

ASSESSMENT OF PATIENT ACCEPTANCE FOR SURGERY IN DIMINISHED VISION: RANDOMISED OBSERVATIONAL STUDY

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ABSTRACT

Background: Impaired vision can have a profound impact on routine life. There are multiple causes of visual impairment and blindness. Cataract is now the leading cause of blindness, other causes includes uncorrected refractive errors, glaucoma, diabetic retinopathy, corneal abnormalities etc. Vision impairment, sometimes it may be sudden onset or gradual and uniocular or binocular. Early detection and prompt treatment of ocular disorders is important to avoid lifelong visual impairment. **Materials and Methods:** This study was conducted to determine the uniocular and binocular diminished vision, presenting to the Eye O.P.D, at Ayurveda College Coimbatore, Tamilnadu, India, between November 2015 and December 2016. Data on age, gender, onset of vision impairment and diagnosis are recorded and analyzed. **Results:** Visual impairment is high among the patients attending the eye department. Uniocular and binocular diminished vision were seen in 67%, 33% respectively. The causes of visual impairment were Cataract (38%), Refractive errors (23%). 66% subjects of the samples were not undergone for surgery and 59% of the samples were not willing for surgery. **Conclusion:** Most of the causes of visual impairment seen were cataract and refractive errors. The conclusion of the study shows that about 59% of subjects are not willing for surgery and 41 % of subjects are willing for surgery. The limitation is that the sample size for this research was not large enough. Further research could be conducted among larger population to generalize the findings.

Keywords: Diminished vision, Blindness, Cataract, Willing

INTRODUCTION

Impaired vision can have a profound impact on routine life. Childhood blindness is second only to cataract blindness in terms of “blind years”¹. The spectrum of ocular problems varies from country to country and even from region to region in the same country². In the 10th revision

of the WHO International Statistical Classification of Diseases, Injuries and Causes of Death, ‘low vision’ is defined as visual acuity of less than 6/18 but equal to or better than 3/60, or a corresponding visual field loss to less than 20°, in the better eye with the best possible correc-

tion. 'Blindness' is defined as visual acuity of less than 3/60, or a corresponding visual field loss to less than 10°, in the better eye with the best possible correction. 'Visual impairment' includes both low vision and blindness³. According to WHO estimation, in 1996, worldwide 45 million were blind and 135 million people were having low vision and then to the projected 2020 population (76 million blind). These estimates indicated that the global extent of visual impairment would double in the period 1990–2020, and this realization provided the impetus for the launch of VISION 2020 in 1999. Of the estimated 45 million cases of blindness by 1996, approximately 60% were due to either cataract (16 million people) or refractive errors. A further 15% were due to trachoma, vitamin A deficiency or onchocerciasis, with another 15% due to diabetic retinopathy or glaucoma. The remaining 10% of cases were attributable to age-related macular degeneration and other diseases³.

Globally, cataract is the single most important cause of blindness. Most cataracts are related to ageing and cannot be prevented, but cataract surgery is highly effective, most cost-effective health care intervention resulting in almost immediate visual rehabilitation. The prevalence of cataract also increases with age in developing countries, although it often occurs earlier in life, and there is more of it. For example, in an Indian study, visually significant cataract occurred 14 years earlier than in a comparable study in the United States^{4,5,6}. Studies have revealed that, uncorrected refractive errors for example myopia, hypermetropia and astigmatism affect a large proportion of the population worldwide⁷. Refractive errors can be easily diagnosed, measured and corrected with spectacles or other

refractive corrections to attain normal vision. If they are not corrected or the correction is inadequate, refractive errors become a major cause of low vision and even blindness⁸. Diabetic retinopathy is the most frequent cause of new cases of blindness among adults aged 20–74 years. During the first two decades of disease, nearly all patients with type 1 diabetes and 60% of patients with type 2 diabetes have retinopathy⁹. Approximately 382 million people across the world have been estimated to have DM in 2013 and if no action is taken this number will rise to 592 million by 2035¹⁰. WHO estimates that 19% of the world's diabetic population lives in India and 80 million people in India will have diabetes by the year 2030. It has been seen that patients having DR are 25 times more at risk of blindness than a non-diabetic individual¹¹. Vision 2020 aims to eliminate avoidable blindness in the world by 2020 and targets the leading causes of avoidable visual impairment¹².

OBJECTIVE OF THE STUDY

1. Identification of individuals with unocular and binocular impaired vision.
2. Evaluation of the patient to determine patients willing for surgery.

MATERIALS AND METHODS

Eye O.P.D at Ayurveda College, Coimbatore, provides primary and secondary eye care services to the patients. The randomized, descriptive approach was used to identify the unocular and binocular impaired vision among the patients who are attending in OPD, Ayurveda College & Hospital, Coimbatore, Tamilnadu in between November 2015 and December 2016. The sample size was seventy. Patients were included

Male and female, aged between 20 to 70 years. Patients were excluded who are aged above 70 years. The questionnaire was designed for the study consists items relating to demographic data of the subjects such as Age, Gender, Education, Religion, Residence, Occupational Status, Marital Status, Family History, Habits and Personal History Including any associated Illness, impairment present in which eye, duration, previous underwent eye surgery like cataract surgery (ICCS, SICS, Paco-emulsification), Glaucoma surgery, Surgery for diabetic retinopathy etc.), unocular or binocular. Confidentiality of their responses was assured. Written consent obtained from the subjects who are willing to participate in study. Anatomical examination was done by using torch and binocular

loupe. Slit lamp examination done for further evolution. Fundus examination was done by using a direct ophthalmoscope. Intraocular pressure measurement was done with a schiotz tonometer. Colour vision was tested with Ishihara's charts. Visual acuity was assessed by using Snellen's test type chart for who are able to read. Those who are not able to read, Landolt's broken ring chart/ C chart, Tumbling E charts or counting fingers was considered.

RESULTS AND DISCUSSION

The demographic profiles of patients, characteristics of patients, causes of impairment, surgical history and the other observations are mentioned below:

Table 1: Distribution of samples according to demographic data

Category	Group	Frequency	Percentage
Age	20-30 Years	9	12.85 %
	30-40 Years	13	18.57 %
	40-50Years	11	15.71%
	50-60Years	22	31.42%
	60-70Years	15	21.42%
Sex	Male	41	58.57%
	Female	29	41.42%
Occupational Status	Employees	46	65.71%
	Housewives	8	11.42%
	Unemployed, Retired	16	22.85%
Causes for Impaired Vision	Refractive errors	16	22.85%
	Cataract	27	38.57%
	Glaucoma	11	15.7%
	Diabetic retinopathy	6	8.57%
	Other causes	10	14.28%
Previous Surgery	Unocular surgery	22	30%
	Binocular surgery	12	17.14%
	No surgical intervention	46	65.71%
Impaired vision	Unocular diminished vision	23	32.85%

	Binocular diminished vision	47	67.14%
Willing for surgery	Willing for surgery	29	41.4%
	Not willing for surgery	41	58.5%

Of the 70 subjects, Maximum number of subjects 22 (31%) belonged to the age group of 50-60 years, 15 (21%) belonged to the age group of 60-70 years and minimum 9 (12.85%) subjects belonged to the age group of 20-30 years. 58.57% were male and 41.42% were female. Majority of the subjects 46 (65.71%) were employed, while 16(23%) were unemployed, retired and 8 (11.42%) of the participants were housewives. Visual impairment is high among the patients attending the eye department. 27 (38%) of the subjects were having cataract, 16(23%) were having refractive errors, 11 patients were having glaucoma, 6 patients were having diabetic retinopathy, 10 patients were having other diseases i.e. ARMD, Optic atrophy

etc. 46 (66%) of the samples were not underwent for surgery, 12 (17%) of subjects were underwent for surgery for both eyes and 22 (30%) samples were underwent for recent eye surgery. In this 41 (59%) of the samples were not willing for surgery, while 29 (41%) of subjects were willing for surgery. Overall about of 47 (67.14%) had binocular impaired vision, 23 (32.85%) had unocular diminished vision. The results show that most of the causes of visual impairment seen were cataract (38%), refractive errors (23%). Majority 67% of subjects had binocular diminished vision, 66% subjects of the samples were not undergone for surgery and 59% of the samples were not willing for surgery.

Fig: 1 Diagram shows distribution of samples by age group

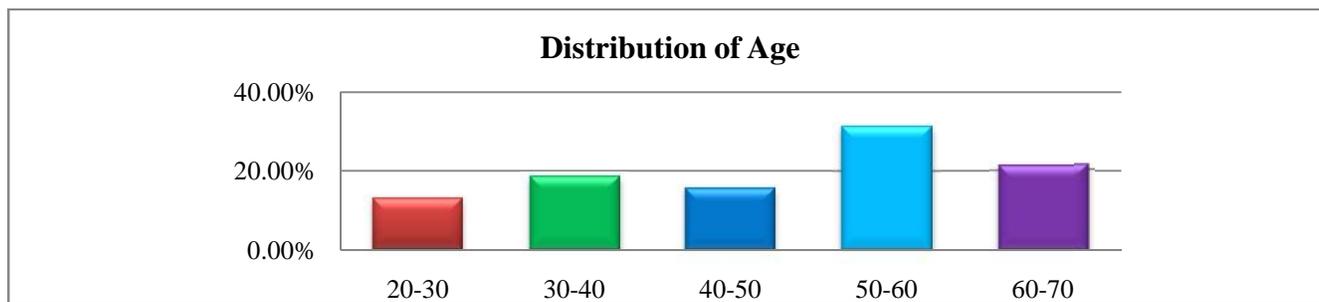


Fig 2: Diagram shows distribution of samples by sex

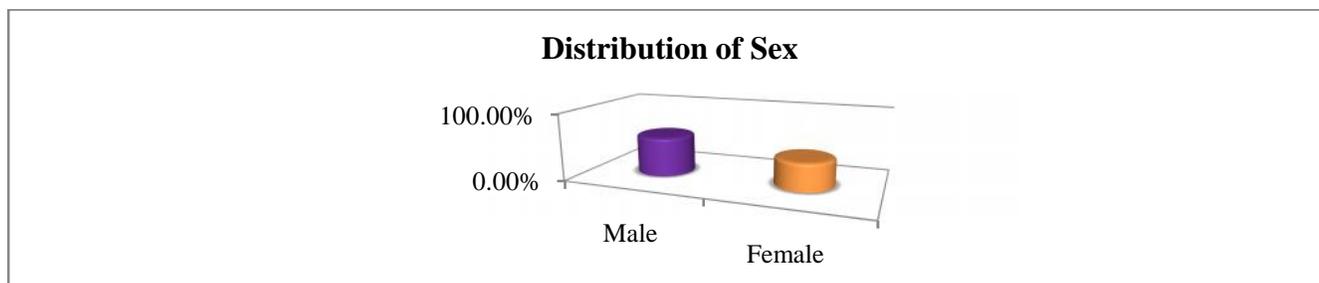


Fig 3: Diagram shows distribution of samples by Occupational Status

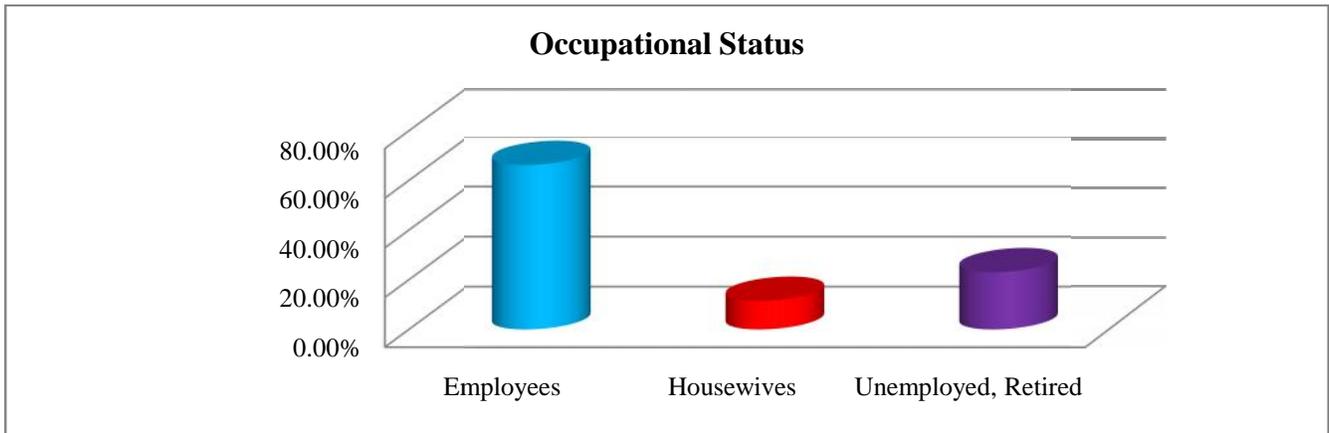


Fig4: Diagram shows causes identified for impaired vision

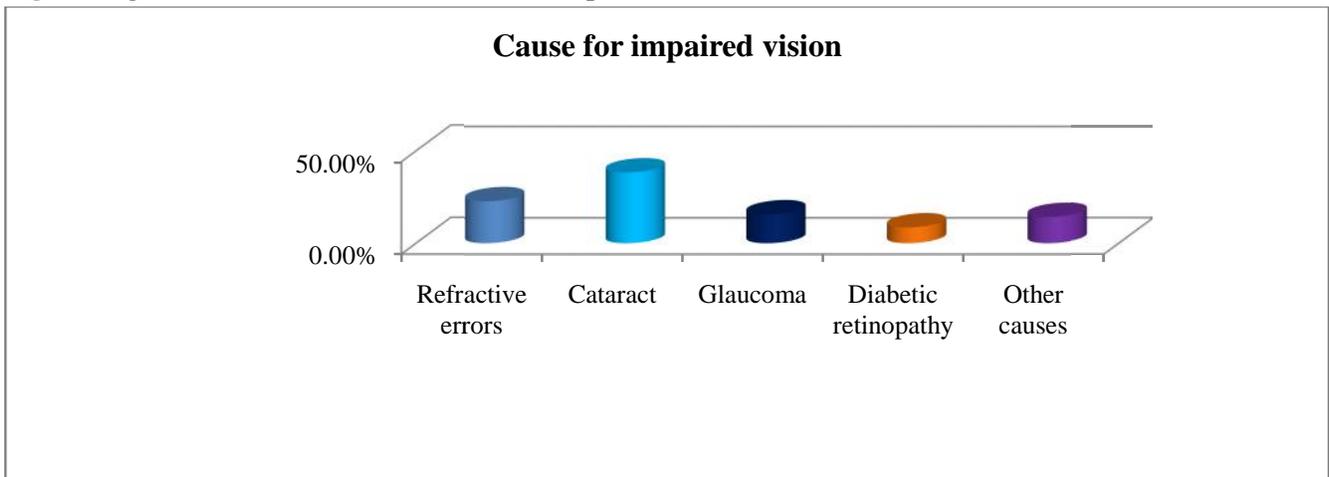


Fig 5: Diagram shows distribution of Unilateral and Binocular diminished vision

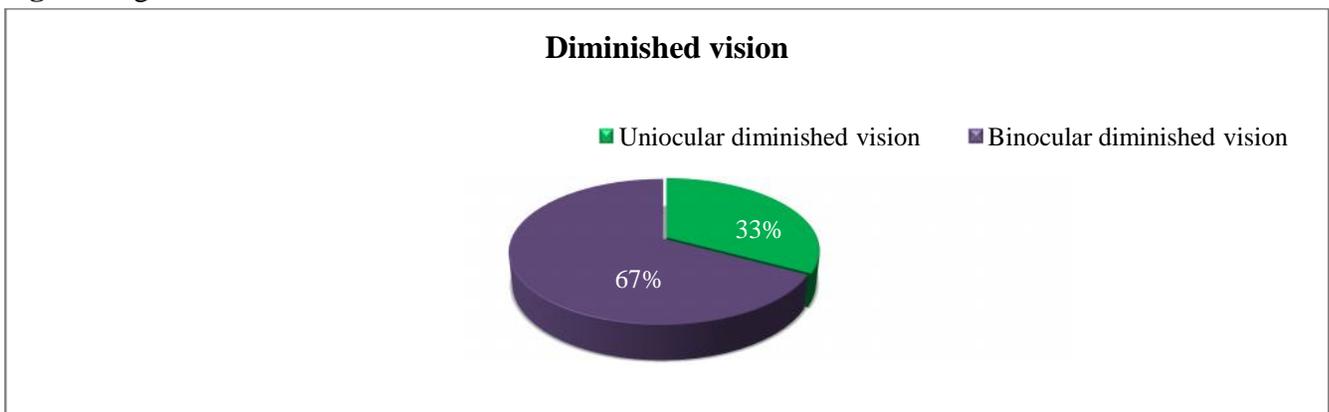


Fig 6: Diagram shows distribution of samples who underwent for previous surgery

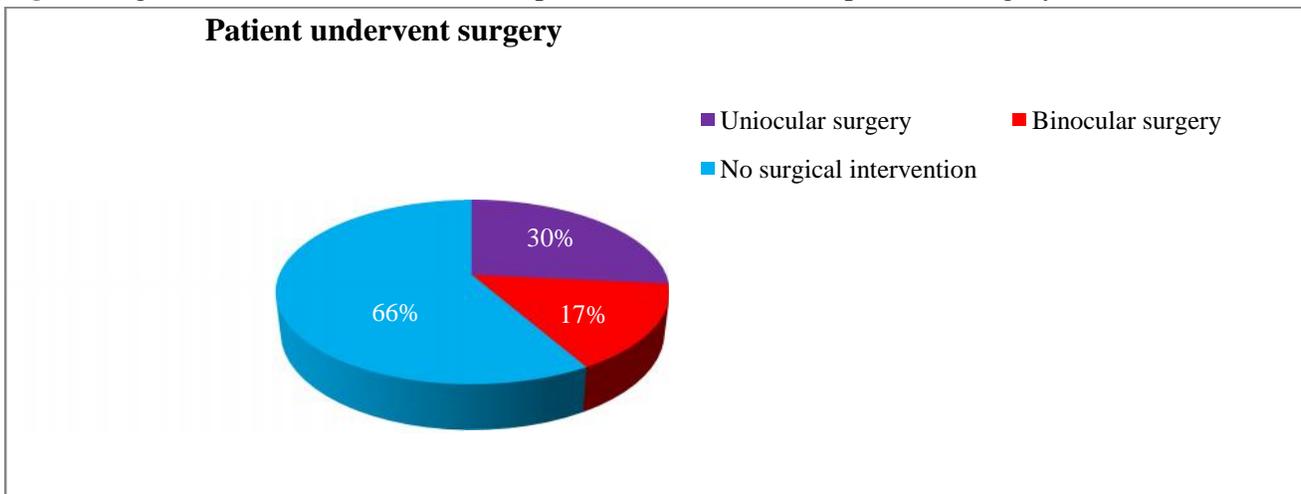
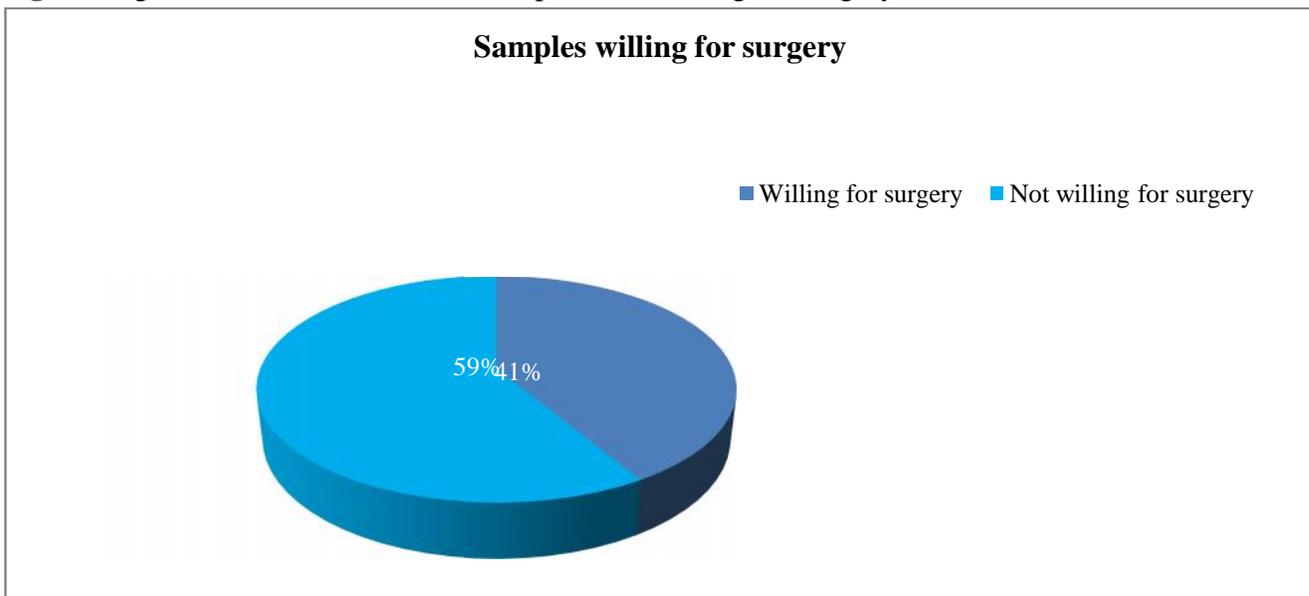


Fig 7: Diagram shows distribution of samples who willing for surgery



CONCLUSION

Most of the causes of visual impairment seen were cataract and refractive errors. The conclusion of the study shows that about 59% of subjects are not willing for surgery and 41 % of

subjects are willing for surgery. The limitation is that the sample size for this research was not large enough. Further research could be conducted among larger population to generalize the findings.

Willing for surgery	29	41.4%
Not willing for surgery	41	58.6%

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