



TO STUDY ASSOCIATION OF REFRACTORY ERROR WITH PROTEIN ENERGY MALNUTRITION AMONG SCHOOL GOING CHILDREN OF AGE GROUP 6-15 YEARS IN MEDTA VILLAGE, UDAIPUR DISTRICT

Community Medicine

Dr. Chhavi Shripat Assistant Professor, Dept Of Community Medicine, RNT Medical College, Udaipur Rajasthan, India

Dr. Pushendra Singh* IIIRD Year Resident, Dept Of Community Medicine, RNT Medical College, Udaipur, Rajasthan, India *Corresponding Author

ABSTRACT

BACKGROUND- Mostly, ocular morbidity originates in childhood and if undetected may result in severe ocular disabilities, in addition to affecting development, educational performance, and learning abilities¹. School children are affected by various eye disorders like refractive errors, squint (strabismus), Vitamin A deficiency and eye infections. Uncorrected refractive errors form the primary cause for visual impairment and blindness in India. This warrants early detection and treatment of these problems to prevent future blindness².

METHODOLOGY- A cross sectional study was village Medta (Rural area) of Udaipur district. All the children of 6-15 years age in the school present at the time of survey.

RESULTS- Among total students 19.17% (115/600) students were having refractive error. 15.67% of total students students were having Myopia (94/600) and 3.16% had both (myopia and hypermetropia), as refractive error while only 0.33% students had Hypermetropia. Ocular morbidity in their respective BMI groups, it was highest 32.9% (78/237) in Underweight BMI group

CONCLUSION- The findings from Medta village, Udaipur, Rajasthan, suggested that a range of different eye morbidities affect a large number of students and highlight the need to proper implementation of appropriate eye care health programs.

KEYWORDS

INTRODUCTION-

Eyes are one of the most important sense organ of the body of all living organisms, including human beings. Right from the birth throughout life, Eyes are required in its well functioning state, to live the life efficiently, to make contact and communication with other persons, to work and earn the livelihood, to see the Nature and enjoy the privileges and pleasures of life. In humans, many diseases affect the functioning of eyes.

Mostly, ocular morbidity originates in childhood and if undetected may result in severe ocular disabilities, in addition to affecting development, educational performance and learning abilities¹. School children are affected by various eye disorders like refractive errors, squint (strabismus), Vitamin A deficiency and eye infections. Uncorrected refractive errors form the primary cause for visual impairment and blindness in India. This warrants early detection and treatment of these problems to prevent future blindness².

During a child's first 12 years of life 80% of all learning comes through vision, and yet most children have not had a comprehensive eye examination prior to starting school³. School children fall in the best preventable blindness age group, and are a controlled population i.e. they belong to a certain age group and are easily accessible, so schools are one of the best platform for imparting health education to the children, for screening of ocular morbidities in children and effectively implementing the comprehensive eye health care programme⁴.

METHODOLOGY-

STUDY DESIGN:

A school based Cross Sectional Study was conducted in purposively selected village Medta (Rural area) of Udaipur district.

RESULTS-

Table 1: Distribution Of Students According To Refractive Error

Types Of Refractive Error N' = 115	Total Students with particular Refractive error	Percentage of those students, who had particular type of refractive error, Out of Total students N = 600	No. of those students, who had particular type of refractive error, Out of N' = 115	Percentage of those students, who had particular type of refractive error, Out of N' = 115
Myopia	94	15.67% (94/600)	94 / 115	81.74%
Hypermetropia	2	0.33% (2/600)	2 / 115	1.74%
Both (Myopia & Hypermetropia)	19	3.16% (19/600)	19 / 115	16.52%
Total	115	19.17% (115/600)	115	100 %

Among total students 19.17% (115 students) were having refractive error (with added or unadded eye) at the time of examination. 15.67%

STUDY POPULATION:

All the children of 6-15 years age in the school present at the time of survey

SAMPLING PROCEDURE:

Sample size was calculated on the basis of previous study **Amol Khadse et. Al**⁵, where prevalence of ocular morbidity was 40.38%. And allowable error was taken 10 % of the prevalence,

$$n = 4pq/L^2 = 590$$

Where 'n' = Sample size

p = Prevalence of ocular morbidity.

$$q = 1 - p$$

$$L = 10\% (\text{Allowable error of } p)$$

To drop out the failure, we rounded up the sample size to 600.

To achieve desired sample size researcher purposively selected the village Medta which is adopted by RNT Medical college. Medta village has four government schools, of which one middle school and one senior secondary school in proper village and two middle schools in nearby falas (extension of village). All the schools were co-educational. All the four schools were included in the study.

INCLUSION CRITERIA:

1. Children of 6 to 15 years of age.
2. Children present in school on the days of survey.

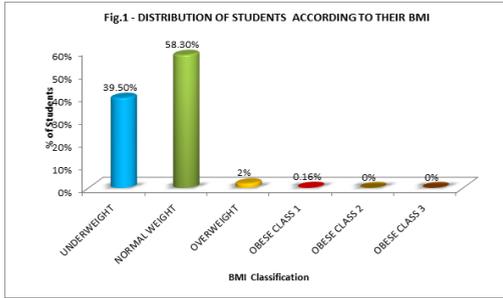
EXCLUSION CRITERIA:

1. Children below 6 years and above 15 years.
2. Children absent on the day of survey
3. Children refused to participate in study

of total students students were having Myopia (94/600) and 3.16% had both (myopia and hypermetropia), as refractive error while only 0.33%

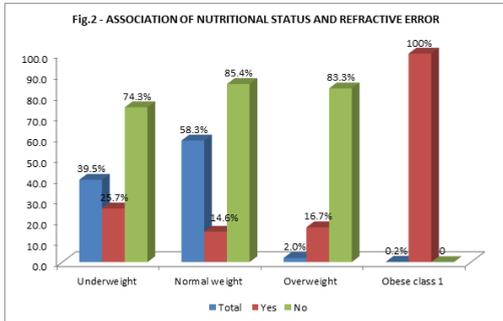
students had Hypermetropia. Out of total 115 students who had refractive errors, majority of them eg. 81.74% had Myopia only and 16.52% students having both myopia and hypermetropia.

Figure – 1: Distribution Of Students According To Body Mass Index (BMI)



BMI classification of students transpired that majority of students (58.3%) had normal weight, while 39.5% students were underweight. Only 2% students were overweight and 0.16% (1 student) fall in BMI category obese class I.

Figure 2: Association Of Nutritional Status (bmi) And Refractive Error



Chi Square test = 12.66 P value < 0.005412, df=3

On classifying all students of study group according to their BMI, the percentage of the students who had refractive error in their respective BMI group, was highest 25.7% (61/237) in underweight group students, constituting them 53% (61/115) of those students who had refractive error; followed by 16.7% in overweight BMI group, and minimum it was 14.6% in normal weight BMI group students.

On finding the association between BMI of the students and the occurrence of refractive error in them, p value < 0.005 suggested that the finding were statistically significant and BMI had association with/ significant effect on, the occurrence of refractive error in students; and refractive error was more common in students who were underweight, and had their BMI below the normal range of BMI, then the students of normal BMI and overweight groups.

SUMMARY AND CONCLUSION-

The findings from Medta village, Udaipur, Rajasthan, suggested that a range of different eye morbidities affect a large number of students and highlight the need to proper implementation of appropriate eye care health programs eg. VISION 2020, having cost-effective strategies targeting to reduce the burden of visual impairment among the younger children. Health education activities should be intensified regarding signs and symptoms of ocular complications, and particular attention needed to be given for training to health care staff in supervision of skilled staff and adequate information (IEC) and referral systems to the locality. Poor vision in childhood affects performance in daily activities in school or at work and has a negative influence on the future life of children. Early detection and management reduce the disease progression and can prevent visual disability.

REFERENCES-

- World Health Organization (1999) Report of WHO/ IAPB scientific meeting, Hyderabad, India 13 -17, April. Childhood Blindness Prevention. WHO/PBL/87 3. Murthy GVS.
- Dr. Roopa Naik, Dr. Jaineel Gandhi, Dr. Nikita Shah, Prevalence of Ocular Morbidity among School Going Children (6-15years); Scholars Journal of Applied Medical Sciences (SJAMS), ISSN 2320-6691 (Online) Sch. J. App. Med. Sci., 2013; 1(6):848-851; ISSN 2347-954X (Print).

- Sharma PM : School eye health – much more than vision screening. School health in India, e-magazine from SHARP NGO. 2008; Vol. 10, Jul.-sept.
- Danish Assistance to the National Programme for Control of Blindness. New Delhi, India: Vision screening in school children. Training module 1.
- Dr. Renu Bedi, Dr. Dinesh Kumar Bedi, Dr. Nizamuddin, Dr. CharushilaDudule, Dr. Rashmi Gupta, Dr. Sanjeev Sharma, Prevalence of ocular morbidity among school children in Ajmer city, IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) e-ISSN: 2279-0853, p-ISSN: 2279-0861. Volume 14, Issue 10 Ver.VII (Oct. 2015), PP 20-25 ; www.iosrjournals.org