

What do School Children know about Eye Injuries and their Prevention?

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Abstract

Ocular trauma is one of the most common causes of acquired blindness among children. The present study was conducted to assess the level of awareness among school children about eye injuries and their prevention to increase their knowledge and awareness about the same as there are no published studies on this important aspect of childhood eye injuries. 477 school children between VIIth and XIth of four schools under RHTC Mandur field practice area were administered questionnaires to assess their knowledge about eye injuries.

Results: 92% of the students could correctly identify the sense organs in the human body.

Most of the school children could identify at least three functions of the eye. 71.90% identified three parts of the eye correctly. 90% knew about the anatomical location of the eye. 93 % of the students were aware about the common places of eye injury as opposed to 33 (7%) who were unaware.

45%) could correctly identify the various causes of eye injury and more than half, i.e 267 (56%) could describe the various mechanisms of eye injury.

Most of the school children i.e. 439 (92%) knew about the importance of promptly consulting a doctor in case of an eye injury.

Keywords: KAP, School children, Ocular trauma

Introduction

Ocular trauma is one of the most common causes of acquired blindness among children¹ and paediatric eye injuries constitute approximately 8 to 14% of injuries among children.² Such injuries lead to devastating effects, causing disabilities which can last a lifetime.

Children are more prone to injuries than adults due to their curiosity and underdeveloped motor skills resulting in ocular trauma mostly at home and school. Most of these can be prevented with proper knowledge about eye injuries, parental supervision and safe school environment. Hence the present study was conducted to assess the level of

awareness among school children about eye injuries and their prevention to increase their knowledge and awareness about the same as there are no published studies on this important aspect of childhood eye injuries.

Objectives

- To study the knowledge regarding eye injuries and their prevention among adolescent school children
- To determine the knowledge score among adolescent school children on eye injuries and their prevention

Materials and methods

Study design: Cross sectional.

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Study participants: 477 school children between VIth and XIth of four schools under RHTC Mandur field practice area namely Shri Dayanand Arya High School, Father Agnel Central School, High School and Higher Secondary School.

Sampling technique: Census method was followed.

Duration of study: 6 months (January – June 2018).

Inclusion criteria: School students studying in class VII – XIth who were present during school health checkup.

Exclusion criteria: School students studying in class VII – XIth who were sick, absent during school health check-up or whose parents were not consenting to allow participation were excluded from the study.

Ethical Clearance: Was obtained from the Institutional Ethics Committee of Goa Medical College Written prior permission was obtained from all the School Headmasters/ Principals and consent was obtained from the parents of school children who took part in the study.

Data Collection and Analysis: Data was entered into a pre designed and pre tested questionnaire. Data was compiled, coded and entered into SPSS version 22 Data analysis was performed using SPSS version 22 Percentages, rates and ratios were calculated Utmost care was taken to ensure privacy and confidentiality of the study participants and their responses.

Results

This cross sectional study was conducted among 477 school children from classes VIth – XIth of four schools under RHTC Mandur field practice area namely Shri Dayanand Arya High School, Father Agnel Central School, High School and Higher Secondary School. The study duration was for a period of 6 months.

Out of the 477 students, 86 were from Std VIth, 114 from Std VIIIth, 126 from Std IXth and 151 from Std XIth. There were a total of 265 (55.55%) boys and 212 (44.44%) girls among the study participants.

Majority, i.e 439 (92%) of the students could correctly identify the sense organs in the human body. 377 of them

described the shape of the eyes correctly.

Most of the school children could identify at least three functions of the eye. Nearly three-fourths of the study participants i.e. 343 (71.90%) identified three parts of the eye correctly. Majority of them i.e. 429 (90%) knew about the anatomical location of the eye. Most i.e. 444 (93 %) of the students were aware about the common places of eye injury as opposed to 33 (7%) who were unaware.

Less than half of the participants, i.e 215 (45%) could correctly identify the various causes of eye injury and more than half, i.e 267 (56%) could describe the various mechanisms of eye injury.

Most of the school children i.e. 439 (92%) knew about the importance of promptly consulting a doctor in case of an eye injury.

Discussion

Knowledge regarding ocular anatomy and physiology (Table 1) Majority, i.e. 439 (92%) of the students could correctly identify the sense organs in the human body. 377 (79.03%) of them described the shape of the eyes correctly. However, nearly a quarter of them, i.e. 100 (21%) could not do so.

Most of the school children could identify at least three functions of the eye and only about 76 (16%) of them could not. Nearly three-fourths of the study participants (343) identified three parts of the eye, whereas 134 (28%) were unable to identify. Majority of them (90%) could describe the anatomical location of the eye and only 48 (10%) of them could not. Despite extensive search, we could not find similar studies to compare our study findings.

Knowledge regarding eye injury and its prevention (Table 2) 458 (96%) knew about eye injuries whereas only 19 (4%) of them gave incorrect answers. Most of the students i.e. 444 (93%) were aware about the common places of eye injury; only 33 (7%) were unaware of the same. The most common place of eye injuries according to the students was at home. We could not find similar studies to compare our study findings with; however studies done in the past among paediatric population suggest that the most common place of injuries among children is at home.^{2,3,4,5}

Table 1. Knowledge regarding anatomy and physiology of the eye

Knowledge	Correct response (No.)	Correct response (%)	Incorrect response (No.)	Incorrect response (%)
Sense organs in the human body	439	92	38	8
Shape of eye	377	79	100	21
Functions of eye	401	84	76	16
Parts of eye	343	72	134	28
Situation of eye	429	90	48	10

Table 2. Knowledge regarding eye injury and its prevention

Knowledge	Correct response (No.)	Correct response (%)	Incorrect response (No.)	Incorrect response (%)
Eye injury	458	96	19	4
Place of injury	444	93	33	7
Cause of Injury	215	45	262	56
Mechanism of injury	267	56	210	44
Whom to consult	439	92	38	8

There are various mechanisms causing eye injuries; which includes blunt trauma, penetrating and perforating injuries, and chemical injuries. More than half, i.e. 267 (56%) were able to describe the various mechanisms of eye injury whereas 210 (44%) of them could not.

According to most of the children the commonest mechanism of eye injuries was blunt trauma and chemical injuries. Although we could not find similar studies in the literature to compare our study findings with; a study by Qayum S and Rather S⁶ in Northern India showed that 67.8% of the eye injuries were as a result of blunt trauma. Other similar studies conducted in Eastern India by Chakraborti C et al⁵ and in Northern India by Maurya RP⁷ et al reported that closed globe injuries accounted for 62.19% and 56.10% of all ocular injuries in children respectively.

Most of the school children (92%) knew about the importance of consulting a doctor following an eye injury whereas 38 (8%) of them did not know.

Conclusion

We report the first study among adolescent children in India to assess their knowledge and attitudes toward eye injuries and its prevention.

It was heartening to observe that more than three fourths of the study participants, i.e 371 (77.7%) of them obtained a score of >8 and 72 of them, i.e 15.2% had a score between 5 and 7 and only a few students, i.e 34 (7.1%) of them scored below 4. The study reveals a high level of knowledge about eye injuries and its prevention among adolescent school children. Health education will help to further increase the awareness so that they know how the injuries may be prevented and understand the need to seek immediate medical help in emergency situations (Table 3).

Table 3. Overall knowledge score regarding eye injury

Knowledge Score	Frequency	Percentage
≤ 4 (poor)	34	7.1
5 – 7 (average)	72	15.2
≥8 (good)	371	77.7
Total	477	100

Conflict of Interest: None

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