



PARENTAL PERCEPTIONS AND PRACTICES REGARDING EYE HEALTH OF CHILDREN: A STUDY FROM A TEACHING HOSPITAL OF COASTAL KARNATAKA.

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ABSTRACT **AIMS:** To assess the perceptions and practices followed by parents regarding eye health of their children. **SETTING & DESIGN:** A questionnaire based study done in a teaching hospital of coastal Karnataka. **MATERIAL & METHOD:** A cross-sectional study amongst 96 parents attending tertiary health care centre and camps conducted by the same centre, through a self designed validated questionnaire. **RESULTS:** Age of the respondents ranged from 23 to 55 years. Majority (79.16%) were females. 69.79% and 90.62% of the parents knew that cataract and strabismus can occur in children respectively. Amblyopia as a complication of untreated refractive error was not known to 56.25% of the participants. Participants got the information about ocular conditions mainly from newspaper 70.83%. Overall knowledge regarding the use of different mode of treatments for the ocular conditions was good except patching. Parents (66.66%) preferred to take their children to an Ophthalmologist. The reason for not consulting a doctor for ocular conditions was found to be time and financial constraints. **CONCLUSION:** Parents were aware of common eye problems in children. Information about ocular health among parents was largely acquired through the newspaper which can be used as a tool to spread awareness. Increased awareness about these is required to positively affect the eye-care seeking behavior of parents for their children, thereby reducing visual impairment in this population.

KEYWORDS : Parental Perceptions, Ocular Care, Pediatric Age, Parental Practice

INTRODUCTION:

Childhood blindness and visual impairment are more devastating and disabling than adult-onset blindness, because of their impact on global development of the child and learning ability. Hence, childhood blindness is one of the priorities in Vision 2020: The Right to Sight. It is estimated that there are around 1.4 million blind children in the world, out of which, one million reside in Asia, and India alone accounts for 0.2 million of them^[1]. According to WHO criteria, 42.9% blindness is avoidable^[2]. Current models for paediatric eye care in India are heavily tilted towards tertiary care and school screening programs. Tertiary-care models rely on an increased awareness among parents or other caretakers of children to recognise ocular abnormalities and bring children in for eye care. Parental awareness regarding eye health in children is important because a child who is in preverbal age group is not able to convey the complaints verbally. Also, in school going age group, a child is not able to recognise the ocular condition and express it to the parents. Thus, identification of the ocular conditions by the caregivers at the earliest is important for early intervention. Not many studies about parental perceptions and practices regarding eye health of children are known in South India. In the year 2004, Nirmalan et al,^[3] has studied the awareness and attitudes of parents and grandparents using focus group discussions (FGDs) in rural South India. In the year 2013, Senthilkumar D et al^[4] has studied parent's awareness and perception of children's eye diseases in Chennai through in-depth interviews and focus group discussions. This study aims to assess parental awareness regarding eye health in children and also practices followed by them towards the eye health in children.

METHODOLOGY:

The research was designed as a cross - sectional study and data collection was completed over a period of 6 months from September 2018 to February 2019. It was conducted in the Department of Ophthalmology at a tertiary care centre in coastal Karnataka after obtaining clearance from Institutional Ethics Committee. The study group included parents who attended tertiary health care centre and parents who attended camps conducted by the same tertiary health care centre. Either father or the mother of the child participated in the study. The sample size was calculated using the formula: $n = \frac{z^2 pq}{d^2}$, where p=prevalence (45%) from the study, q=1-p, d=effect size=0.1=10%, α =level of significance (5%), β =power=80% with 95% confidence interval and it was found to be 96. The parents of the child were informed regarding the need of the study. The participants were also assured of confidentiality of information shared. Any doubts regarding the study protocol were clarified by the chief investigator. The parents were given the information sheet about the study and after obtaining written informed consent, a self designed validated questionnaire (validated by subject experts) was administered to the parents. The questionnaire was prepared after review of relevant research articles

and was translated into two vernacular languages (Kannada and Malayalam) which are commonly spoken in the field practice area of the hospital. Reliability of questionnaire was assessed using Cronbach's Alpha in SPSS Software version 22 and Cronbach's alpha was 0.985. The questionnaire recorded the demographic details of the study participants including age, education, employment, socioeconomic status and number of children in the family. It included 20 questions that assessed the awareness regarding ophthalmic conditions in children and the practices that are followed by the parents for eye care of the child. The filled questionnaire was collected. Later the parents were given a pamphlet that contained details about the child eye care and the practice that can be followed for the eye health of the child.

RESULTS:

Parents ranging from 23-55years old participated in this study with mean±SD of 34±8.6 years. Predominant participants were mothers accounting for 79.16% (n=76). The education, employment and socio-economic status of the participants are given in table 1.

Table 1- Education, employment and socio-economic status of the participants

		N(96)	%
Education status	Primary education	28	29.16
	Secondary education	29	30.20
	College/graduate	39	40.62
socio economic status	Above poverty line	48	50
	Below poverty line	48	50
Employment status	Employed	78	81.25
	Unemployed	18	18.75

Table 2 shows most common ocular complaints that needed an ophthalmic examination according to parents.

Majority of the parents (n=67) knew about the occurrence of cataract in children. Among parents 70.83% (n=68) knew that it can cause vision loss and 72.91% (n=70) knew that surgery is the mode of treatment for it.

Table 2-Reasons according to parents that needs an ophthalmic/ eye examination

Ocular complaints	N(96)	%
Rubbing / Itching of eyes	68	70.83
Watering of eyes	66	68.75
Headache	57	59.37
Strain of eyes	50	52.08

Squinting / deviation of eyes	58	60.41
Redness of eyes	86	89.58
Not able to see the objects clearly	86	89.58

Table 3- Parental knowledge about strabismus and night blindness in children

Questions	Yes	%	No	%
1. Can strabismus occur in children?	87	90.62	9	9.38
2. Can strabismus affect vision?	56	58.33	40	41.66
3. Is strabismus a sign of good luck?	22	22.91	74	77.09
4. Can strabismus be treated?	65	67.7	31	32.3
5. Can strabismus cause lazy eye?	35	36.45	61	63.54
6. Can night blindness occur in children?	64	66.66	32	33.33
7. Can night blindness be caused by nutritional deficiency?	65	67.7	31	32.3
8. Can night blindness be seen at birth?	45	46.87	51	53.13
9. Can night blindness be treated with medicines?	57	59.37	39	40.63

Table 3 shows parental awareness about strabismus and night blindness. Parental awareness regarding refractive error was 94.79% (n=91), 83.33% (n=80) knew that it is treated with spectacle prescription and the spectacle power can change. Amblyopia as a complication of uncorrected refractive error was known to 43.75% (n=42) of parents. More than 75% (n=72) knew that allergic conjunctivitis can occur in children and consultation with an ophthalmologist is needed. Procuring eyedrops over the counter from pharmacy was considered as an option by 76.04% (n=73) parents. Possibility of certain ocular condition running in families was known to 76% (n=73) of parents. The importance of correct posture and adequate lighting during studies were known to 87.5% (n=84) parents. Eating foods like green leafy vegetables, carrots and papaya was considered good for eyes by 86.46% (n=83) of participants. Excessive use of mobile and watching television at close distance can affect vision in children was known to 85.41% (n=82). Parents got the information about the eye conditions in children most commonly from newspapers 70.83% (n=68) followed by television 58.33% (n=56) and doctors 59.37% (n=57) and only 39.58% (n=38) from radio and 38.54% (n=37) hearsay. Patching of the eye as a mode of treatment was less known fact among the parents (n=11) according to this study. Routine eye examination of the child was considered as a necessity by 61.45% (n=59) parents. Among 96 parents, 75% (n=72) of them have taken their child for eye examination, indications being child having ocular complaints as a referral by general practitioner, by paediatrician and from screening camp and by paediatrician. Consulting an ophthalmologist for any eye problems were considered by 66.66% (n=64) parents. About 40.62% (n=39) parents reported that they faced challenges with regard to compliance in their child's treatment and follow up. The most common reasons being time constraints 41.02% (n=16) and financial problems 43.58% (n=17).

DISCUSSION:

PARENTS' PERCEPTION ABOUT EYE CARE

Identification of the ocular conditions by the caregivers at the earliest is important for early intervention to prevent ocular morbidity and thereby reducing the number of blind years in children. Majority of responders in our study were mothers. More than 80% of parents felt the need of an eye check up for their children if they had complaints of diminution of vision and redness. Awareness about symptoms of ophthalmic conditions like headache and straining of eyes which needs evaluation is less known fact according to this study. Compared to the study done by Gupta V et al^[5] where only 11% of parents knew that cataract in childhood is a cause for blindness, our study showed good overall knowledge about cataract in paediatric age group among the parents (69.69%). According to Nirmalan et al,^[3] parental perceptions about strabismus were – it was a congenital disease, not treatable, did not cause decrease in vision and was a sign of good luck. In our study parents had good knowledge about strabismus and they were aware that it is a treatable condition. Amblyopia, as a complication of uncorrected refractive error was known to 43.75% of participants. Studies done by Ebeigbe J et al^[6] Senthilkumar D et al^[4] showed the awareness about amblyopia to be 2.9% and 2.8% respectively. Awareness regarding allergic conjunctivitis was overall good among the parents but knowledge about night blindness was less known to them (33.33%). Study done by Dandona R et al^[7] showed that 55.8%

subjects were aware of night blindness which was similar to our study. In our study parents got the information about ocular conditions in children from newspapers 70.83% (n=68) followed by television 58.33% (n=56). In a study done by Paranjpe R et al^[8] the information about the eye conditions was known to the parents from teachers (53%). Thus media plays an important role to spread the awareness in the community. Also teachers can be trained to recognize early symptoms of ocular conditions in school going children and to notify about them to the parents for early intervention. Patching as mode of treatment was a less known fact among the study group, though they were aware about other modes of treatment. In a study done by Senthilkumar D et al^[4] despite the presence of awareness in eye problems in their children, the causes for those problems were not well understood by the parents. Parents considered that unhealthy eating habits and lack of proper nutrition caused ocular disorders, especially refractive errors. In addition, watching television and playing video games were perceived by parents as causes of refractive errors. These results were similar to those reported by Nirmalan et al,^[3] Gupta V et al^[5] and our study.

PARENTS' PRACTICES ABOUT EYE CARE

Our study showed that 75% of the responders had taken their children to an ophthalmologist for ocular examination. A study done by Gupta V et al^[5] showed that only 30% of the responders had taken their child for a regular eye check-up. They observed that a large majority (79%) of parents visit a general practitioner or family doctor for consultation regarding the eye problems of their child, whereas only 9% consult ophthalmologists. In contrast to this, in our study majority of the parents (66.66%) preferred to take their children to an ophthalmologist with only some parents preferring general practitioner, paediatrician and optometrists. Public should be made aware of available eye health facilities in the community. Our study found that the reasons for not consulting a doctor for treatment of ocular conditions and for follow up were time and financial constraints. Hence it is essential for the parents to be aware of common ocular conditions in children like cataract, refractive error, strabismus, night blindness and allergic conjunctivitis and also the need for regular ophthalmic consultations with an ophthalmologist for these treatable conditions. So we made an attempt to create this awareness by distributing pamphlets to the participants.

CONCLUSION:

The study highlighted that the parents were aware of occurrence of cataract, refractive errors and allergic conjunctivitis in children but the knowledge about the strabismus, night blindness and amblyopia was poor. Information about ocular health among parents was largely acquired through the newspaper which can be used as a tool to spread awareness.

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CONFLICTS OF INTEREST

There are no conflicts of interest

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