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## RESEARCH ARTICLE

# EARLY IDENTIFICATION AND MANAGEMENT OF REFRACTIVE ERRORS BY PRIMARY SCHOOL TEACHERS

Sridevy S., Dorothy., Emelda and Drobathy

### ARTICLE INFO

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### ABSTRACT

A study was undertaken to assess the knowledge of primary school teachers regarding early identification and management of refractive errors among school children at Petit Seminaire Primary School Puducherry. Samples of 75 primary teachers were selected by convenient sampling technique. The structured Questionnaire was distributed to the selected primary teachers to assess their knowledge regarding refractive errors.

The findings of the study showed that 41% of the teachers were from the age group 41-50 years, 51% of the teachers were educated BSc.BED, 33% of the teachers had 20years of experience, 87% of the teachers were using spectacles, 77% of the teachers belong to nuclear family and all teachers had some previous knowledge about refractive error. Majority of the subjects 87(87%) were having average knowledge regarding identification of refractive errors. Similarly 12(12%) of the subjects were not having adequate knowledge on identification of refractive errors. There was need for more education regarding refractive errors among the primary teachers to improve their knowledge and attitude towards refractive errors.

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## INTRODUCTION

**“When you take good care of your eyes, you take good care of yourself.”**

The ultimate molding of a person's personality and potentiality rests with his nature, surroundings and quality of eye sight. Children are more at risk of developing refractive errors, because they are actively growing and subjected to the strain of near work due to demanding academic schedules. Vision screening is most commonly carried out on schoolchildren, which is a valuable method of identifying potentially treatable ocular abnormalities, including blindness due to refractive error and related amblyopia.

School screening is performed in various ways, including simple visual acuity assessment by school teachers or paramedical professionals and by using computers to assess vision. In developing countries, schoolteachers have been most commonly used for vision screening of schoolchildren. Barriers to acceptance of services include the cost and quality of available refractive care and mistaken beliefs that glasses will harm children's eyes.

### Need For the Study

The global prevalence of refractive errors has been estimated from 800 million to 2.3 billion. The World Health Organization

estimates that 13 million children aged 5–15 years worldwide are visually impaired from uncorrected refractive error.

The school going years are formative for children in determining their physical, intellectual and behavioral development. Children may not be aware of their problem; they adjust to the poor eyesight by sitting near the blackboard, holding the books closer to their eyes and even avoiding work requiring visual concentration. Refractive errors are a significant problem among school children and have a considerable impact on the public health. When a child enters into the school, the school becomes a second family to the child and teachers play an important role in the child's life.

Child spent a significant portion of the time in the school and it is important for the teachers to identify the refractive errors in the early stage itself. Early detection and management of the refractive errors is very much important to prevent blindness and other complications. Therefore the knowledge regarding the refractive errors among school teachers is very much important to detect any manifestations of refractive errors in school children.

### Statement of The Problem

A study to assess the knowledge of primary school teachers regarding early identification and management of refractive

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errors among school children at selected urban schools in Puducherry.

### **Objectives**

1. To assess the knowledge of primary school teachers regarding refractive errors among school children.
2. To find the association of level of knowledge of primary school teachers regarding refractive errors among school children with their selected personal variables.

### **Hypotheses**

- H<sub>1</sub>:** There will be significant level of knowledge among primary school teachers regarding early identification and management of refractive errors among school children
- H<sub>2</sub>:** There will be significant association between knowledge of primary school teachers regarding early identification and management of refractive errors among school children with their selected personal variables.

### **Assumptions**

Primary school teachers will have some knowledge regarding early identification and management of refractive errors among school children.

### **Delimitations**

1. The study is delimited to primary school teachers of selected urban schools in Puducherry.
2. The study is conducted in selected urban schools at Puducherry.

## **REVIEW OF LITERATURE**

The literature reviewed for the present study is organized and presented under the following headings.

1. Studies related to risk factors of refractive errors among school children.
2. Studies related to prevalence of refractive errors among school children.
3. Studies related to knowledge of teachers regarding refractive errors among school children.

## **METHODOLOGY**

### **Research Approach**

In this study, quantitative research was used. This study uses semi-structured questionnaire to collect the data related to identification of refractive errors among school children.

### **Research Design**

The research design selected for this study was descriptive design.

### **Settings of the study**

This study was conducted at the petit seminaire primary school located at uppalam, puducherry comprising of totally 75 people (primary teachers).

### **Population**

All primary school teachers.

### **Samples**

The samples selected for this study includes teachers working in the petit seminaire primary school.

### **Sampling technique**

Simple random sampling technique was adopted for this study. It is the probability sampling method in which the samples have an equal chance of being selected.

### **Size of the Sample**

Seventy five samples were selected for this study.

### **Criteria for Sample Select**

#### **Inclusion criteria**

1. Primary teachers working at the petit seminar primary school
2. Those who are willing to participate.
3. Those who can communicate Tamil and English

#### **Exclusion criteria**

Those who are not present on the day of data collection.

### **Instruments**

A structured questionnaire with an interview schedule.

### **Description of The Tool**

The tool was developed after the extensive search of review of literature, internet search and experts' advice which helped the investigators to refine the tool.

#### **Section A**

1. Semi-structured questionnaire
2. It includes 25 questions related to various risk factors of the refractive errors and the fear of blurred vision, symptoms of refractive errors, sensory impairment, gait, physical activity and diet. Scores allotted based on the questions.
3. Each question carries 1 mark for correct response
4. Incorrect response was given no mark.

**Scoring Procedure**

The overall score of the tool is 25  
Based on the score, total were interpreted as follows;

**Score to assess knowledge**

Category	score	Percentage%
adequate	1	1%
average	65	87%
inadequate	9	12%
Total	75	100%

**Ethical Consideration**

We are maintaining the confidentiality by using code number and without using their name.

**Procedure for Data Collection**

Formal permission was obtained from principal of petit seminaire primary school at uppalam, Puducherry. Primary school teachers fulfilling the inclusion criteria were and using random technique the sample were selected. They were explained the purpose of the study and requested for their willingness and co-operation. The questionnaire was distributed to the selected subjects after getting informed consent and the data were collected.

**Data Analysis and Interpretation**

The collected data was analysed by using descriptive statistical method.

**Organization of Study Finding**

The findings are organized according to the objectives of the study.

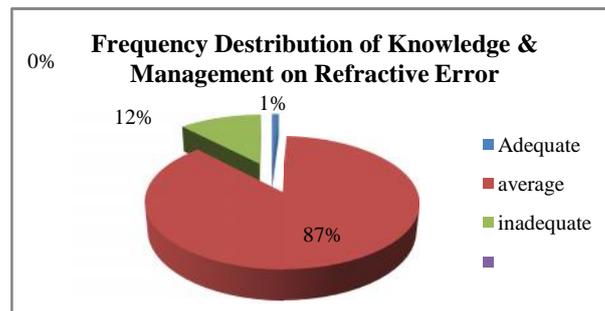
S.no	Demographic data	Frequency	Percentage	
1.	AGE IN YEARS	20-30years	17	23%
		31-40years	22	29%
		41-50years	31	41%
		51-60years	5	7%
		D.TED	14	19%
2.	EDUCATION	BSc.BED	38	51%
		BA.BED	6	8%
		MA.BED	17	22%
		1-5years	16	22%
3.	EXPERIENCE	6-10years	19	25%
		11-20years	25	33%
		21-30years	15	20%
4.	USAGE OF SPECTACLES	using	10	13%
		Not using	65	87%
5.	TYPE OF FAMILY	Nuclear family	58	77%
		Joint family	17	23%

**Frequency and Percentage Distribution of Demographic Variables**

**Level of knowledge in association with frequency distribution of knowledge and management on refractive error N=75**

Knowledge level	Frequency	Percentage (%)
Adequate	1	1%
Average	65	87%
Inadequate	9	12%
TOTAL	75	100%

**Interpretation:** The above table shows that 1% of school teachers had adequate knowledge, 87% had average knowledge and 12% had inadequate knowledge.



**Significant Findings**

- Majority of the subjects 87(87%) were having average knowledge regarding identification of refractive errors.
- Similarly 12(12%) of the subjects were not having adequate knowledge on identification of refractive errors.

The education and experience of the teachers does not have any relationship with the knowledge regarding identification of refractive errors.

**CONCLUSION**

From this study, the investigators observed that the teachers knowledge of refractive errors, in general do not know the complications of refractive errors but they are able to identify the symptoms of the refractive errors.

Therefore education, practice and preparation are necessary for the successful care of school children through the teachers, so they may achieve the benefits of physically active life- time.

**Recommendations**

- Follow up studies can be done for longer duration in regular intervals.
- This study can be done with more samples for a longer period of time.

- A study can be done to find out the reasons for refractive errors.
- Same study can be conducted in different settings.
- A similar study can be conducted among different age groups like adolescents, geriatric, etc.

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