

Demographic profile of Ocular Morbidity in school children in Cuttack

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Abstract:

To know the prevalence of ocular morbidity in school children under the urban field practice area of S.C.B Medical College in Cuttack. Out of all the schools covered by the urban health centre two were selected randomly. Study population included children of age group 6 to 16 years. Sample size was 953. In present study prevalence of ocular morbidity in students was found to be 18.67%.

Introduction:

To study & understand the pattern of ocular morbidity in children is very important because, most of the conditions are preventable or at least treatable. If neglected they can affect the child's performance & even lead to disability. Schools are the best forum for imparting health education to the children. Children in the school-going age group (6-16 years) represent 25% of the population in the developing countries. In India total child population in 2010 was 345 million and number of blind children was 2, 80,000.

Material And Methods:

A cross sectional study was conducted among school children in the age group of 6-16 years in field practice area of the Department of Community Medicine of S.C.B Medical College, Cuttack.

Inclusion criteria

All the Children in the age group of 6-16 years in the selected schools of urban field practice area.

Exclusion criteria

Those who were not willing to participate and absentees on the day of examination.

The Sample size was calculated by taking the prevalence of ocular morbidity in school children in 6-16 years age group i.e. 31.6% [1]. Using this prevalence for finding out sample size following method is used.

Formula [2] $n = 4PQ/L^2$ is used

$$P = 31.6\% \quad Q = 100 - 31.6 = 68.4$$

$$L = \text{allowable error } 10\% \text{ of } P = 3.16$$

$$\text{Sample size} = 4PQ/L^2$$

$$= 4 \times 31.6 \times 68.4 / (3.16)^2$$

$$= 865.82 = 866$$

The sample size calculated was 866. After adding the non-response error of 10%, an additional 87 children included. Thus 953 school children were selected for this study.

The list of government and private school in field practice area of UHTC was obtained. There were 10 government and 2 private schools. One government school and one private school were selected randomly by lottery method. Permission of school authority was obtained. School authority was explained about nature of study. An informed consent from school authority was obtained. The information was collected in a predesigned and pretested proforma.

All the students in the age group of 6 to 16 years present on the days of examination in that school were examined. Snellen's chart in English/Oriya was used on the basis of the student's preference. The students who could not read the Snellen's chart were assessed with the E charts. The cut off level of visual acuity to denote failure was fixed at less than 6/6 in either eye. Pinhole vision testing is done to differentiate refractive error from posterior

chamber pathology (The visual acuity improves with pinhole if there is refractive error but it remains the same in posterior chamber pathology). Bitot's spot was noted clinically. Further investigations were done in RIO, SCB MCH. Data thus collected was cleaned, compiled & entered into a database. The results were analysed using MS Excel v2007.

Results And Discussion:

Out of total students only 9.57% students were having some ocular complaint while 90.43% told no complaint. Students of government school have more complaint (9.09%) as compare to students of Private English medium school (5.62%). 75.84% students were having watering from eyes during reading while 24.16% had pain in Eyes which might be due to refractive error.

In present study prevalence of ocular morbidity in students was 18.67%. The prevalence was more in Government School (8.56%) while in Private English medium school it was 3.2%.

Similar finding was observed by a study by Jha K N [3] in their Baseline Ophthalmic Data of School Children aged 15 years or younger in Leh, Jammu and Kashmir, India where they found that total 10.79 % were identified as having ocular morbidity. Madhu Gupta, Bhupinder P Gupta et al.[4] conducted study on ocular morbidity prevalence among school children and observed that overall prevalence of ocular morbidity among school children of age 6-16 years was 31.6%.

Amongst the total students prevalence of refractive error was 7.3% followed by Vitamin A deficiency (3.23%), conjunctivitis (1.6%), and stye (1.14%). Amongst both types of school refractive error was commonest ocular morbidity. When different types of ocular morbidity were concerned refractive error was more in private English medium school i.e 4.55% while Vitamin A deficiency, Infection (Conjunctivitis and Stye) were more in government school. In government school almost 32.6% of ocular morbidity was due to Vitamin A deficiency.

The proportion of vitamin A deficiency and conjunctivitis in government school was more (2.6% and 1.8%) as compared to private school which was 0.43 % and 0.05

% respectively. Another ocular morbidity found was stye 1.04% in government school as compared to private English medium school (0.14%).

Rajesh Kumar et al. [5] in their study found that the commonest types of diseases in urban school students were trachoma(4.9%), conjunctivitis (4.3%), xerophthalmia (3.6%), uncorrected refractive error (3.3%), stye (1.0%), Blepharitis (1.3%), colour blindness (1.0%), chalazion(0.8%), corneal opacity (0.5%), pinguecula (0.3%), subconjunctival haemorrhage(0.3%), and posterior chamber pathology (1.3%).

Conclusion:

In present study prevalence of ocular morbidity was 18.67%. Amongst which prevalence of refractive error was 7.3% followed by Vitamin A deficiency (3.23%), conjunctivitis (1.6%), and stye (1.14%). Ocular morbidity was more common in age group of 9-11 years (34.65%), males (55.84%), Hindus (95.67%). As most of the conditions are preventable, early detection can hugely reduce the burden on society.

References:

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