

DETECTION AND CLINICAL REFERENCE OF STRABISMIC CHILDREN AT COIMBATORE DISTRICT

By

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Abstract

Strabismus (sometimes also called as “squint eyes” or “cross eyes”) means misalignment of the eyes. This makes it difficult or impossible for the brain to use the information from the two eyes together normally. Some children with strabismus (squint eyes) develop amblyopia (lazy eyes). Strabismus can also interfere with normal binocular vision. In India, ophthalmologist population ratio counts 1: 25,000. Hence this issue is neglected due to treatment back lock in cataract and major eye diseases. So, this situation necessitated and urged the education and rehabilitation professionals to identify the children with strabismus and children at risk for strabismus at earlier stage per se. Hence, a study is planned in the educational setting using indigenous techniques and devices. The present research study entitled encompasses primarily to identify the strabismic children at Coimbatore district and provide them clinical reference.

Keywords: *misalignment, squint, vision, imbalance, rehabilitation.*

Introduction

One of the common visual problems faced by young children is having crossed eye condition resulting from an eye muscle irregularities which make one of the eyes farsighted than the other, the disorder which is called as strabismus. This imbalance forces the normal eye to work hard to cope with the functions of

farsighted eye, which if left untreated leads to its loss of vision.

Need and importance of the Study

Early identification and treatment of the squint problem in children prevents permanent visual loss. Therefore all the children should have a thorough eye examination at least between ages 3 and 5 years. Therefore early eye examination is of utmost importance. In general,

parents think that nothing can be done to improve vision in the Strabismic eye. This can be reduced to a great extent in majority of cases if it is detected around the age of 3-4 years. Realizing the need for the early eye examination, the researcher has selected this study.

Objectives of the Study

- Screen children using indigenous devices and techniques.
- Identify children with strabismus and at risk for strabismus enrolled in Anganwadi Programme.
- Refer to children with strabismus and at risk for comprehensive clinical examination and treatment to help them to attain correct visual responses and develop healthy vision.

Methodology

The researcher adopted Quasi – experimental study to screen and identify children with strabismus

and at risk for strabismus enrolled in Anganwadi Programme.

The investigator also used Case Study Approach for careful and critical investigation of the individual's sensory skills particularly vision skills with the support of parents and teachers. The study was designed on the basis of Pretest and Posttest without control group Design.

Site description

The present study was conducted in Anganwadi schools situated at Coimbatore district covering North block and South block including both urban and rural areas. The Strabismic children were identified from 50 Anganwadi schools.

Sample selected for the Study

The investigator used Purposive Sampling technique to select the sample for this study. The sample chosen for the present study consisted of 1000 preprimary

children age group between 2 – 5 years. These children were enrolled in 50 Anganwadi schools, registered under ICDS project of Coimbatore District.

The investigator gathered information from the teachers and parents with regard to the problems encountered by the anganwadi children. Based on the information, the investigator used Hirschberg method and identified 31 children having Strabismic and at risk for Strabismic condition. They were once again screened with the help of an adapted checklist from World Health Organization (1993) to find out if there are any problems such as appearance of the eyes, complaints and behaviour of the child.

Tools used for the Study

Based on the objectives of the study, the investigator selected suitable tool such as

i) Personal data bank to collect the information about the subjects such

as name, age, gender, date of birth, order of child, any visual problems in family, qualification, occupation and income of parents.

ii) Vision screening checklist developed by WHO (1993) which consisted of 50 items listed under 3 areas, such as Appearance of the eye, Complaints encountered by the children and Behaviour of the children. The purpose of the checklist was to screen the Strabismic condition associated with any other visual defects.

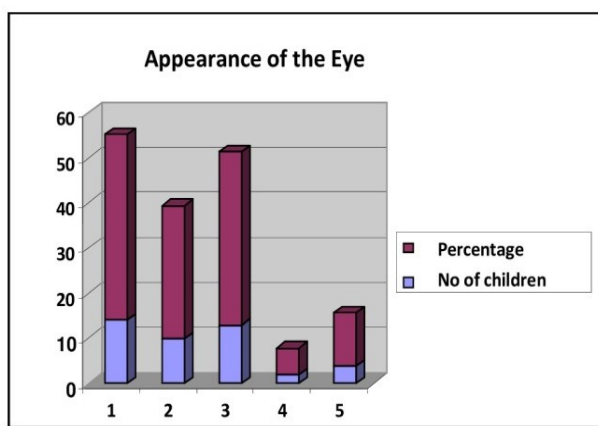
The data after collection was processed and analyzed in accordance with the outline laid down for the purpose at the time of developing research plan and depicted as follows:

Table 1. Appearance of the eye

Sl. No	Appearance of the eye	No of children	Percentage
1	Redness of the eyes	14	41
2	Watery eyes	10	29
3	Jerky eyes	13	38
4	Have squint in one eye	2	6
5	Have squint in both eyes	4	12

From the table it was found that redness of the eyes was exhibited by 41% of the children, jerky eyes 38%, watery eyes 29%, having squint in both the eyes 12% and having squint in one eye is only 6% respectively.

Fig. 1. Appearance of the eye



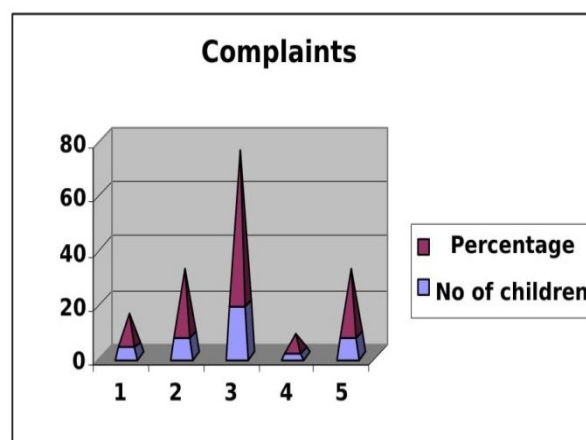
1-Redness of the eye, 2- Watery eye, 3- Jerky eye, 4-Having squint in one eye, 5- Having squint in both eyes

Table 2. Complaints reported by the children

Sl. No	Complaints	No of children	%
1	Headache	4	12
2	Burning eyes	8	24
3	Rubbing the eyes frequently	19	56
4	Double vision	2	6
5	Sensitivity to light	8	24

It was found that 56% of children exhibited rubbing their eyes frequently. 24% of students showed sensitivity to light and 24% complained of having burning eyes. Headache and double vision was reported by 12% and 6% of the children respectively.

Fig. 2. Complaints



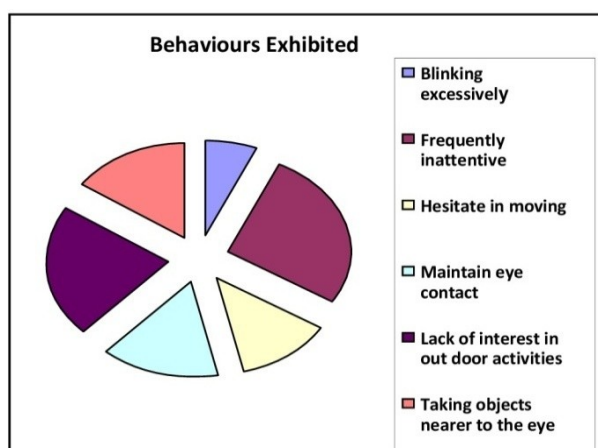
1- Headache, 2-Burning eyes, 3-Rubbing the eyes frequently, 4-Double vision, 5- Sensitivity to light

Table 3. Behaviour of the children

Sl. No	Behaviour	No of Children	%
1	Blinking excessively	5	15
2	Frequently inattentive	19	56
3	Hesitate in moving	9	26
4	Maintain eye contact	11	32
5	Lack of interest in out door activities	16	47
6	Taking objects nearer to the eye	11	32

It was found that the highest percent (56%) of children were inattentive in the class due to their eye defect which made them disinterested in participating outdoor activities.

Fig. 3. Behaviours exhibited



Findings of the Study

The major findings are summarized as follows:

- 9 children were identified with Strabismic eyes. Out of which 7 were boys and the remaining 2 were girls i.e., the prevalence of strabismus among boys is more than girls.
- The highest percentage of the Strabismic children fall under the age group of more than 3½ years.
- It was found that hundred percentage of the children were congenitally Strabismic.
- While analyzing the type of strabismus 73% of them having Esotropia and the remaining 27% of them represented Exotropia. It was noted that none of the children had Hypotropic and Hypertropic Strabismic.
- While analyzing the appearance of the eyes, it was found that redness of the eyes was exhibited by 41% of the children, jerky eyes 38%, watery eyes 29%, having squint in both the eyes 12% and having squint in one eye is only 6% respectively.
- While analyzing the behaviour of the children, it was found that 56% of children exhibited rubbing their eyes frequently. 24% of students showed sensitivity to light and 24% complained of having burning eyes. Headache and double vision

was reported by 12% and 6% of the children respectively.

- From analyzing the complaints of the children, it was found that the highest percent age (56%) of children were inattentive in the class due to their eye defect which made them disinterested in participating outdoor activities.
- It is revealed that children with strabismus and at risk referred for comprehensive clinical examination and treatment helped them to attain correct visual responses and develop healthy vision.

Conclusion

Early identification and intervention is the best means to minimize the eye defects associated with

strabismus. Despite enormous challenges encountered by the Strabismic children in day to day activities they can also achieve great deals in their life through proper training and follow up of remedial and awareness programmes. The early identification and intervention enhance equal opportunity and exposure in education and employment in the right time for the Strabismic children. Thus the research carried out currently leads us to more hope in the search for the causes and intervention for strabismus. Awareness among the parents of Anganwadi children enhanced them to undertake the identification process, to know about the child's eye condition. So that, every child who has been enrolled in Anganwadi schools will be benefited.

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