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ORIGINAL RESEARCH

Assessment of awareness about common pediatric eye disorders among primary school teachers and epidemiological factors associated with it

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ABSTRACT

Introduction: Childhood ophthalmic disorders have an important role to play in the child's development, academic achievements, self-esteem and their quality of life. Recently there are no update on awareness among school teachers regarding the common pediatric eye disorders. Therefore this study was designed to assess the awareness among the teachers regarding the prevailing eye disorders. Objectives: To assess the awareness among primary school teachers about common pediatric eye diseases prevailing in the society and epidemiological factors associated with it. Methodology: This community based cross sectional study was conducted on the primary school teachers. Total 168 study subjects participated in the study. Data was collected using google form after obtaining consent. Data was auto saved in google database and analyzed with help of excel and SPSS 21 software. Results: This study included total 168 participants, out of which 93 (55.36%) were male and 75(44.64 %) were female. Level of adequate awareness among primary school teachers was about 34 percent. Female teachers and teachers with post graduate degree had adequate level of awareness and this association was found to be statistically significant. Discussion: Level of awareness was found to be less when compared to studies done in adult population. Also some factors like more awareness among more qualified teachers was in concurrence with finding from other studies. Conclusion: There is inadequate awareness among primary school teachers like minimum age of undergoing cataract surgery, exact distance of vision testing in school children, Primary treatment of congenital dacryocystitis and congenital glaucoma.

Keywords: awareness, pediatric eye disorders, school teacher, eye health

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INTRODUCTION

We live in a visual world, where the ability to see effortlessly is taken granted by many. Undetected vision problems are a major cause of reduced performance in day to day life.[(1)] Childhood ophthalmic disorders have an important role to play in the child's development, academic achievements, self-esteem and their quality of life.[(1,2)] Awareness of common eye disorders and their treatment will help in encouraging people to seek timely eye care and can thus help in lessening the burden of visual impairment.[(3)] The WHO estimates on the global

magnitude and causes of visual impairment states that 80% of all causes of visual impairment are preventable or curable.[4]

Poor health awareness about the ocular diseases leads to delay in seeking treatment which in turn leads to various complications and may ultimately lead to avoidable blindness.[5] Blindness is defined by WHO as a visual acuity less than 3/60 or a corresponding visual field loss of less than 10D (diopter) in the better eye with the best possible correction.[6] Childhood blindness refers to a group of diseases and conditions occurring in childhood or early adolescence which if left untreated results in severe blindness or some visual impairment that are likely to be untreatable later in life.[6] Lack of awareness is a major hurdle in early intervention and prevention of the ocular diseases.

In developing countries like India, attempts have been made to train school teachers for screening of some prevalent eye diseases.[7] This needs teachers to be aware of the ocular diseases prevalent in the society especially among students. Proper awareness among the teachers can help in early detection of the ocular diseases which will help to rule out the ignorance and illiteracy as factors of delay in seeking treatment.[7,8] This will also assist to plan strategies to improve visual acuity screening and providing education on the importance of timely follow-up for eye care which is important to avoid vision problems and eye morbidities.[9] To our knowledge there is no study conducted yet which takes into account the awareness among school teachers regarding the common pediatric eye disorders Therefore this study was designed to assess the awareness among the teachers in primary schools regarding the prevailing eye disorders and study the beliefs and misbeliefs regarding the same.

OBJECTIVES

To assess the awareness among primary school teachers about common pediatric eye diseases prevailing in the society and study some epidemiological factors associated with it.

METHODOLOGY

This community based cross sectional study was conducted at primary schools present in rural and tribal area of Central India. Study population consisted of the primary school teachers in Vidarbha region of Maharashtra state. Primary school teachers teaching for at least 1 year were included in the study while teachers having experience of less than 1 year were excluded from the study.

Sample size was calculated as 163 considering prevalence of refractive error in school children as 12% and absolute precision of 5% and 95% confidence interval. Considering the sample size primary teachers from total 6 schools were recruited in the study. As all teachers from 6 school were recruited the sample size increased to 168. All teachers were informed about the purpose of the study by providing subject information sheet and written informed consent was taken before data collection.

A pre-designed and pre-tested structured questionnaire was used for assessing awareness of common pediatric eye disorders among primary school teachers. The questionnaire consisted of 15 questions. Adequate awareness was considered if study participant answered more than 9 correct answers and participants answering less than 9 correct answers were considered to have inadequate level of awareness. The questions were designed to assess the perception about eye disorders like refractive errors, congenital glaucoma, squint and cataract. Some questions are designed to analyze knowledge regarding basic eye care. This predesigned proforma was modified into google form and send to all 168 study participants through google link on their email account and whatsapp mobile number. Consent form and proforma were translated in local language and were provided to participants in both English and local

language. Google forms were such designed that one teacher was able to fill the proforma one time only.

Data was auto saved in google database and analyzed with help of excel and SPSS 21 software.

RESULTS

This study included total 168 participants, out of which 93(55.36 %) were male and 75 (44.64 %) were female. The mean age of study subject was 44 years with standard deviation of 9.81 years. Out of total 168 teachers 57 (33.93 %) were working in Government school and rest 111 (66.07 %) were teaching in private schools. Also it was noted that 27 (16.07 %) teachers were having educational qualification upto degree level while 141(83.93 %) teachers were having post graduate degree.

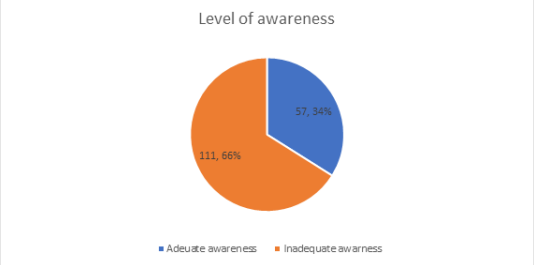

Figure 1: Percentage of adequate level of awareness among primary school teachers about common pediatric eye diseases

Above figure show that level of adequate awareness among awareness among primary school teachers about common pediatric eye diseases was about 34 percent. Adequate awareness was considered if study participant answered more than 9 correct answers out of total 15 questions.

Table 2: Level of awareness among study subjects about common pediatric eye disorders

Sr no	Question asked/awareness tested	% of study subject with correct knowledge
1	First line of management in case foreign body enters eye	98.21%
2	If prescribed/required spectacles are not used at early age, vision of person may decrease permanently in some cases	83.93%
3	Child can get squint if prescribed/required spectacles are not used	75.00%
4	Symptoms of refractive error in children	76.79%
5	If squint is not corrected at early age, vision of person may decrease permanently in some cases:	73.21%
6	Child can get cataract at birth	32.14%
7	Earliest at which age cataract surgery can be performed	8.93%
8	Exact distance of vision testing in school children	17.86%
9	Ultimate treatment of congenital Glaucoma	46.43%
10	Primary treatment of congenital dacryocystitis	28.57%
11	Type of spectacle lenses most suitable for children	57.14%

Table 2 describes the level of awareness in school teachers related to specific pediatric ophthalmic problems. It was observed that level of awareness was least about topics like

minimum age of undergoing cataract surgery (8.93%), exact distance of vision testing in school children (17.86%), Primary treatment of congenital dacryocystitis (28.57%) etc while awareness was good on topics like First line of management in case foreign body enters eye (98.21%).

Table 3: Epidemiological factors associated with awareness of common pediatric eye disorders in study subjects.

Epidemiological factor	Adequate awareness (n=57)	Inadequate awareness (n=111)	Chi sq. value	P value
Age ≤ 44 years (compared to age≥ 45)	30	42	3.36	0.06
Gender female (compared to male)	36	39	11.97	**0.00***
Teachers in Govt. school (compared to private school)	48	93	0.00	0.94
Teachers with PG degree (compared to qualification less post graduate)	36	42	9.70	**0.00***

(p value <0.05 is considered statistically significant to study association)

When association of common epidemiological factors was tested with level of awareness of common pediatric eye disorders in study subjects it was observed that female teachers have adequate awareness compared to male teaches and teachers with post graduate degree have more awareness than graduate teachers and these association were found to be statistically highly significant.

DISCUSSION

Ophthalmic problem in pediatric population is always a neglected topic and also knowledge about it in general population is often limited. Although we have national health program about ophthalmic problem in India prevalence of ophthalmic problem is on the rise. Hence it is the need of the hour to increase awareness about such ophthalmic conditions so that management of such condition can be done at its earliest and blindness can be prevented. Data from around the world has shown variations in the level of awareness about common ocular diseases. Awareness of adult related ophthalmic condition varies from 30% to 60% in various studies. [1,2,3,5] But awareness about pediatric ophthalmic condition is studied much less, hence we tried to study it and it was found to be 34 %.

Our study reveals that knowledge about management of foreign body in eye is good in teachers but they have very limited knowledge about condition like congenital cataract, congenital dacryocystitis, congenital glaucoma etc. This level of awareness is more in case of adult subject as found in other studies but it is very less about pediatric population.[7]

In our study we have also tried to find out which factors were associated with level of awareness among teachers and we found that factors like and female gender and teachers with more educational qualifications had more level of awareness. Finding of our study shows that level of awareness about ocular diseases increases with level of education is concurrent with study done by Mera F Haddat[7] et al. Also teachers in government school had more awareness as compared to teachers in private school but this may be due to fact that teachers in government school work in various health program run by government of India. While studying association it was observed that females were more aware compared to males

which are contradictory to the finding of research done by Dandona R[(3)] but this may be due to fact that females included in our study were teachers and had higher educational status.

CONCLUSION

There is inadequate awareness among primary school teachers like minimum age of undergoing cataract surgery, exact distance of vision testing in school children, primary treatment of congenital dacryocystitis and congenital glaucoma. Also as qualification of teacher increases their level of awareness about pediatric ophthalmic complication increases.

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