	2.4
COLOBOMA	12	2.4
EMPTYSOCKET	9	1.8
ALBINISM	9	1.8
MICROPHTHALMOUS	6	1.2

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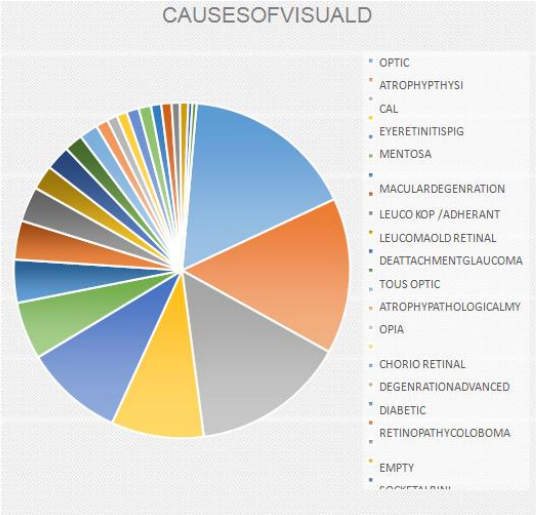
AMBYLOPIA	5	1
ANOPHTHALMOUS	5	1
RETINOPATHYOF PREMATURITY	6	1.2
MICROCORNEA	6	1.2
CHRONICUVEITIS	5	1
SQUINT	5	1
ARMD	4	0.8
ANTERIORSTAPHYLOMA	4	0.8
FAILEDKERATOPLASTY	2	0.4
EVISCERATED	2	0.4



Discussion

The findings of this study will be helpful to provide insights into the pattern of visual impairment among individuals seeking a disability certificate at a tertiary care hospital in Rajkot, Gujrat. Handicap 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. Many studies have been conducted in India to assess the prevalence of visual impairment in the community.

The findings of these studies were helpful in provide insights into the pattern of visual impairment among individuals and understanding the types, causes, and severity of visual impairment in the community will be helpful for developing appropriate strategies for diagnosis, treatment, and rehabilitation services. 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 socioeconomic burden on society.

Visual disability does not mean blindness, with the available rehabilitation services that can help an individual to lead an independent and higher quality of life. About 2.1 % of the total population were living with disability. According to the data collected among the five types of disability, visual disability emerges next to locomotor disability. 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.(19) We assessed the application of visual handicap certificates to find out the causes and its distribution in our area.

This is one of its kind to be performed in our area, so we can find out some suggestions to reduce the visual handicap and improve eye health delivery system and also we compared the results of our study with similar other studies and analysed the results. The results of this study will be helpful for government in order to plan the strategies for rehabilitation and prevention of visual impairment. The results of the current study conform to the results of previous studies conducted at different geographical areas in India. In this study of 500 patients with visual disability analysed about the pattern of visual disability by age, gender, category and causes. In our study, more evenly distribution among various age group but more prevalent in 20- 60 years of age is comparable to Dandona et al studies. (18) Hence over all burden of visual disability is more in younger age in developing countries due to high birth rate and mortality rate.

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According to observation of our study, number of male applicants (67.6%) was higher than that of female applicants (32.4%). 52 The current study result shows male dominance and the possible reason behind this may be that the certification system is easily accessible to males as compared to the females due to the societal hindrances. It is comparable with other similar studies like Sambuddha Ghosh et all in West Bengal (20) and Ambastha A et al (21) in Bihar in India. But a study performed by Michal S. Nowak and Janusz Smigielski (22) in Poland females were more than the males that might be because it is a developed country, everyone has good accessibility to health services and also there is difference in age group of the study population. In India males are the money earners in most of the families and traditionally they have more mobility and accessibility to health services as compared to females due to social and economic restrains.

Also the registration for visual impairment and blindness is institute based and optional, so those who seek benefits from certificates apply the most. Comparison of average sex involvement in present study and other study Study by Ambastha et al Michel and Janerszsmigielski Present study Average sex involvement 64% male 58% female 67.6% male In our study 385 patient out of 500 belongs to category III/IV which is comparable to performed by Sambuddha Ghosh et all in West Bengal found that the 84.5% of applicants belonged to the Blindness (100%) category. (20). Comparison of category IV involvement in present and other study Study by Sambuddha ghost et all Y Kareemsab et all Bunch et all Present study Category IV involvement 84.5% 55.15% 40% 77% In our study most common cause of disability is optic atrophy whereas in study of A Descriptive Analysis of Unique Disability Identification Card (UDID)-Certified Visually Disabled Patients at a Tertiary Eye Care Centre in Central India most common cause is retinal diseases including retinitis pigmentosa. Second most common cause of disability is phthisis bulbi followed by retinitis pigmentosa followed by macular pathology in our study whereas in Visual handicap certificates: A tool to evaluate the causes for permanent visual impairment in Northern Maharashtra phthisis was the most common cause followed by corneal opacity and Amblyopia . In our study, optic atrophy causing visual disability is 16.8% of them 77% were males in the age group between 21 – 60 years which is similar to Levin L.A et al, international optic nerve trauma study (1999). (23) In our study, retinitis pigmentosa constitute 15% and more predominant in the age group between 21- 60 years of age. (24, 25**,** 26)..

Conclusion

Theresultsofthisretrospectivestudywillprovidevaluable informationonthepatternofvisualimpairment among individuals seeking a disability certificate at a tertiary care hospital inRajkot, Gujrat. The findings can contribute to the development of targeted interventions andsupportservices for individuals with visual impairments.

Visual handicap registers are useful for the rehabilitation of visually impaired individuals andtoassess thepattern or causes ofblindness in particulararea.

To conclude the study, it was found that visual disability due to retinitis Pigmentosa is morecommon among males in the age group between 21 – 60 years. It is very important to makeearlydiagnosissothatpatientcanmakeuseoflowvisionaidstomaximizehisvisualpotential.Geneticcounsellingand testinghelp todetermineindividuals at risk.

Allpatientswithvisualdisabilityshouldundergolowvisionevaluation,trainingandsupportivecounselling,so that theycan bnefit from opticalandnon-optical devices.

Visualdisabilityisatragedyratherthanabandoningthosepopulationitisbettertoprovidelowvisioncareorreferringthem to rehabilitation services.

Public and government policy makers must understand that loss of independence related tovisualdisabilityis as realas that esulting fromphysical impairment.

Visual rehabilitation services can continue to evolve through continuous efforts of educationand outreach programmes to secureahigher qualityoflife forvisuallydisabled people.

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