ISSN - Print: 2277 – 1522; Online: 2277 – 3517

ORIGINAL RESEARCH ARTICLE

DOI: 10.26727/NJRCM.2018.7.3.182-185 Year: 2018 Vol: 7 Issue: 3. Jul.-Sep. Page: 182-185

Hospital Based Study: Ocular morbidity pattern among Patients attending a Private Hospital in Urban area of Kancheepuram city.(T.N.)

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Date of Submission	**: 21-02-2018**	**Date of online Publication**	**: 07-07-2018**
Date of Acceptance	**: 16-06-2018**	**Date of Print Publication**	**: 30-06-2018**

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ABSTRACT

Background: Normal vision is essential for normal physical, mental, psychological development and education. The Visual impairment is a worldwide problem that has a significant socioeconomic impact. **Objective:** To study the pattern of ocular morbidity and its association with socio-demographic variables in urban population. **Method:** Hospital based study. A retrospective study was done by reviewing the case records of all patients attending the Private Hospital at Kancheepuram city from October 2015 to February 2016. Prior permission for reviewing the recorded data was taken from the institutional Chief. The case reports of total 1613 patients was included in the study using consecutive sampling method. **Results:** Prevalence of ocular morbidity was 53.0% with a significantly higher prevalence in females than males (56.2% vs 49.1%). Refractive errors were the major ocular morbidity (86.4%) followed by cataract (22.5%). The ocular morbidity was significantly more prevalent in people aged >60 years (98.5%) than <60 years (44.3%), illiterates (75.7%) than literates (58.2%), widows/widowers (96.0%) than others (50.1), clerk/shop owner group (69.0%) than other groups (63.6%), lower class (65.2%) than other socio economic classes (52.7) and general category (57.8%) than other caste categories (36.7%). **Conclusion:** The ocular morbidity was found to be significantly associated with the literacy status, occupation, marital status, socio economic status and caste of the individuals. Measures should be undertaken to render eye health education, awareness creation and motivational programmes.

Key-words: Ocular Morbidity, Demographic variables, Social Variables, Urban Area Hospital

INTRODUCTION

Among all the senses provided by God, sense of sight is supreme. Almost 80% of our knowledge is gained through our eyes. Worldwide, approximately 285 million people are visually disabled, of whom 39 million were blind and 246 million were with low vision. And about 90% of them living in developing countries. The estimated prevalence of blindness in India for the year 2004 was about11.2 per thousand populations. According to rapid national survey on blindness 2006-07the prevalence rate reduced from 1.1 % to 1%and estimated national prevalence of childhood blindness or low vision was 0.8 per 1000 children. One out of every four persons in our country suffers from an eye problem at some point of time.[(1)]. The eye morbidity is multi-factorial; infections, poor nutrition and certain socio-cultural factors are important in its causation. Poor hygiene and sanitation are important predisposing factors and the climatic conditions can further aggravate the eye problems. Therefore, there is a need to control the above mentioned factors for checking ocular diseases in early stages. Necessary treatment, if given in early stages, many times, prevents permanent visual disability. This warrants early detection and treatment to prevent permanent disability. The causes of blindness vary widely in different parts of the world Data on the prevalence of blindness and causes of blindness and severe visual impairment are needed for planning and evaluating preventive and curative services provided, including planning special education and low vision services.

Aims and Objective:

1) To study the pattern of ocular morbidity among patients attending a private hospital in urban area in Kancheepuram city.

2) To study the association of Ocular morbidity with socio demographic variables among patients attending a private hospital urban area of Kanchpuram city.

MATERIAL AND METHODS

Study Design: This was a Hospital based Retrospective cross sectional study carried out by reviewing the case records of patients attending a private hospital in urban area of Kanchepuram city.

Study Area And Population: The study is done in Private hospital which is situated in Kancheepuram city

catering a population of 164,384 of which male and female are 81,992 82,382 respectively.[2,3] This private eye hospital gets most of the patients from this population.. A retrospective study was done by reviewing the case records of the patients attending the private eye clinic in urban area of Kancheepuram district during the duration of study period. Prior permission from the chief of the hospital for reviewing the records was taken.

Inclusion criteria: All the patients who attended the clinic for any problem during the study period were included in the study.

Exclusion criteria-: The follow up patients or old patients were excluded from the study.

Sample Size and Sampling technique: Considering the prevalence of ocular morbidity in the general population as 20%, with a relative precision of 10% of P and at confidence limits of 95%, the sample size was calculated to be 1600 using the formula ($4pq/L^2$ where p=20 and q=80 and L is 10% of p which is precision.) . Total 1613 patients case records was included in the study in 5 months period.(October 2015 to February 2016)The sampling technique followed was convenient sampling.

Study Period: To cover the sample size of 1600 study period taken was of five months from October 2015 to February 2016

Study Tool: The secondary data was collected from the Hospital records of Patients attending the hospital during the study period. The data collected was socio-demographic details and the eye disease diagnosed by the Ophthalmologic consultant of the hospital.

Statistical Analysis: The collected data was analysed using SPSS version 20 and the chi square test was used for significance of association of ocular morbidity with various socio-demographic variables.

Ethical Approval: The approval for the study was obtained from the Ethical eommittee of Sree Balaji Medical College and Hospital. Informed consent was obtained from the hospital chief to review the records

RESULTS

Out of 1613 individuals whose case record was included in the study, 855 (53.0%) suffered ocular morbidity. The most common morbidity was Refractive Error (86.4%), followed by Cataract (22.5%), Conjunctivitis (6.0%), Pterygium (2.6%), Squint (2.5%) and Blepharitis (1.5%). Trachoma and Entropion comprised a bare minimum of 0.2% each (Table-1). As seen in Table-2, amongst children aged <4 years, the prevalence of ocular morbidity was 1.7%. It increased significantly (P<0.001) with advancing age, being maximum (98.5%) in people aged ≥ 60 years. Ocular morbidity was significantly higher (P<0.01) in females (56.2%) than males (49.1%). In the present study subjects below 7 years of age were excluded for studying educational status because, Census involves persons above 7 years for assessing literacy status.Table-3 depicts that the prevalence of ocular morbidity was being maximum in the illiterate group (75.7%) and minimum (51.0%) in the group educated up to fifth class. This difference in the prevalence of ocular morbidity in relation to the educational status was found to be statistically significant (P<0.05).

Table -1 Percent Prevalence of Occular Morbidities.N=1613

Type of morbidity	No. of Morbidity N=855		Percent Prevalance N=1613
	No	%	
Refractive Error	739	86.4	45.8
Cataract	192	22.5	11.9
Conjunktivitis	51	6	3.2
Pterigium	22	2.6	1.4
Squint	21	2.5	1.3
Blephritis	13	1.5	0.8
Glaucoma	6	0.7	0.4
Corneal Opacity	3	0.3	0.2
Stye	3	0.3	0.2
Dacryocystitis	3	0.3	0.2
Tracoma	2	0.2	0.1
Entropion	2	0.2	0.1

Table -2 Age and sex-wise distribution of morbidities

Age group	Male Attendees			Female Attendees			Total attended		
	Total	Morbid	%	Total	Morbid	%	Total	Morbid	%
0-4a*	77	2	2.6	40	0	0	117	2	1.7
5-14b*	120	20	17	117	35	29.9	237	55	23.2
15-59	413	220	53	587	323	55	1000	543	54.3
≥60	119	116	98	140	139	99.3	259	255	98.5
Total	729	358	49	884	497	56.2	1613	855	53

For the purpose of calculation a & b have been merged.
Age wise morbidity χ^2=409.00 ; df=2; P <0.001.
Sex –wise morbidity χ^2=8.12 ; df=1; P <0.01.

Table-4 denotes that ocular morbidity was significantly more (P<0.05) in individuals who belonged to the category of 'clerk/shop owner' (69.0%) as compared to other categories, being minimum (48.1%) in 'semiprofessional' group and in this table also children below 14 years were excluded as their occupation status cannot be ascertained as they were students. It can be seen from Table-5, that ocular morbidity was significantly related to (a)marital status, being maximum (96.0%) in widow/widower group followed by separated/ divorce group (68.2%) and married group (66.3%) and minimum (29.7%) in the unmarried group (P<0.001); (b) social

Table-3: Distribution of Ocular Morbidity by Educational Status.

Education	Total Population	Morbid Population	
	No	No	%
Illiterate	115	87	75.7
Primary	257	131	51
Middle	138	76	55.1
High school	260	171	65.8
Higher Secondary.	212	137	64.6
Graduate	201	112	55.7
Post Graduate.	227	127	56
Total	1410	841	59.6

Children < 7 years (203) with 14 morbidities were excluded[3].

χ^2 = 30.28,df-6; P value=<0.05

Table -4: Distribution of Ocular Morbidity by Occupation.

Occupation	Total subjects	Subjects with morbidity	
		Number	%
Unemployed	553	365	66
Non skilled worker	60	40	66.7
Semiskilled worker	72	43	59.7
Skilled worker	111	68	61.3
Clerk/shop owner	238	164	69
Semi Professional	77	37	48.1
Professional	45	31	68.9
Total	1156	748	64.7

*Children <14 years(457) with 107 morbidities were excluded.

χ^2=13.4 ;df=6 ; P=<0.05

Table-5: Relation of ocular morbidity with marital status, social class and caste.

Social Variables	Total (n=1613)	Individuals with Morbidity	
		No	%
Marital Status			
Married	820	544	66.3
Unmarried	670	199	29.7
Widow/Widower	101	97	96
Seperated/Divorced	22	15	68.2
P=<0.001			
Socio-economic status			
Upper	90	50	55.6
Upper Middle.	775	433	55.9
Lower Middle.	461	237	51.4
Upper Lower	264	120	45.5
Lower	23	15	65.2
P=<0.05			
Caste			
General	1248	721	58
Other backward classes.	197	76	38.5
Scheduled caste/Scheduled tribes	168	58	34.5
P=<0.01			

class being maximum (65.2%) in lower class and minimum (54.1% each) in upper lower and lower middle classes (P<0.05) and (c) caste, being maximum (57.8%) in general category, followed by other backward classes (38.6%) and scheduled caste/scheduled tribe (34.5%) (P<0.01).

DISCUSSION

In this study, the prevalence of ocular morbidity was found to be 53.0%, which is higher than 40.38 % found at a study done by Dr Amol Khadse, Dr Uday Narlawar et al. in central india [4]. Similar prevalence of ocular morbidities were observed by study done by Rajesh Gattani. (42.3%)[5] and study done by Madhu Sharma *et al*. (40%)[6]. In the present study, the prevalence of ocular morbidity was found to be significantly associated with age which is in agreement with the findings of the studies done by Gulati N *et al.* [7], Titiyal JS *et al*.[8], Dandona L *et al.* [9] and Asole S *et al.*[10] .

Children (0-14 years) in this study, had an ocular morbidity of 30.1% which is higher than 10.9% reported in the study done by Mukherji .PS at West Bengal.[11] and 22.7% in a study done by Kumar .R, Mehra.M and Kamlesh at Delhi[12].The ocular morbidity in the geriatric age group, in this study, was 98.5%, which is in approximate agreement to100% in a study done by Gulati N et al at Delhi[7] and 90.62% found in studies done by reasons. Ocular Asole et al at Aurangabad[10]. The higher prevalence of ocular diseases in old age could be due to increasing degenerative conditions, increased susceptibility to infections, lack of proper care of the eyes, among other morbidity was found to be significantly higher in the females as compared to males (P<0.01), which was similar to the findings of the study done by Asole et a.l[10] However the study done by Dr Amol Khadse, Dr Uday Narlawar et al. in central india [4] also showed higher prevalence of ocular morbidity in females than males but this difference was not significant.

In the present study, the ocular morbidity was found to be significantly associated (P<0.001) with literacy status being maximum in illiterates. A Delhi based study done by Sreehari.Y.R, Gulati PV.also observed the same. Also study done by Dr Amol Khadse, Dr Uday Narlawar et al. in central India[4] also supports the significant association of literacy status with ocular morbidity. Ocular morbidity was found to be significantly associated with occupation ((P<0.05) with the highest morbidity prevalence in the clerk/shop owner group and professionals. This finding can be explained due to higher educational status of the working group as professionals.

In the present study, widows/widowers had the maximum prevalence of ocular morbidity while unmarried (yet to get married) people had the least prevalence and this association was highly significant (P<0.01). This observation is explained on the basis of higher ocular morbidity (already discussed) with increasing age.

The ocular morbidity was found to be significantly associated with socio-economic status (P<0.05) being highest in the lower socio-economic group (class V), which was similar to the findings of the studies conducted by Asol et al at Aurangabad[10], also in study done by Kumar .A, Mittal.S.Gupta.A and Garg .S.K. at Meerut[14]

and Dr Amol Khadse, Dr Uday Narlawar et al. study in central india[4]

Ocular morbidity was significantly more prevalent ($P<0.05$) in the general category as compared to OBCs and SC/ST categories in the present study. Similar findings were observed in the study done by Sharma J.L., Lal S, Chauhan B.S., Singh M and Singh I at Haryana [15]. The higher ocular morbidity in this category may be because of the better health seeking behavior and consequently more frequently diagnosed ocular morbidity in this category

Conclusion:-The prevalence of ocular morbidity was found to be 53.0% in the population with a significantly higher prevalence in females than males. The ocular morbidity was found to be significantly associated with the literacy status, occupation, marital status, socio economic status and caste of the individuals. Measures should be undertaken to render eye health education, awareness creation and motivational programmes in the community including parents, senior school students and the primary school teachers with active participation and involvement of community organizations like youth clubs, women organizations, religious leaders etc. The importance of first eye check-up in children at the age of five years should be emphasized to the parents, the aged as well as the population as a whole should be educated and told about the benefits of screening for eye problems. School health programmes should be strengthened to carry out screening and proper management of eye problems in children

Acknowledgement:- It is proud privilege to record my heartfelt gratitude and indebtedness to my esteemed teacher Dr R Umadevi, Professor Department of Community Medicine, Sree Balaji Medical college, Chennai who able guidance, untiring constant supervision, sympathetic attitude and encouraging polite expressions are really unforgettable. I am equally indebted to Professor Dr.J.Krishnakumar for his kind suggestion and technical know how in setting up this work. My sincere thanks to the chief of the Eye Hospital for permitting me to collect the required data for completing the study. I also thank them whose names have not been mentioned but have stood to my cause, rendered me unconceivable help at every step of my work.

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Conflict of Interest: **None**
Source of funding support: Nil

How to cite this article: Rashmi Gour Patel, S .Gopalkrishnan, Sunil Patel. Hospital Based Study: Ocular morbidity pattern among Patients attending a Private Hospital in Urban area of Kancheepuram city.(T.N.). Nat J Res Community Med 2018;7(3):182-185.

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