

## Prevalence of Ocular Morbidity among School Children

Abhishek Kulkarni<sup>1</sup>, Pranesh Kulkarni<sup>2</sup>

<sup>1</sup>Assistant Professor <sup>2</sup>Professor and Head, Department of Ophthalmology, Khaja Banda Nawaz Institute of Medical Sciences, Kalaburagi, Karnataka 585104, India.

### Abstract

*Introduction:* No one can deny the fact that the eyes are the most important of our sense organs. Good eye-sight plays a vital constructive role in the development of the faculties of the child. Most of our knowledge and skills are acquired by (Nit eyes which are said to be the windows to the world. Bad eye-sight not only affects academic improvement, but in the long run causes untold damage to the psyche and self-confidence of the child. *Methodology:* Screening was undertaken with the help and active cooperation of the school management. In each of these institutions the assistance of that particular class-teacher and the physical instructor was made available. The class teacher was given the proformas and general aspects, like name, age, sex, class, address were filled up. *Results:* The majority of ocular disorders fall in the category of refractive errors (54.93%), conjunctival lesions (23.94%) and lesions of the Lids 414 (12.68%). These three put together account for 91.5%. *Conclusion:* The schools should condone the absence of the students for treatment - especially surgical Procedures, where the child will have a short hospital stay and a longer recovery period.

**Keywords:** Screening; Ocular Morbidity; Refractive Errors.

### Introduction

The World Health Organization(WHO),the highest international organisation which protects human rights for a healthy-life defines health in its constitution as "a state of complete physical, mental and social well being and not merely an absence of disease or infirmity". The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, irrespective of race; religion, political belief, economical or social condition [1].

To achieve this aim, the WHO has coined the motto as "Health for all by 2000 AD". Good vision is certainly an important part of this state of well being. How far the developing countries have been able to achieve this state is questionable, even though the possibility to achieve this state is not beyond our reach or means, needing only effort by Government. Voluntary social organizations and last but not the least, by one and all in society [2].

The ophthalmology authorities have modified the motto of WHO as "Sight for all by 2000 AD".

Healthy eyes and good vision are nature's gift and these are to be protected and preserved if a healthy human society is to be developed. Good habits develop easily in the minds of the young and so efforts must be made to catch them young. To achieve this school health programmes must be implemented, and these must incorporate eye health too. Visual hygiene must be taught to students. Parents and teachers must also be aware of the importance of visual hygiene so that they can implement them and correct the children [3].

---

**Corresponding Author:** Pranesh Kulkarni,  
Professor and Head, Department of Ophthalmology,  
Khaja Banda Nawaz Institute of Medical Sciences,  
Kalaburagi, Karnataka 585104, India..  
E-mail: [dr.p.kulkarni15@gmail.com](mailto:dr.p.kulkarni15@gmail.com)

Received on 29.09.2017, Accepted on 11.10.2017

Children are the wealth of, a nation because tomorrow they will become its citizens and leaders. The nation's economy and progress depends mainly on the younger generation. Hence they are to be nurtured to be the future pillars of the nation No one can deny the fact that the eyes are the most important of our sense organs. Good eye-sight plays a vital constructive role in the development of the faculties of the child. Most of our knowledge and skills are acquired by (Nit eyes which are said to be the windows to the world. Bad eye-sight not only affects academic improvement, but in the long run causes untold damage to the psyche and self-confidence of the child [4,5].

A child's school life is a crucial period of his development when good or bad habits become established. Habits die hard, and hence is vital to teach them young to provide a better and healthier future generation.

Health care centers must be available at every school and are more important in the rural areas. It is here that ignorance and superstition can ruin and damage a child's life. Periodic checkup is of utmost importance. Proper eye care and visual hygiene must be taught early to make it habit forming, and a part of every young child.

The detection and correction of defective vision, squint, and other eye diseases are very important in the school going age. Most children are unaware of their defects and so are their parents and teachers. These undetected defects result in immense emotional stress and strain for the child. It must be emphasized that if, an eye with gross refractive error and/or squint is not cared for or corrected at an early stage, the eye would become amblyopic and useless for fine work at a later age [6].

Undetected eye problems can affect, a child's academic and professional career. Unless the child can see the blackboard clearly and read print clearly, he would be branded as below average and will be under constant strain resulting in disinterest in this studies. This would definitely interfere with his

academic career and progress, causing irreparable damage to his abilities psychologically.

## Methodology

The screening included both boys, and girls in the age group Of 5 to 15 years. Students from the 1st Standard to the X<sup>th</sup> Standard were screened for any ocular disorders. Screening was undertaken with the help and active cooperation of the school management. In each of these institutions the assistance of that particular class-teacher and the physical instructor was made available. The class teacher was given the performs and general aspects, like name, age, sex, class, address were filled up. The physical instructor was helpful in organizing the students into batches and in their general discipline. He was also briefed before the screening about what the study exactly aimed-at. He was given adequate training in the use of the "Snellens" chart for assisting in the recording of the distant visual acuity. Also with the help of pictures and charts, certain gross visual defects commonly encountered in children like for example: bitot spots, pterygiurn, conjunctivitis etc. were 'made familiar to him.

Finally ophthalmologist carried out clinical examination and made note on morbidities

## Results

In the present study a total of 1012 school children between the ages 5-15 were screened from various schools. Of them 542 (53.56%) were boys and 470 (46.44%) were girls. Thus the numbers of boys screened were more than the number of girls.

Out of the total number (1012) of Children screened, 71 students (7.02%) were discovered to have some or the other ocular defect. Among the 542 boys screened, 42 i.e, 7.75% had ocular defects while

**Table 1:** Distribution of students

Students	Number	Percentage
Boys	542	53.5%
Girls	470	46.5%
Total	1012	100%

**Table 2:** Distribution based on students affected

Students	Number screened	Number affected	Incidence
Boys	542	42	7.75%
Girls	470	29	6.17%
Total	1012	71	7.0%

**Table 3:** Distribution of various ocular disorders

Disorders	Number	Percentage
Refractive errors	39	54.9%
Conjunctival lesions	17	23.9%
Lesions of lids	09	12.6%
Others	06	8.4%
Total	71	100%

amongst the girls, 29 i.e., 6.17% had ocular defects.

Thus a higher incidence of Ocular disorders were seen in boys as compared to the girls

The majority of ocular disorders fall in the category of refractive errors (54.93%), conjunctival lesions (23.94%) and lesions of the Lids 414 (12.68%). These three put together account for 91.5%

### Discussion

In order to ascertain the prevalence of ocular defects in school children, a total number of 1012 children from different schools were screened. Their visual acuity and colour vision were tested, in addition to ocular motor balance. Their eyes were carefully examined, refraction performed with mydriasis and a detailed fundus examination was done. In select cases additional investigations like slit-lamp biomicroscopy, indirect ophthalmoscopy etc were done. In those children in whom the common ocular disorders were discovered, the conditions were treated with medicines, glasses or simple surgical procedures.

Of the total 1012 students screened, boys were 542 in number and 470 were girls. 71 students (7.02%) were found to have some eye defect. The disease pattern in these children was studied by grouping them as belonging to

- I. Refractive errors
- II. Lesions of the conjunctiva
- III. Lesions of the lids
- IV. Other ocular lesions

This study has shown that most of the ocular disorders in these children are attributable to xerosis, refractive errors, infective lid conditions and a few other ocular conditions. More boys had myopia than girls and was seen to be more in the higher classes (VI th to Xth standard). Most of the cases of conjunctival xerosis were seen in girls and in lower classes (1st to the VIth standard).

Majority of the lid disorders were belfharitis and chalazion, probably because of their poor nutritional

status and lack of hygiene

The above facts have to be taken into consideration while interpreting the results of the present study. A comparative study with a few other Standard school surveys has been done in this work.<sup>7,8,9</sup> Although the results are not numerically, comparable (nor do they tally among them-selves), they are helpful in arriving at certain common inferences. Thus, the principle causes of preventable visual impairment vary from one region to another and are ultimately related to ecological, environmental, socio-economical, seasonal and cultural factors, not to mention about the dietary habits and personal hygiene. In developing countries, in children, visual impairment associated with infections, nutritional deficiencies and trauma is much more common than it is in developed countries and affects the lower age groups. The burden on society is thus proportionally higher. Hence, it becomes all the more important and imperative that ocular disorders are identified, treated and prevented at the earliest opportunity lest blindness overtakes. It should be noted that blindness is the most expensive and the most undesirable of all causes of serious physical disablement.

### Conclusion

The children found to be defective in these screening programmes should receive prompt treatment either on the spot or should be referred to institutions where they can be tackled. The teacher should be made aware of the condition and is his responsibility to follow up and see that the child attends the hospital with his parents.

### References

1. Agarwal. R.S. Indian of ophththal 1942.p.3,1.
2. Armally. Archive of ophththal 1967.p.78-35,51
3. Athavale VB, School Health Service aiic.i Medical Examination of Children, UCH, 8.587, (1959).
4. Bietti. B.B. et al: Prevention of Blindness who Chronicle. 1973 Jan;V27:21-27.

5. Blach, John and Kolh. British JoUrnal of Ophthal 1966;59:629.
  6. Byerly Holt. L. Text Book of Paediatric Ophthal.
  7. Chandra. D.B. et al. Indian Journal Ophthal, 1982;30:517.
  8. Chitnis.V.K. Swath Hind, 1962.p.66.
  9. Dada V.K. Earlyptedtion and prevention of Visual Defects in Children in the National Sympsoum on Prevention of Blindness in School Goind Children. 1970.
  10. Duke Elder - Systems 'of Ophthammology Vol. 11. Duke Elder - Practice of Refraction.
- 

### **Red Flower Publication Pvt. Ltd.**

*Presents its Book Publications for sale*

- |  |                     |
|--|---------------------|
| <b>1. Breast Cancer: Biology, Prevention and Treatment</b> | <b>Rs.395/\$100</b> |
| <b>2. Child Intelligence</b>                               | <b>Rs.150/\$50</b>  |
| <b>3. Pediatric Companion</b>                              | <b>Rs.250/\$50</b>  |

#### **Order from**

Red Flower Publication Pvt. Ltd.

48/41-42, DSIDC, Pocket-II

Mayur Vihar Phase-I

Delhi - 110 091(India)

Phone: Phone: 91-11-45796900, 22754205, 22756995, Fax: 91-11-22754205

E-mail: sales@rfppl.co.in