

# Awareness of Children Eye Problem among Parents

*Tanka B Khadka<sup>1</sup> Renu Thakur<sup>2</sup> Dhruv K Mandal<sup>3</sup> Purushotam K Sahani<sup>4</sup> Sapana Yadav<sup>5</sup> Babli Sharma<sup>6</sup> Akhil J Gowda<sup>7</sup>*

Chitkara School of Health Science, Chitkara University, Punjab, India<sup>1, 3-7</sup>  
Sankara Academy of Vision, Sankara Eye Hospital, Ludhiana, Punjab, India<sup>2</sup>

## Introduction

The present prevalence of childhood blindness in India is 0.8/1000 patients [1], there are 6.2 % of 10,000 children are blind in Southern India, whereas 42.9% of this blindness was potentially avoidable [2]. The common cause for childhood blindness is uncorrected refractive error, cataract, amblyopia and corneal diseases [3]. The refractive error such as myopia, hyperopia and astigmatism is an avoidable cause of blindness if diagnose and correction is prescribe at early age [4]. The goal of present study was to assess the effectiveness of awareness as a tool for modifying parents' perception of children eye problem.

## Method

A Cross-sectional study was conducted in Karnataka, Rajasthan, Haryana and Punjab sector, 132 parents who had children aged 5 to 12 years were randomly selected for the study [5] inform consent was obtain prior to the study. The study run in two phases, phase one self-administered questionnaire [Table 1] was used as a tool for collecting the awareness of children eye disease from parents, this questionnaire was constructed and validated with the help of focus group of esteemed optometrists and a biostatistician. The questionnaire was comprise of 13 different closed ended questions, out of 13 questions, 3 questions were focused on academic performance with link of visual correlation. 3 questions were directly targeting eye health and rest questions had included behavioral and quality of vision. These questions were asked to parents during parent's teacher meeting, prior permission was taken from school management. Second phase was providing education about general eye conditions and diseases to parents with the help of power point presentation. Post awareness presentation response of parents was computed in the post awareness assessment sheet.

## Results

A total of 132 parents took part in this study (100% response rate), 56% (74) males and 44% (58) females; mean age ( $\pm$ SD) of parents was 34.24 years ( $\pm$ 5.99). Most of the parents (89%) reported having knowledge on "eye infection" while least knowledge was on child losing concentration or feeling sleepy while studying is the indication for eye problem (37%). Parent's response is elaborated in table 1.

Table 1. Parent's awareness on common children's eye problem.

<b>Parent's awareness on common children's eye problem</b>		
	<b>Yes %</b>	<b>No %</b>
Do you think making mistakes while copying from the blackboard is an indication for child having an eye problem?	85%	16%
Are you aware that child complaining of headache may also be due to eye problem?	73%	27%
Are you aware that child frequently rubbing his/her eyes indicate an eye problem?	78%	22%
Do you think turning of child's eye is an eye problem?	70%	30%
Do you think child losing concentration or feeling sleepy while studying is the indication of eye problem?	37%	63%
Do you think child having difficulty in identifying or discriminating the colors is the indication for an eye problem?	77%	23%
Do you think your child having ocular pain, watering, itching or discharge are the indication for eye infection?	89%	11%
Do you think if your child blinking frequently, sensitive to bright light and squeezing of eyes may indicate the eye problem?	77%	33%
Do you think your child complaining of double vision indicates an eye problem?	77%	33%
Do you think child having difficulty seeing in dim light or at night is the indication of eye problem?	58%	42%
Do you think your child's performance at school can be affected by poor vision?	57%	43%
Since your child was born, have you ever taken him/her for an eye exam?	50%	50%
Are you aware that regular eye exam after every 3-6 months is necessary for better eye health of the children?	61%	39%

The Statistical analysis was performed with the help of STATA 11.2 (College Station TX USA). Age distribution, qualification, parent's awareness of sign and symptoms of eye problems in children questionnaire were described as frequency and percentage. The Chi square test were used to measure the association between the age groups and qualification with awareness questionnaire and it's described as frequency and percentage. The association of knowledge with age qualification where highly significant, ( $p < 0.001$ ), for child making mistakes while copying from the blackboard is an indication for child having an eye problem showed significant finding ( $p < 0.001$ ), for child complaining of headache may also be due to eye problem, ( $p < 0.001$ ), for turning of child's eye is an eye problem, ( $p < 0.006$ ), for eye infection ( $p < 0.012$ ) for child complaining of double vision indicate an eye problem ( $p < 0.002$ ) for child difficulty seeing in dim light or at night is the indication of eye problem ( $p < 0.004$ ). According to the findings from feedback from parents the knowledge regarding children eye disease was categories in three sections minimum 36.83 %, average 66 % and maximum 72%. Post awareness (power point presentation educating about common eye disease) session was 100 % appreciated by parents.

## Discussion

To the best of our knowledge, these are the first parents-based data on post awareness of children's eye problem in Indian parents. Prevention and/or reduction of childhood blindness are near impossible without good parental knowledge regarding eye problem. According to the WHO "blindness" is defined as best corrected visual acuity of less than 3/60 and visual field less than 10 degree in the better eye [3]. Studies have shown that preventable eye errors or eye disease that is not being treated within a proper time will cause permanent visual loss [6]. According to Nirmalan *et. al.*, findings reports based on World Health Organization criteria, 6.2/10,000 children were blind in India [2]. Gilbert C and Foster A reported that 36 % childhood blindness is avoidable [7]. The risk is high in rural area then cities, the prevalence of blindness in children approximately 0.3/1000 children in wealthy region of the world to 1.2 /1000 in the poorer country region [8]. Awareness and knowledge of parents regarding eye diseases might help to eliminate avoidable blindness due to early intervention [9]. Present study finding corresponds with He M, Xu J *et.al.*, where they have stated that parental education and enhanced school based vision screening program [10]. Velibanti N *et.al.*, study corresponds with current study findings that barriers to refractive errors services should be identified and addressed at early age [11]. Education programmes are needed to address significant of knowledge groups in family and school about glasses [12].

## Conclusion

Present study like to conclude that parents had adequate awareness on common symptomatic eye problem. But we also found that until the child do not have problem, the parents will not take their child for regular periodic eye checkup. Educational programs are needed to address significant knowledge about child eye health. Parents' awareness and perceptions about eye problems are very crucial. Knowledge and understanding of eye health becomes important as early detection and management serves best when provided at an early age of children.

## References

1. Meenakshi Wadhvani, Praveen Vashist, Suraj Senjam Singh, Vivek Gupta, Noopur Gupta, Rohit Saxena 2020. Prevalence and causes of childhood blindness in India: A systematic review. Indian Journal of Ophthalmology. 68(2): 311-315.
2. Nirmalan PK, Vijayalakshami P , Sheeladevi S ,Kothari MB ,Sundaresan K, Rahmathuallah L 2003. The kariapatti pediatric eye evaluation project : baseline ophthalmic data of children aged 15 years or younger in southern India. Am J ophthalmol. 136 (4): 703-9.
3. Dandona R, Dandona L 2000. childhood blindness in India: A population based perspective.Br Journal ophthalmol. 87(3): 263-65.
4. Padhye AS, Khandekar R, Dharmadhikari S, Dote K,Gogate P, Deshpandey M 2009. Prevalence of uncorrected refractive errors and other eye problems among urban and rural school children. middle east afr.Jophthalmol. 16(2): 69-74.
5. Jaykaran Charan and Tamoghna Biswas 2013. How to calculate sample size for different study designs in medical research? Indian Journal of Psychological journal. 35 (2) : 121-126.
6. Vision 2020 Right to Sight. GLOBAL INITIATIVE FOR THE ELIMINATION OF AVOIDABLE BLINDNESS ACTION PLAN 2006–2011
7. Gilbert C, Foster A 2001. Childhood blindness in the context of Vision -2020 The Right To Sight .Bull world health organ. 79(3):227-32.
8. Gilbert C 2007. Changing challenges in the control of blindness in children. Eye. 21: 1338–1343.
9. Jennifer A. Ebeigbe and Chike Martin Emedike 2017. Parents' awareness and perception of children's eye diseases in Nigeria. J Optom. 10(2): 104–110.
10. He M,Xu J , yin Q ,Ellwein LB 2005. Need and challenges of refractive correction in urban Chinese school children. optom vis sci. 82(4): 229-34.
11. Velibanti N. Sukati , Vannesa R. Moodley , Khathutshelo P. Mashige 2018. Knowledge and practices of parents about child eye health care in the public sector in Swaziland. African J of Primary Health care and Family Medicine. 10(1).
12. Li L , Lam J, Lu Y,Ye Y, Lam Ds, Gao Y et al 2010. Attitudes of students , parents and teachers Towards Glasses use in rural china. Arch ophthalmol. 128 (6): 759-65.