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Prevalence of ocular morbidities among school children's in the field practice area of a tertiary care hospital in Mangaluru, Karnataka

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Abstract: ***Background:****Prevalence of blindness in children is estimated to be around 1.25/1000 in rural and 0.53/1000 in urban areas in India. Ocular morbidity describes any eye disease regardless of visual loss. Ocular morbidity may affect large number of students and could lead to visual loss.* ***Objective:****To assess the prevalence of ocular morbidities among school children in the field practice area of a tertiary care hospital in Mangaluru, Karnataka.*

Materials and methods: *A Cross sectional study was carried out among School children studying from 5th to 10th standard in the field practice area of A.J Institute of medical science& research center. Study period was from June 2014 – July 2015, Schools located in Rural and Urban field practice areas of A J Institute of Medical Science and Research Center. A total of 2152 school children were examined for ocular morbidities.Data was analyzedusing SPSS (Statistical Package for Social Sciences) Inc.16.0 software.*

Results: *The prevalence of ocular morbidity was 15.56%%. Total 292students were found to have refractive error which was the most common ocular morbidity*

Conclusion:*Refractive error continues to be the most common Ocular morbidity among school going children. Regular eye screening programmes need to be conducted to detect ocular morbidities.*

Keywords: *Eye screening, ocular morbidities, refractive errors, colour blindness, school children.*

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I. INTRODUCTION

Eyes are the most treasured organ of human beings. Ocular morbidity describes any eye disease regardless of visual loss. Ocular morbidity may affect large number of students and could lead to visual loss.The school age is a formative period, physically as well as mentally, transforming the child into a promising adult. Children in the school-going age group represent 25% of the population in the developing countries.(1)

School children are affected by various eye disorders like refractive errors, squint, Vitamin A deficiency and eye infections. Uncorrected refractive errors form one of the important causes of visual impairment and blindness in most developing countries including India. The earliest signs of refractive errors are strainful eyes with or without redness by evening, with watering and headache. These complaints of the child to the parents go unnoticed due to lack of awareness, more so among the children studying at a government school in the rural areas. Refractive errors along with Vitamin A deficiency form a major preventable cause of blindness in the young age group.(2)

Visual impairment is a worldwide problem that has significant socioeconomic impact also. Childhood blindness is a priority area because of the number of years of blindness that ensues. Data on the prevalence and causes of blindness and severe visual impairment in children are needed for planning and evaluating preventive and curative services for children, including planning special education and low vision services. Considering the

fact that 30% of India's blind lose their sight before the age of 20years, the importance of early and treatment of ocular morbidity and visual impairment in young children is obvious. [3,4,5]

Therefore, this present study aims to measure the prevalence of ocular morbidities among school children in the field practice area of a tertiary care hospital in Mangaluru, Karnataka.

II. MATERIALS AND METHODOLOGY

A School based cross sectional study was carried out among School children studying from 5th to 10thstandard in the field practice area of A.J Institute of Medical Science& Research Center from June 2014 – July 2015. Ethical permission was obtained from ethical committee of A.J Institute of Medical Science& Research Center. There are 22 schools under the jurisdiction of field practice area of A.J Institute of Medical Science& Research Center. All the schools were included in the present study. The Sample size was calculated to 2152 using the formula $4pq/L^2$, considering p =44.77%[6], q=(1-p), relative allowable error (L) =5% of p, and 10% as non response.For feasibility 2058study subjects (98 in each school) were selected from 21 schools and rest 94 study subjects were selected from the last school. Then head masters of all schools were approached before hand and written permission were obtained. Students were selected by simple random sampling using the students list as data frame. A pretested semi-structured questionnaire was used for collection of information regarding socio demographic. Ophthalmic examination was done with appropriate instrument by the one senior Ophthalmologist. Children who were found to have ocular morbidity were managed appropriately. Data was entered in excel sheet and analyzed using SPSS (Statistical Package for Social Sciences) Inc.16.0 software.

III. RESULTS

In the present study, among the study participants (Table 1 shows) 1167 (54.25%) were male and 984 (45.75%) were female. Majority of participants were Hindus (65.60 %), followed by Muslims (30.08%), Christians (4.28%). Most of the participants were belongs to nuclear family (72.85%), followed by joint family (19.29%) and three generation (7.72%).

In the present study (table no.2) the overall prevalence of ocular morbidity was 15.57% (335). Majority of the male gender (69.84%) were suffering from ocular morbidities. Study participants belong to Hindu (56.42%) and nuclear type family (85.08%) was suffering from ocular morbidity.Among ocular morbidities (table no.4) refractory error was most common (87.16%) ocular morbidity, followed by Color blindness (5.67%) and Conjunctivitis (2.69%).

Table No.1: Showing the demographic distribution of the study participants (n=2152)

Demographic variables	Frequency	Percentage
Gender		
Male	1167	54.25%
Female	984	45.75%
Religion		
Hindus	1411	65.60%
Muslims	647	30.08%
Christians	92	4.28%
Others	1	0.05%
Type of family		
Nuclear	1567	72.85%
Joint	415	19.29%
Three generation	166	7.72%

Table No.2: Showing the prevalence of ocular morbidity among study participants (n=2152)

Ocular morbidity	Frequency	Percentage
Present	335	15.57%
Absent	1817	84.43%

Table No.3: Showing the prevalence of ocular morbidity among study participants according to their demographic distribution (n=335)

Ocular morbidity	Frequency (%)
Gender	
Male	234(69.84%)
Female	101 (30.16%)
Religion	
Hindus	189 (56.42%)
Muslims	123 (36.71%)
Christians	23(6.87%)
Others	0(0.00)
Type of family	
Nuclear	285(85.08%)

Joint	26(7.76%)
Three generation	24(7.16%)

Table No. 4: Showing the proportion of different of ocular morbidities (n=335)

Ocular morbidities	Frequency	Percentage
Refractive error	292	87.16%
Color blindness	19	5.67%
Conjvunctivitis	9	2.69%
Vitamin A deficiency (Bitot's spots)	6	1.79%
History of eye injury	5	1.49%
Kalazion	4	1.19%

IV. DISCUSSION

In the present study the prevalence of ocular morbidities found to be 15.57%. Similar kind of results (13%) seen in a study conducted in Gujarat[(4)], Kathmandu (19.56%)[(6)]. But higher prevalence seen in different studies conducted in Karnataka (44.7%)[(7)], Shimla (31.6%) [(8)], Uttar Pradesh (29.35%) [(9)]. Lower prevalence (11%) has been observed in Kathmandu.[(10)]

In the present study refractive error was the most common ocular morbidity and similar kind of results were observed in others studies. [(6,7,9,10)]

V. CONCLUSION

In the present study the prevalence of ocular morbidities found to be 15.57%, which is lower than other studies conducted in different places, but the major cause of ocular morbidity was refractive error in this present study. So regular screening for refractive error among school children should be encouraged.

REFERENCES

[1] World Health Organization (1999) Report of WHO/IAPB scientific meeting, Hyderabad, India 13-17th April. Childhood Blindness Prevention. WHO/PBL/87.
[2] Arora K S, Garg R, Gupta N and Bansal N. Comparative study of colour blindness among various immigrant populations in Punjab. Int J of Basic and Applied Medi Sci.2012;2 (2):214-217.
[3] Majumder G, Ramakrishnan R, Chandrasekharan S. Prevalence of Congenital Colour Blindness in a Tertiary Hospital. Aioc 2010 proceedings; 413-415.
[4] Prajapati, P, Oza, J, Prajapati, J, Kedia, G, Chudasama, R.K. Prevalence of Ocular Morbidity Among School Adolescents of Gandhinagar District, GujaratOnline J Health Allied Scs 2010; 9 (5):1.
[5] Desai S, Desai R, Desai NC, Lohiya S. School eye health appraisal. Indian J Opthalm 1989; 37: 73-75.
[6] Shrestha R.K, Joshi M.R, Ghising R, Rizyal A.Ocular morbidity among children attending government and private schools of Kathmandu valley.JNMA J Nepal Med Assoc. 2011 Oct-Dec;51(184):182-8.
[7] Kamath B.T.P, Prasad B.S.G, Deepthi R, Muninrayana. Prevalence of ocular morbidity among school going children (6-15years) in rural area of Karnataka, South India. nt J Pharm Biomed Res 2012;3(4):209-212.
[8] Gupta M, Bhupinder P Gupta, Chauhan A. Ocular morbidity prevalence among school children in Shimla, Himachal, North India. Indian J Ophthalmology 2009 Mar-Apr; 57(2):133–138.
[9] Singh V, Malik K.P.S, Malik V.K, Jain K, Prevalence of ocular morbidity in school going children in West Uttar Pradesh.Indianjournal of Ophthalmology2017:65:500-508.
[10] Nepal B.P, Koirala S, Adhikary S, Sharma AK.Ocular morbidity in schoolchildren in Kathmandu. Br J Ophthalmol. 2003May;87(5):531-4.

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