

# A Research Investigation Was Conducted to Evaluate the Efficacy of a Structured Educational Progrme on Eye Disorders, Focusing on the Enhancemnent of Practical Skills Among Students in Chooosen School in Village Areas

Mr. Abhishekh Kumar Roy<sup>1</sup>, Dr. Atanu Maulik<sup>2</sup>, Ms. Samreen Sultana<sup>3</sup>,  
Ms. Zeya Haqqee<sup>4</sup>

<sup>1</sup>Course Coordinator & Assisitant Professor, Optometry, School Ofallied And Healthcare, Al-Karim University, Katihar, Bihar 854106

<sup>2</sup>Principal & Professor Pandaveswar Institue Of Health & Allied Sciences Durgapur. West Bengal.

<sup>3,4</sup>Assisitant Professor, Optometry, School Ofallied And Healthcare, Al-Karim University, Katihar, Bihar 854106

## ABSTRACT

**Introduction:** Nutrition is the basic component of child health. It is one of the prime importance for the attachment of normal growth and development. Nutrition is an important throughout childhood, it is more crucial during the first five years of a child's life. Children are the valuable asset for the society. The nature of the physical and developmental growth depends upon the genetic endowments, nutritional status and surrounding physical environment conditions.

**Aim:** To study the comparison between pre-test and post-test knowledge scores regarding eye disorders among school children.

**Method & Methodology:** To demonstrate the refractive error or any eye disorder diagnosis in pre-schooler for schooler children, total no. of patients taken in this study were 200, they were further divided into different cases according to their clinical conditions.

**Result:** On the basis of the observational study conducted among 200 students of school belonging to the age group of 8-10 years. It was observed that those who were belonging to the age group of 10 years were 102 (51%), 70 (35%) were belonging to the age group of 11 years and 28 (14%) belonged to the age group of 12 years. On the basis of gender determination, the 97 (48.5%) were male while 103 (51.5%) were female.

Based on the dietary pattern (vegetarian and non-vegetarian) of the students 61 (80.5%) had nan-vegetarian habit while the 39 (19.5%) had vegetarian dietary habit. With regards to type of family, 171 (85.5%) children were belonging to the nuclear family while 29 (14.5%) children were from joint family. (Fig 5). With reference to area of residence 124 (62%) children were from urban area while 76 (38%)

children were from rural area. Children with eye disorders deficiency were 178 (89%) while 22 (11%) were diagnosed normal.

**Keywords:** Vitamin A deficiency, refractive error like -Myopia, hypermetropia, astigmatism & amblyopia. Preventive measures of eye disorders.

## INTRODUCTION

Nutrition is the basic component of child health. It is one of the prime importance for the attainment of normal growth and development. Nutrition is an important throughout childhood, it is more crucial during the first five years of a child's life. Children are the valuable asset for the society.

The nature of the physical and developmental growth depends upon the genetic endowments, nutritional status and surrounding physical environment conditions. Good nutrition is an indispensable component of healthy growth of mind and body.

It plays an important role in the physical, mental and emotional development of a child. Good health increases the brain's ability to enhance children achievement and helps to avoid academic barriers.

In nutrition vitamins are essential food factors to be included in diet for maintaining proper health and vitality. Vitamins are organic compounds occurring in small quantities in the different natural foods and necessary for the growth and maintenance of good health in children.

The eyes has considered the most valuable human organ as they play a crucial role in vision, expression and beauty. Approximately 85% of all information received from the surroundings is through visual perception. Loss of vision or any alterations in a child's eyesight can lead to delays in growth and development, impacting the dynamics of the family.

## REFRACTIVE ERROR

A Refractive error is an optical defect of the eye that prevents light from being brought to a sharp focus by the cornea and lens on to the retina. Varying degrees of decreased vision visual disability or blindness result from refractive error depending on the type and severity.

## TYPES

**Myopia** - The image is brought to focus in-front of the retina. The eye ball is too long for the refractive power of the lens and the cornea. Myopia is corrected with concave or minus lenses.

**Hyperopia** - People say farsighted because they have good vision at distance, but poor vision at near. In hyperopia the eye ball is too short for the power of the lens and cornea. Hyperopia is corrected with the help of convex or plus lenses.

## AIM AND SPECIFIC OBJECTIVE

**AIM** - study the comparison between pre-test and post-test knowledge scores regarding eye disorders among school children.

## SPECIFIC OBJECTIVE

THE CHILDRENS ARE ABLE TO --

Understand the eye disorder.

Know about the function of vitamin a

- Explain the causes of vitamin a deficiency.
- Explain the sources of vitamin a.
- Explain the complications of vitamin a deficiency.
- Causes of myopia.
- Causes of hypermetropia.
- Explain the prevention of refractive errors.
- Explain the preventive measures of eye disorders.

**MATERIAL AND METHODS**

**SAMPLE**

The samples consist of adolescent children, who are studying in 8th standard.

**CRITERIA FOR SAMPLE SELECTION**

**INCLUSION CRITERIA**

- The age group between 8-12years.
- English medium students.
- Both boys and girls
- Children who are deliberate to participate in this study.

**EXCLUSION CRITERIA**

Refractive error children

**SAMPLE SIZE**

The sample size is comprised of 200 children, who met the inclusion criteria.

**ORGANIZATION OF DATA**

**SECTION – A: Distribution of demographic values among school going children**

**Table 1: Frequency and data percentage of demographic variables of school children.**

**N=200**

S. No	Demographic variables a/c to age	Frequency (f)	Percentage (%)
<b>1</b>	<b>Age</b>		
	10 years	102	31
	11 years	70	35
	12 years	28	14
<b>2</b>	<b>Gender</b>		
	Male	97	48.5
	Female	103	51.5
<b>3</b>	<b>Diet pattern</b>		
	Vegetarian	39	19.5
	Non vegetarian	161	80.5
<b>4</b>	<b>Types of family</b>		
	Joint	29	14.5
	Nuclear	171	85.5
<b>5</b>	<b>Area of resident</b>		
	Urban	124	62

	Rural	76	38
<b>6</b>	<b>Presence of Eye disorder</b>		
	Yes	22	11
	No	178	89

The school children who belonged to the age group of 10 years were 102(51%).70 (35%) children were belonged to 11 years, 28 and (14%) children were belonged to 12 years. (Fig 2)

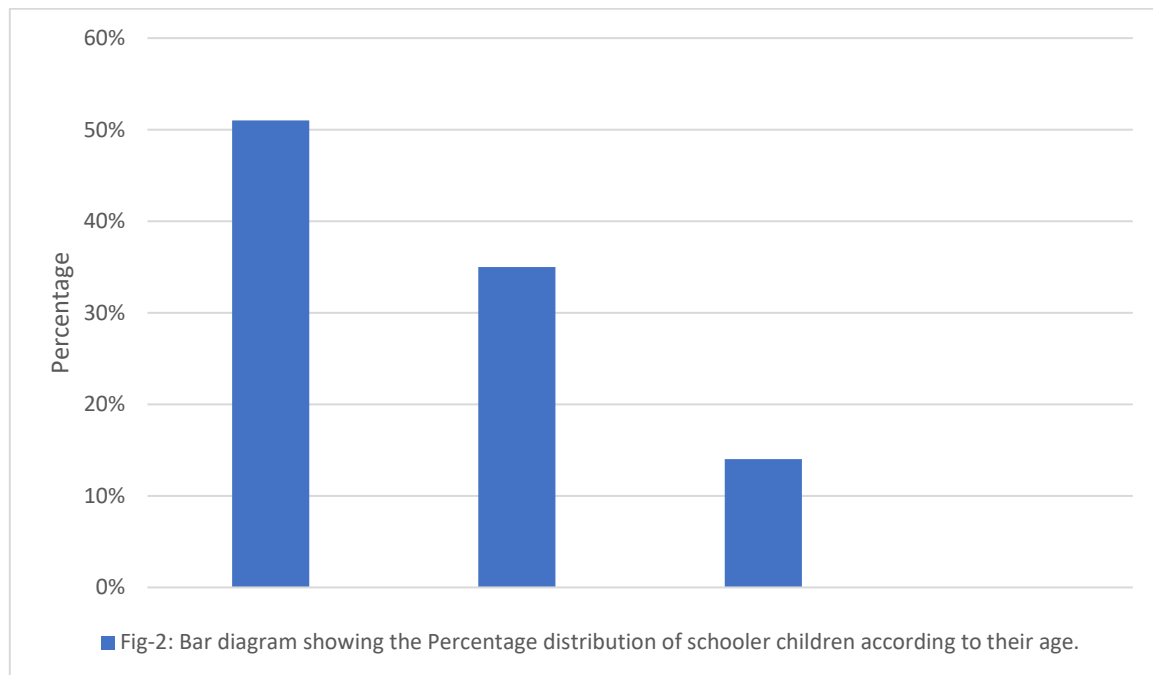
With regard to sex. 97 (48.5%) male and 103 (51.5%) female school children were distributed. (Fig 3)

With regard to Diet pattern, 61 (80.5%) children were belonged to non-vegetarian 39 (19.5%) children were vegetarian. (Fig 4)

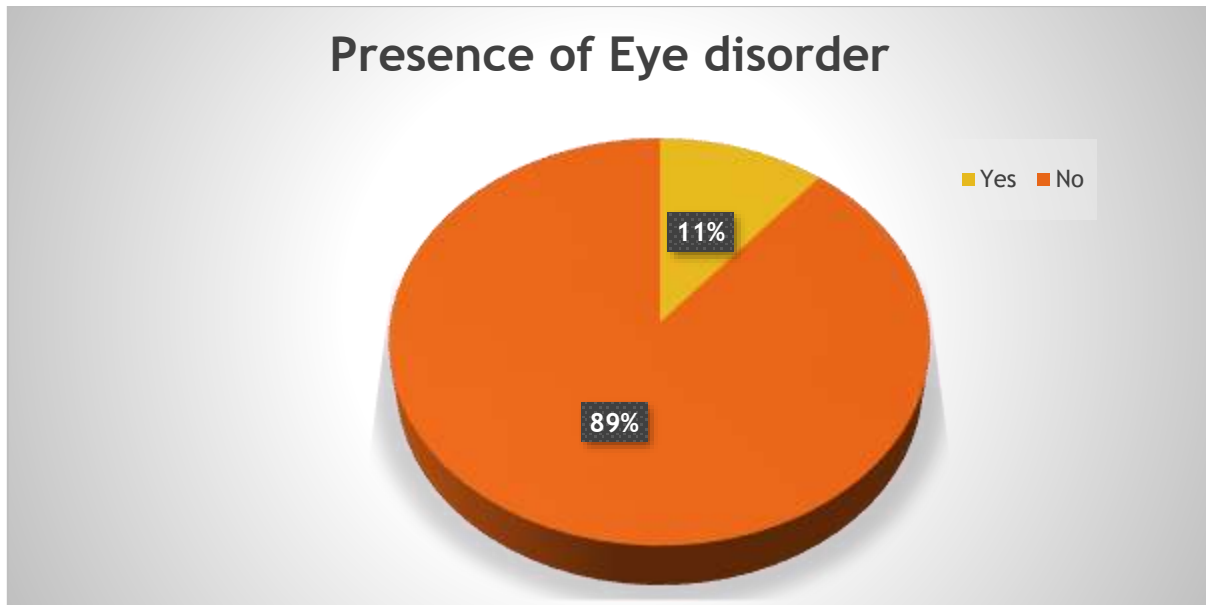
With regard to type of family, 171 (85.5%) children were in nuclear family. and 29 (14.5%) children were in joint family. (Fig 5)

With regard to area of residence 124 (62%) children were from urban area. and 76 (38%) children were from rural area, (Fig 6)

According to their eye disorders 178 (89%) children have no eye disorders and children were presence of eye disorder 22 (11%). (Fig 7)

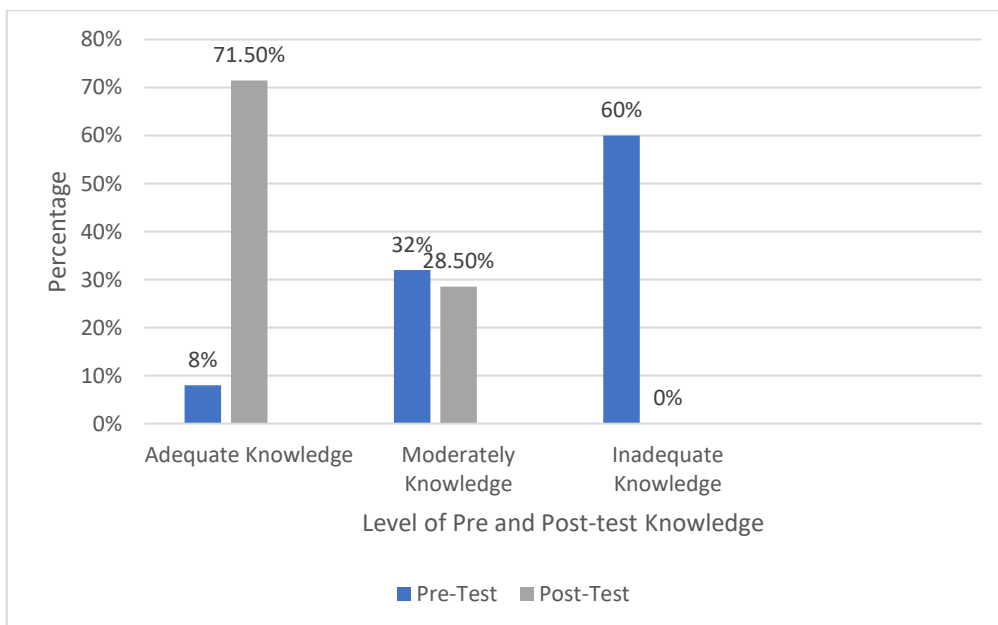


**TABLE – 1-Percentage distribution according their age**



**Pie Diagram showing the Percentage distribution of schooler children according to their area of residence.**

**Pie chart – 1**



**TABLE – 2- Bar Diagram showing the Comparison Pre-test and post knowledge scores regarding eye disorder among schooler children.**

**DISCUSSION**

This chapter deals with description of the sample characteristics and objectives. The aim of the study is to evaluate the effectiveness of structured teaching programme on eye disorders in terms of knowledge and practice among School going children at selected schools.

200 schooler children were selected for the study by using specified random technique, the data were selected by self-doing survey and statistically analysed.

### **Description of the sample characteristics**

The school children who belonged to the age group of 10 years were 102(51%), 70 (35%) children were belonged to 11 years, 28 and (12%) children were belonged to 12 years. With regard to sex, 97 (48.5%) male and 103 (51.5%) female school children were distributed. With regard to Diet pattern, 161 (80.5%) children were belonged to non-vegetarian 39 (19.5%) children were vegetarian. With regard to type of family, 171 (85.5%) children were in nuclear family, and 29 (14.5%) children were in joint family. With regard to area of residence 124 (62%) children were from urban area, and 76 (38%) children were from rural area. According to their eye disorders 178 (89%) children have no eye disorders, and children were presence of eye disorders 22 (11%).

### **The findings of the study are discussed according to the objectives as follows:**

1. Asses the pre-test knowledge and practice scores regarding eye disorders among schooler children.
2. Asses the post-test knowledge and practice scores regarding eye disorders among schooler children.
3. Compare the Pre-test and Post-test Knowledge and practice scores regarding eye disorders among schooler children.
4. Correlate the post-test knowledge and practice scores regarding eye disorders among schooler children.
5. Find out the association between Post-test knowledge scores regarding eye disorders among schooler children with their selected demographic variables.

### **CONCLUSION**

The study findings revealed that there was a significant improvement in the knowledge (26.5) and practice (23.5) of schooler children followed by structured teaching programme. Based on the analytical findings it is apparent that the providing such kind of structured teaching programme will motivate the school going children and helps them to acquired knowledge and correct practice regarding eye disease.

### **RECOMMENDATIONS**

Based on the findings of the study, the followings recommendation has been made for future study.

- Same study can be conducted by using small samples group to generalize the findings.
- A comparative study can be conducted on knowledge and practice on eye disorders between rural and urban schools among schooler children.
- The study can be conducted regarding management of eye disorders.
- The study can be conducted regarding complications of eye disorders.

### **LIMITATION**

It was more time taking to explain the children problem because of the understanding level.

We should provide the knowledge of nutritional disorders among children's during birth period of the child. So, we can help the parents or patients to cure the nutrition problem in their children in younger age.

### **REFERENCES**

1. McCormick, S. F., Waugh, C. A., & Smith, S. H. D. (2020). The impact of visual impairment on child development and family life. *Journal of Pediatric Ophthalmology and Strabismus*, 57(4), 234-240.

<https://doi.org/10.3928/01913913-20200703-01>

2. Wright, L. L. E., Barron, K. J., & Liu, R. J. H. (2019). Vision and its impact on child development. *Child Development Research*, 2019, 7401256.
3. Johnson, M. T., & Williams, H. E. (2018). The role of vision in the development of cognitive and motor skills in early childhood. *Early Childhood Research Quarterly*, 43, 65-75.
4. Davis, A. S., Smith, L. R., & Reynolds, B. J. (2017). Impact of visual impairment on family dynamics and child development. *Journal of Visual Impairment & Blindness*, 111(6), 465-478.
5. Dijkstra N, Bosch SE, van Gerven MAJ. Shared Neural Mechanisms of Visual Perception and Imagery. *Trends Cogn Sci*. 2019 May;23(5):423-434. doi: 10.1016/j.tics.2019.02.004. Epub 2019 Mar 12. PMID: 30876729
6. Lam LF, Lawlis TR. Feeding the brain - The effects of micronutrient interventions on cognitive performance among school-aged children: A systematic review of randomized controlled trials. *Clin Nutr*. 2017 Aug;36(4):1007-1014. doi: 10.1016/j.clnu.2016.06.013. Epub 2016 Jun 23. PMID: 27395329
7. de Onis M, Blössner M, Borghi E. Global prevalence and trends of overweight and obesity among preschool children. *Am J Clin Nutr*. 2010 Nov;92(5):1257-64. doi: 10.3945/ajcn.2010.29786. Epub 2010 Sep 22. PMID: 20861173
8. Savarino G, Corsello A, Corsello G. Macronutrient balance and micronutrient amounts through growth and development. *Ital J Pediatr*. 2021 May 8;47(1):109. doi: 10.1186/s13052-021-01061-0. PMID: 33964956; PMCID: PMC8106138.
9. Barker T. Vitamins and Human Health: Systematic Reviews and Original Research. *Nutrients*. 2023 Jun 26;15(13):2888. doi: 10.3390/nu15132888. PMID: 37447213; PMCID: PMC10346564.
10. Klapp, T., Klapp, A. & Gustafsson, JE. Relations between students' well-being and academic achievement: evidence from Swedish compulsory school. *Eur J Psychol Educ* 39, 275–296 (2024). <https://doi.org/10.1007/s10212-023-00690-9>
11. Holick MF. Vitamin D deficiency. *New Engl J Med*. 2007;357:266–8.
12. Elizabeth L Prado, Kathryn G Dewey, Nutrition and brain development in early life, *Nutrition Reviews*, Volume 72, Issue 4, 1 April 2014, Pages 267–284, <https://doi.org/10.1111/nure.12102>
13. Dibyadeb Ghosh, Irfan Ahmad Khan, Dr Seema Yadav, & Dr Sukanta Bandyopadhyay. (2024). THE IMPACT OF EARLY CHILDHOOD NUTRITION ON LONG-TERM HEALTH OUTCOMES: A PROSPECTIVE COHORT STUDY. *Journal of Population Therapeutics and Clinical Pharmacology*, 31(3), 317–324. <https://doi.org/10.53555/jptcp.v31i3.4789>
14. Schwarzenberg SJ, Georgieff MK; COMMITTEE ON NUTRITION. Advocacy for Improving Nutrition in the First 1000 Days to Support Childhood Development and Adult Health. *Pediatrics*. 2018 Feb;141(2):e20173716. doi: 10.1542/peds.2017-3716. Epub 2018 Jan 22. PMID: 29358479.