EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM REGARDING EYE DISORDERS INTERMS OF KNOWLEDGE AND PRACTICE AMONG ADOLESCENT CHILDREN IN SELECTED SCHOOLS, AT DHARAPURAM

Certified Bonafide Project Work

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COLLEGE SEAL

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CHAPTER - I

INTRODUCTION

"Eye sight efficient – life proficient

Vision defective – future ineffective"

Garrow

BACKROUND OF THE STUDY

Nutrition is the basic component of child health. It is one of the prime importance for the attainment of normal growth and development. Nutrition is an important throughout childhood, it is more crucial during the first five years of a child's life. Children are the most valuable asset for any society. A nature of physical growth and development of children depends primarily upon the genetic endowments, nutritional status and surrounding physical environment conditions. Good nutrition is an indispensable component of healthy growth of mind and body. It plays a vital role in the physical, mental and emotional development of a child. Good health increases the brains ability to enhances children achievement and helps to avoid academic barriers.

Sivan, R et. al.,(2003)[61]

In nutrition vitamins are essential food factors to be included in diet for maintaining proper health and vitality. Vitamins are organic compounds occurring in small quantities in the different natural foods and necessary for the growth and maintenance of good health in children.

Swaminathan, C., (2002) [26]

Eyes have been the most precious human organ for the function of vision, expression and beauty. 85% of all information's received from the environment is visual. If a child's vision is lost or any changes the growth and development can be delayed, with repercussions for the family structure .Eyes are endangered commonly in deficiency of vitamin A and Refractive Errors.

Achar, K., (2000) [6]

Vision is an important sense for normal child development from the moment of birth. Through sight, the child learns to read, move about the environment and interact with the world. Impaired vision requires early assessment and intervention to ensure the child's optimal development.

Piyush Gupta(2004) [19]

Vision is an integral part of effective communication and learning. Because of its significant impact on children's life and impairment of vision is an important health problem. Vision changes are common during the teenage years. The onset of refractory errors or worsening of previous errors peaks in adolescence as a result of the growth spurt. The main goal is to detect new refractive errors. Adolescent with refractive changes are referred for contacts or glasses as appropriate.

Wongs, (2007) [5]

Many countries and regions may not realize that vitamin A deficiency is a problem, since they do not have up-to-date national level assessment. Some countries have carried out assessments using ocular indicators, such as the Bitots spots. The ocular signs are associated with advanced stages of vitamin A deficiency. A high infant mortality or under five mortality rate (U5MR>70) Should be taken as an indicator of a likely vitamin A deficiency problem ,especially if it is also known that over all child malnutrition and low birth weight are prevalent and consumption of vitamin A rich food is low

Bellamy,S.,(2000) [12]

Refractive error in children affect their performance in school and at work and have strong positive influence on the future life of the child. It is estimated that 2.30 million people world wide have refractive error. The vast majority of people could have sight restored by spectacles, but only 1.80 billion people have access to eye exams and affordable correction. This leads to appropriately 500 million people mostly in developing countries (close to 1/3 are in Africa) and many children with uncorrected error causing blindness and impaired vision.

Holen, A. B., (2003) [14]

It is believed that feeding of locally available carotene rich foods, such as green leafy vegetables, yellow and orange vegetables and fruits like pumpkin, carrot, papaya, mango, oranges etc to the school children helps to prevent vitamin A deficiency. The recommended allowance of vitamin A is 5000 IU per day. National prophylaxis programme for prevention of blindness due to vitamin A deficiency aims at protecting children from vitamin A deficiency and is in operation in the country since 1970.It is carried by paramedical personnel in public health department.

Singh, H.,(2001) [59]

The eye disorders and deficiency disorders are associated with poverty, low purchasing and unavailability of food, population explosion, poor weaning practices, social justice and customs, unhygienic environments, sanitary living conditions, infection and communicable diseases. Because of vitamin A deficiency, the school children are suffering from conjunctival xerosis, Bitot's spots, corneal xerosis, Night blindness, corneal ulceration, Keratomalacia, corneal scar, xeropthalmia, Dry skin and growth failure. Deficiency of vitamin A is a leading cause of blindness among school children.

Voke, R., (2001) [63]

Infants and children depend on sensory input from their environment to achieve normal growth and development. They learn about themselves, families and world through visual stimulation and through vision. Eighty five percent (85%) of all information received from the environment is visual. If a child vision is lost or any changes, growth and development can be delayed with repercussion for family structure.

Debre Ann, M., (2002) [16]

The national programme for prophylaxis against blindness due to vitamin A deficiency was launched in 1970.India was the first country to launch a national programe of vitamin A distribution for prevention

of blindness in children.An evaluation of the programme has shown that in areas where it has been implemented well,there was significant reduction in the signs of vitamin A deficiency .The reason for poor coverage have been inadequate supplies of vitamin A adaptation of clinic approach instead of house to house visit for the distribution.

Park,K., (2007) [21]

Vision 2020 ,The right to sight:Global initiatives for elimination of avoidable blindness after the realization that unless blindness will double by 2020 AD, WHO along with an international partnership committee launched the vision 2020 initiative in 1995.Under global initiative for the elimination of all avoidable blindness by 2020AD. The diseases identified for global elimination includes:Avoidable causes of childhood blindness refractive errors and low vision,the target have been set up for each of the component diseases for the next 20 years.

Park,K., (2007) [23]

Avoidable blindness and low vision can restrict progress in education, limit motor development in children, affect mobility and restrict access to information. By correcting uncorrected refractive errors we can dramatically improve the quality of life and access to education for many children. More emphasis should be given to health education particularly about available and affortable spectacles,

balanced diet with in the limits of locally available. Vitamin A rich foods and care of eyes to prevent vitamin A deficiency and Refractive errors. It is a pity, that though WHO has recognized vitamin A deficiency as "one of the major preventable causes of blindness" for over a decade, it is far from having been controlled. This paradoxical situation appears to be the result of such factors as public ignorance, lack of nutrition, education, failure to suspect the disease at an early stage

Abraham, V., (2003) [2]

NEED FOR STUDY:

The vast bulk of India's children continue to be in a sub standard state of health and nutrition. These children grow into adults of tomorrow with varying degrees of physical stamina and productivity. Good nutrition is essential for maintaining life. The objectives of good nutrition for children are to promote optimal growth and development to prevent nutritional deficiency states and help to prevent acute and chronic illness.

Milwanker,N., (2002) [49] vitamin A deficiency is most often associated with protein calorie malnutrition and affect over 120 million children world wide. It is also a leading cause of childhood blindness.

WHO, (2001) [66] reported that Vitamin A deficiency exist as a problem of public health significance in varying degrees in 158 countries. The highest prevalence of clinical vitamin A deficiency occurs in Africa and South East Asia has the highest number of children affected clinical vitamin A deficiency involving signs and symptoms of eye damage and xeropathalmia affects 3 million children globally. It is estimated that 140-250 million children under 5 years of age are at risk of sub clinical Vitamin A deficiency. They showed that none of the ocular signs or symptoms but have a markedly increased risk of illness.

Vitamin A deficiency causes blindness 250,000 to 500,000 children and is a major factor contributes to 1 to 3 million child death.

Davidson,L., (2004) [38] Visual impairment is a common problem during childhood. In the United States the prevalence of blindness and serious visual impairment in pediatric population is estimated at 30 to 64 children per 100,000 populations. Another 400 children per 100,000 have less serious impairment. How well a child vision affects learning process, social development, coordination, and safety. One in 1,000 children of school age has serious vision impairment.

Mihora,V et.al., (2004) [50] conducted a study to evaluate children 6 years old and younger, lactating mothers, and women of childbearing age for vitamin A deficiency in the districts of Kabul City, Afghanistan. Randomly selected patients in all 13 districts of the city limits were examined between August and September 2000 for ocular signs of vitamin A deficiency. The results showed that Night blindness, Bitot's spot, corneal ulceration, and corneal scars were seen in increased amounts as defined by the World Health Organization among the sampled population. The study concluded that Vitamin A deficiency is a moderate to severe public health problem in children and lactating mothers.

Khan, M et.al., (2005) [44] conducted a study to 154 cases of clinical vitamin A deficiency in Pakistani children. The results showed that the data on age, sex, date of presentation and clinical stage of vitamin A deficiency was recorded. A total of 154 children aged 0-15 years suffering from clinical vitamin A deficiency (xerophthalmia) were recorded. One hundred and twenty three (79.9%) children were 0-6 years with 99 (64.3%) male children. Blinding xerophthalmia (corneal xerosis and keratomalacia) was present in 94 (61%) children. The study concluded that this report indicates the clinical cases of vitamin A deficiency in children.

Moorthy,G., (2000) [51] In India 5.1%school children had a visual acuity of <6/12 in the better eye. In Botswana a survey of children in schools and community showed that 1.5%of children aged 5-15 years had a visual acuity of <6/18 in the better eye due to refractive error.

Chowdhury,R ., (2002) [35] According to WHO reports more than half a million children become blind every year due to lack of vitamin A. In India about 40,000 children are visually handicapped due to keratomalacia, on an average one child is going to blind every 14minutes due to vitamin A deficiency.

Swami, R et.al., (2001) [61] Vitamin A deficiency is an important public health problem in approximately 118 countries including India. It contributes about 2 percentages of cases of total blindness in the country which is preventable. According to an estimate in 30,000 to 40,000 children may lose their eye sight due to vitamin A deficiency. In India each year with another 50,000 to 1,00,000 becoming partially blind nearly eight percentage of the children in India show an apparent occular sign and symptoms of xeropthalmia. A recent estimation of the magnitude of the problem world wide reveals that 25 to 50 million children may be suffering from physiological consequences of vitamin A deficiency with 0.5 million of them developing xeropthalmia annually.

Gogate, P et.al., (2009) [42] Conducted a study to determine the causes of severe visual impairment and blindness children in schools for the blind in southern Karnataka state of India. Children's are aged 16 years of age selected as samples. The results showed that a total of 1,179 students were examined, 891 of whom fulfilled the eligibility criteria. Corneal conditions (mainly scarring due to vitamin A deficiency, measles, trauma) (133, 14.9%), cataract in 102 (11.4%), and retinal disorders (mainly dystrophies) in 177 children (19.9%). Nearly one-fourth of children were blind from conditions which could have

been prevented or treated (27.8%), 87 of whom were referred for surgery. Low vision devices improved near acuity in 27 children (3%), and 43 (4.8%) benefited from refraction. The study concluded that congenital anomalies, cataract, and retinal conditions account for most of the blindness in children.

Prakash,B et.al.,(2003) [55] conducted a study on vision screening programme for primary school children in Madhya Pradesh reported that out of 1000 children, 656 children had refractive errors, our of the 471 had myopia, 161 had hyper Metropia and 21 had high hyper Metropia.

Nirmalan, P et .al .,(2002) [53] conducted a study on 24 focus group discussions for parents and grandparents as part of a population-based survey of ocular morbidity to determine awareness and perceptions of eye diseases in children among parents and guardians of children in a rural south Indian population in Madurai. Focus group discussions were conducted separately for mothers, fathers and grandparents. They were audio taped and subsequently transcribed to the local language and English. Content analysis of the focus group discussions was done to identify key concepts, and this yielded five broad areas of interest relating to awareness and attitudes towards: 1) eye problems in children, 2) specific eye diseases in children, 3) vision problems in

children, 4) existing health practices, and Vision impairment did not figure in the top ten eye problems cited for children. There was a predominant belief that children below 4 years should not wear spectacles. The discussions also brought out that eye doctors were approached last for eye care, after traditional healers and general physicians. The discussions raise several issues of relevance that eye care programs need to address for better community involvement with programs.

EYE SCREENING FOR SCHOOL CHILDREN (2007)

	Madurai	**Theni**	**Tirunelveli**	**Coimbatore**	**Puducherry**	**Total**
Schools covered	23	9	16	20	26	94
Teachers trained	27	46	158	45	90	366
Students screened	50608	6765	18985	25097	17457	118912
Students with defects	3159	405	1503	1647	1354	8068

In addition, during clinical experience the investigator,, have attended many eye camps most of the children have near sightness and long sightness due to eye disorders. They have complained about difficulty in reading, head ache, dizziness. This was happened due to lack of knowledge and practice regarding eye disorders. This made investigator to create an awareness regarding eye disorders among adolescent children.The investigators felt that there is a need of structured teaching programme which impart the knowledge and practice and prevention of eye disorders to the school children.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching program regarding eye disorders in terms of knowledge and practice among adolescent children in selected schools, Dharapuram, Tiruppur District.

OBJECTIVES

1. To assess the Pretest knowledge and practice regarding eye disorders among adolescent children.
2. To assess the Post test knowledge and practice regarding eye disorders among adolescent children.
3. To compare the Pre test and Post test level of Knowledge and practice scores regarding eye disorders among adolescent children.
4. To correlate the posttest knowledge and practice scores regarding eye disorders among adolescent children.
5. To find the association between Post test knowledge scores regarding eye disorders among adolescent children with their selected demographic variables.
6. To find the association between Post test practice scores regarding eye disorders among adolescent children with their selected demographic variables.

0PERATIONAL DEFINITION

Effectiveness

It means producing an intended result. In this study it refers to determine the extent to which structured teaching program has achieved the desired effect in improving the knowledge and practice regarding eye disorders by using statistical measurement.

STRUCTURED TEACHING PROGRAMME :-

It is a planned series of information to educate group of people. In this study it refers to a structured set of information provided in sequence by researcher to spread knowledge to adolescent children regarding eye disorders using a compact disc with laptop for a period of 45 minutes. It includes vitamin A deficiency disorders and Refractive errors, definition, types, clinical features, treatment and preventive measures.

EYE DISORDERS

It is an impairement of health, or condition of abnormal functioning of the eye.

a) Night Blindness

Lack of vitamin A first causes night blindness or inability to see in dim light.

b) Bitot's Spots

Bitot's spots are triangular pearly white or yellowish foamy spots on the bulbar conjunction on either side of the cornea.

c) Conjunctival Xerosis

This is the 1st clinical sign of vitamin A deficiency. Conjunctiva appears muddy and wrinkled.

d. Keratomalacia

Keratomalacia or liquefaction of the cornea is a grave medical emergency.

e. Myopia

Short sight. The images are brought to focus infront of the retina.

h. Hyperopia

Long sight. Eye ball is too short for the power of the lens and cornea

KNOWLEDGE

Information gained through experience or education. In this study it refers to the written response of understanding of adolescent children about eye disorders, which is measured by self administered knowledge questionnaire and its scores.

PRACTICE

It means way of doing something. In this study knowledge on practice refers to the written response of the activities performed by the children regarding eye disorders which is measured by Dichotomonous questionnaire.

ADOLESCENTS

The period between puberty and attainment of complete growth and maturity. In this study it refers to the children studying in 9th standard between the ages of 14-16 years.

HYPOTHESES

H_1: The mean post test knowledge scores is significantly higher than the mean pretest knowledge scores regarding eye disorders.

H_2: The mean post test practice scores are significantly higher than the mean pretest practice scores regarding eye disorders.

H_3: There will be a significant correlation between post test knowledge and practice scores regarding selected eye disorders.

H_4: There will be a significant association between post test knowledge scores with their selected demographic variables among adolescent children.

H_5: There will be a significant association between post test practice scores with their selected demographic variables among adolescent children.

ASSUMPTION

1. The adolescent children may have some knowledge regarding selected eye disorders.
2. Teaching enhances the knowledge and practice regarding eye disorders among adolescent children.
3. Adequate knowledge my help the adolescent children to overcome from eye disorders

DELIMITATION

The study is delimited to :

- The adolescent children studying in 9th standard.
- Data collection period 4 weeks.

PROJECTED OUTCOME

The Structured teaching programme will improve the knowledge among adolescent children regarding eye disorders which will help them to gain knowledge, disseminate the knowledge to others, and identify the problems earlier for appropriate treatment and prevent the complications due to eye disorders.

CONCEPTUAL FRAMEWORK

Conceptual framework helps to express abstract ideas in a more reality understandable or precise form of the original conceptualization. The conceptual framework for this study was direction from Wieden Bach's helping art of clinical nursing theory (1969).

According to Ernestine Wieden Bach (1969) nursing is nurturing and caring for someone in a motherly fashion. Nursing is a helping service that is rendered with compassion, skill and understanding to those in need for care, counsel and confidence in the area of health. The practice of nursing comprises a wide variety of services each directed toward the attainment of one of its three components.

Step I : Identification of a need for help.

Step III : Ministration of help needed.

Step II : Validation that need for help was met.

CENTRAL PURPOSE:

According to the theorist the nurse's central purpose defines the quality of health she desires to effect or sustain in her patient and specifies what she recognizes to be her special responsibility in caring for the patient.

In this study the central purpose is to gain knowledge and practice regarding eye disorders through structured teaching programme.

STEP I- Identification of a need for help:

According to the theorist within the identifying component there are four distinct steps. First the nurse observes the patient, looking for an inconsistency between the expected behaviour of the patient and the apparent behaviour. Second she attempts to clarify what the inconsistency means. Third she determines the cause of the inconsistency. Finally she validates with the patient that her help is needed.

In this study the general information which comprises the age, sex,type of family,diet pattern,resistance,and presence of eye disorders, In this study the adolescent children are identified based on the

inclusion criteria, stratifird random sampling technique was used to assign the adolescent children.

STEP II: Ministration of the needed help

According to the theorist in ministering to the patient the nurse may give advice or information, make a referral, apply a comfort measures or carry out a therapeutic procedures. The nurse will need to identify the cause and if necessary make an adjustment in the plan of action.

Ministration of the help needed has two components

- Prescription
- Realities

❖ PRESCRIPTION:

According to the theorist a prescription is directive to activity. It specifies both the nature of the action that will most likely lead to fulfillment of the nurse's central purpose and the thinking process that determines it.

In this study prescription is plan of care to achieve the purpose which includes developing and validating of structured teaching

programme of knowledge and practice regarding eye disorders by using laptop with compact disc for 45 minutes.

❖ REALITIES

According to the theorist the realities of the situation in which the nurse is to provide nursing care. Realities consist of all factors -physical, physiological, emotional and spiritual that are at play in a situation in which nursing actions occur at any given moment. Wiedenbach's defines the five realities as the agent, the recipient, the goal, the means and the framework.

- **AGENT:**

According to the theorist, the agent is the practicing nurse or her delegate is characterized by personal attribute capacities, capabilities and most importantly commitment and competence in nursing. In this study the investigator is the agent.

- **RECIPIENT:**

According to the theorist the recipient is the patient, is characterized by the personal attributes, problem, capabilities, aspirations and most important the ability to cope with the concerns or problems being experienced. In this study the recipients are adolescent children.Who are studying 9th standard.

- **GOAL:**

According to the theorist the goal is the desired outcome the nurse wishes to achieve. The goal is the end result to be attained by nursing action. In this study it refers to gain knowledge and practice regarding eye disorders among adolescent children through structured teaching programme.

- **MEANS:**

According to the theorist the means comprise the activities and devices through which the practitioner is enabled to attain her goal. The means include skills, Techniques, procedures and devices that may be used to facilitate nursing practice. In this study it refers to the implementation of structured teaching programme regarding eye disorders,by using compact disc with laptop for 45 minutes.

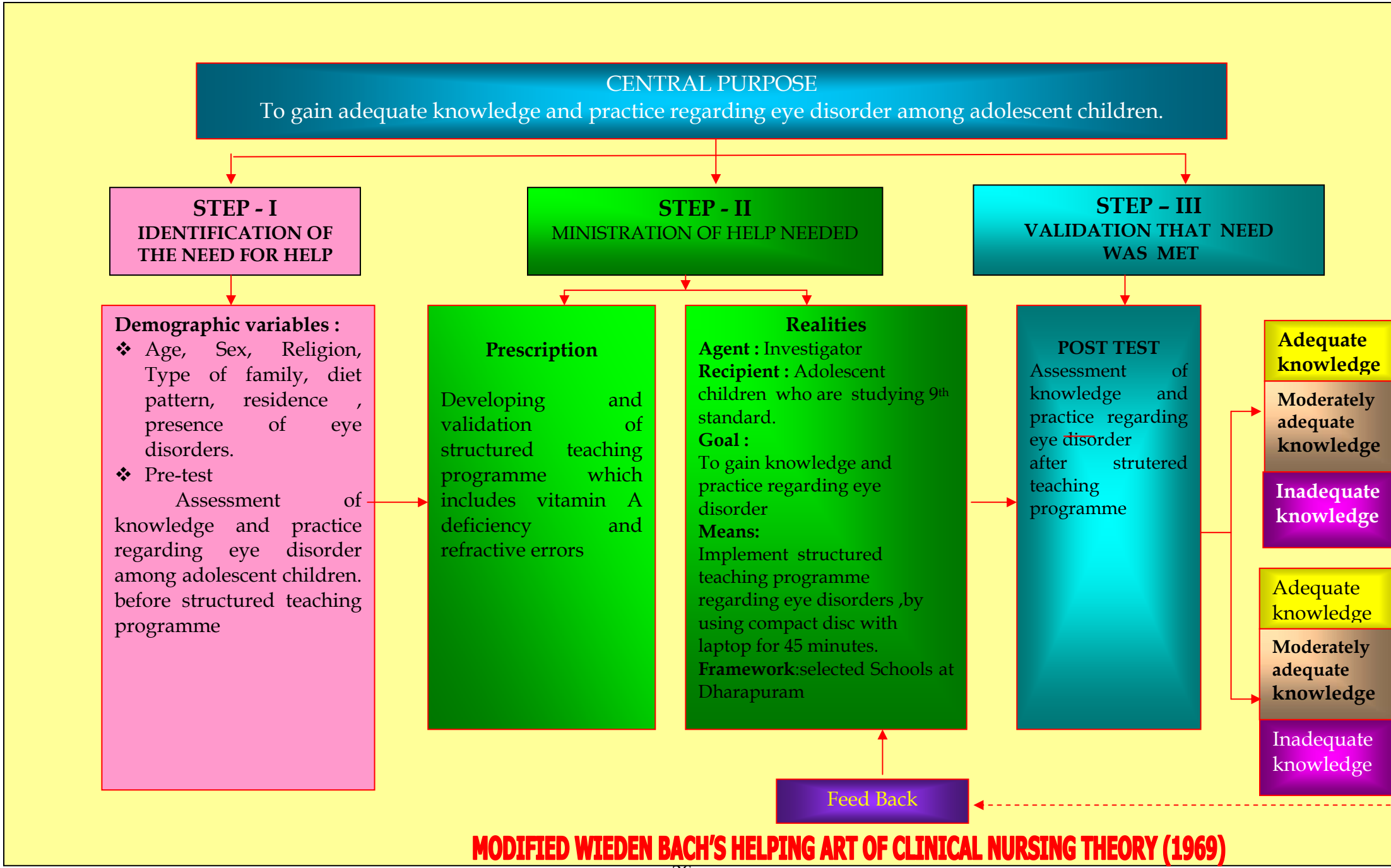
- **FRAMEWORK:**

According to the theorist the framework is consists of the human environmental, professional and organizational facilities that not only make up the context within which nursing is practiced but also constitute is currently existing limits. In this study it refers selected schools at Dharapuram.

STEP:III Validation that need for help was met.

According to the theorist the third component is validating. After help has been ministered the nurse validates that the actions were indeed helpful. Evidence must come from the patient that the purpose of the nursing actions has been fulfilled.

In this study the validating need for help was met by means of post test assessment of knowledge and practice regarding eye disorders after structured teaching programme.


CENTRAL PURPOSE
To gain adequate knowledge and practice regarding eye disorder among adolescent children.
STEP - I
IDENTIFICATION OF THE NEED FOR HELP
STEP - II
MINISTRATION OF HELP NEEDED
STEP – III
VALIDATION THAT NEED WAS MET
Demographic variables :
Age, Sex, Religion, Type of family, diet pattern, residence , presence of eye disorders.
Pre-test
Assessment of knowledge and practice regarding eye disorder among adolescent children. before structured teaching programme
Prescription
Developing and validation of structured teaching programme which includes vitamin A deficiency and refractive errors
Realities
Agent : Investigator
Recipient : Adolescent children who are studying 9th standard.
Goal :
To gain knowledge and practice regarding eye disorder
Means:
Implement structured teaching programme regarding eye disorders ,by using compact disc with laptop for 45 minutes.
Framework:selected Schools at Dharapuram
POST TEST
Assessment of knowledge and practice regarding eye disorder after strutered teaching programme
Adequate knowledge
Moderately adequate knowledge
Inadequate knowledge
Adequate knowledge
Moderately adequate knowledge
Inadequate knowledge
Feed Back
MODIFIED WIEDEN BACH'S HELPING ART OF CLINICAL NURSING THEORY (1969)

CHAPTER – II

REVIEW OF LITERATURE

Review of literature for present study aimed at identifying eye disorders prevalent among school children and its management. The literature available on the subjects in the filed of nursing is limits of the relevance literature under the following headings.

Part 1:

Over view about the vitamin A deficiency and refractive errors.

Part 2 :

A: Studies related to eye disorder.

B: Studies related to vitamin A deficiency.

C: Studies related to refractive errors.

D: Studies related to structured teaching programme regarding eye disorder.

PART 1:

OVER VIEW ABOUT THE VITAMIN A DEFICIENCY AND REFRACTIVE ERRORS.

INTRODUCTION

Vitamin A deficiency result in blinding several hundred thousand children a year. It is now recognized not only to harm the eye but also to increase childhood and maternal mortality. Globally 21% of children have vitamin a deficiency and suffer increased rates of death from diarrhea, measles and malaria. About 800,000 deaths in children and women of reproductive age are attributable to vitamin A deficiency which, along with the direct effects on eye disease account for 1.8% of global DALYs (disability adjusted life years). This appear to be lower than previous estimates possibly because of vitamin supplementation or for fortification programs during the last decade.

Swami, R et.al.,(2003)

TYPES

Vitamins are divided in to two groups

1) Fat soluble vitamins eg –A,D,E,K.

2) Water soluble vitamins eg –vit B and C

CAUSES

1. In adequate diet

- Delayed supplementary feeding
- Lack of foods containing vitamin A

2. Poverty

- Low purchasing power
- In accessible village

3. Ignorance

- Traditional beliefs and ignorance prevents the utilization of available resources.
- Excluding of vitamin A rich foods like green leafy vegetables and papaya to children and pregnant women.
- Low literacy

4. Infections

- Diarrhoea and respiratory tract infection ,impaired the appetite
- Food intake will be reduced
- Infections, infestations interfere with the absorption of vitamin A deficiencies.

Swaminathan ,M.,(2002)

FUNCTIONS OF VITAMIN A

- Essential for maintenance and function of body tissue.
- It is necessary for vision
- It contributes the production of retinal pigments.
- It supports especially skeletal growth
- It is anti-infective

SIGNS AND SYMPTOMS

CONJUNCTIVAL XEROSIS:

- This is a first clinical sign of vitamin A deficiency.
- Conjunctiva becomes dry and non wetable.
- Instead of looking smooth and shiny it appears muddy and wrinkled

BITOTS SPOTS

- Bitots spots are triangular pearly white or yellowish, fomy spots on the bulbar conjunctiva on the either side of the cornea.
- Frequent bilateral

CORNEAL XEROSIS

- This stage is particularly serious

- The cornea appears dull, dry, and not wettable and eventually opaque.
- It does not have a moist appearance
- In more severe deficiency there may be corneal ulceration

KERATOMALACIA

- The cornea may become soft and may burst open.
- Process is rapid
- If the eye collapses, vision is lost

NIGHT BLINDNESS

- Inability to see in dim light.
- Unless vitamin A intake is increased, the condition may get worse, especially may get worse, especially when children also suffer from diarrhoea and other infections.

Park,K.,(2007)

TREATMENT

- Should be tested urgently
- Administration of a massive dose 200,000 IU or 110 mg of retinal palmitate
- It should be orally on two successive days.

- 50,000 IU in children with age group of below 6 months
- One lakh of IU in children with age group of 6 to 12 month
- 2 lakh IU in children aged >1year

Swaminathan,M.,(2002)

AVAILABLE PLACES FOR VITAMIN A ORAL SOLUTION

- Government hospital
- Meternity centre
- Primary health center
- Subcenter
- District hospital
- Private hospital
- Interval between 6 month to 6 year

Mahajan,D., (2000)

PREVENTION OF VITAMIN A DEFICIENCY

- Prompting consumption of vitamin A rich foods
- Regular dietary intake of vitamin A rich foods by pregnant and lactating mother
- Breast feeding including feeding of colestrum must be encouraged.

- Feeding of locally available B carotene rich food such as green leafy vegetables,yellow and orange vegetables and fruits .

Park, K., (2007)

REFRACTIVE ERROR

A Refractive error is an optical defect of the eye that prevents light from being brought to a sharp focus by the cornea and lens on to the retina. Varying degrees of decreased vision visual disability or blindness result from refractive error depending on the type and severity.

Hockenberry(2007)

TYPES

Myopia

The image is brought to focus infront of the retina. The eye ball is too long for the refractive power of the lens and the cornea. Myopia is corrected with concave or minus lenses

Hyperopia

People say 'farsighted'because they have good vision at distance,but poor vision at near.In hyperopia the eye ball is too short for the power of the lence and cornea. Hyperopia is corrected with convex or plus lenses.

Refractive errors are described in diabters as follows:

1. The refractive error of myopic eyes is given in minus(-) diapter,because concave or minus lenses are required for correction of myopia
2. The refractive errors of hyperopia eyes is expressed in plus(+)diapter,because convex or plus lenses are required to correct hyperopia.

Nikki L pots(2007)

SPECIAL CONSIDERATION

Spectacles are readily available and even small refractive errors are often corrected with eye glasses. People who cannot afford to purchase commercially produced spectacles optical correction can be provided. Service clubs such as lions club, and rotary clubs collect un used and second hand spectacles for donation and free distribution to indigent patients.

Marlow,R.,(1998)

PART -11

A) STUDIES RELATED TO EYE DISORDERS AMONG CHILDREN

Jialiang, z et.al., (2000) [12] studies refractive error in children aged 5- 15 years in china reported that,A total of 6,134 children from 4,338 household were enumerated and 5,884 children (95.9%)were examined. The prevalence of uncorrected,presenting and best visual acquity of 0.5 %or worse in atleast one eye was 12.8%,10.9%and 1.8% respectively 0.4%had best visual acquity 0.5 or worse in both eyes. Refractive error was the cause in 87.5%of the 1.236 eyes with reduced vision.

Asphat, T et .al., (2000) [4] A comprehensive survey was carried out to assess the vitamin A status of (0-17 years)children of socio economically back ground families from slums of Bombay and its sub urban. The vitamin A , protein and iron from the rice and dhal based diet was found to be below recommended dietary allowances. Among the 1956 children surveyed 20%of the children showed low serum vitamin A levels 4-8 %of the children were suffering from one of the other signs of vitamin A deficiency.

B) STUDIES RELATED TO VITAMIN A DEFICIENCY

Mathenge,S et.al.,(2007) [52] conducted a study on vitamin A deficiency disorders in adult male prisoners**.** The aim of study was to estimate the prevalence and causes of vitamin A deficiency disorders.The study was conducted at nakuru Kenya.It was a randomized study.Two hundred and forty one cases with xeropthalmia and 448controls randomly selected from the remaining prisons populations were interviewed about risk factors for xeropthalmia and blood samples were taken to measure serum retinol and heamoglobin. Results showed that 23.6% (95%- (I =21.1-26.31%) of examined inmate showed at least one sign of xerophthalmia. Mostly night blindness 98.8% of cases. The study concluded that Vitamin A deficiency was a significant public health problem among these Kenyan male prison indicating may be important vulnerable groups other than young children and pregnant women.

Singh, V et .al., (2004) [60] conducted study on vitamin A deficiency and xerophthalmia among school aged children. The aim of the study to determine provisional estimates of the extent of vitamin A deficiency and xerophthalmia. The Design of the study was , literature search of published unpublished and website based population survey, and study reports with country specific imputation of

prevalence rates and numbers of children affected by 1) vitamin A deficiency 2) xerophthalmia. Settings was used the countries with in the WHO south East Asian region. The subject are 5 -15 years of age .Results showed that the estimated prevalence of vitamin A deficiency is 23.4% of 10.9% have mild xeropthalmia (night blindness or bitot's spots) This study concluded that vitamin A deficiency including mild xerophthalmia appears to affect large numbers of school – aged children in south – east Asia.

Wednerst, D et.al.,(2003) [67] conducted study to assess the validation of night blindness reports among children. The aim of the study validates different definitions of reported night blindness in a vitamin A deficiency. This study was conducted at different population in rural Tanzania. Design was used case- control study with follow up after treatment settings used eight primary school and health centers in rural Tanzania. Subjects of this study A total of 1214 participants were screened for reported night blindness and other eye signs of xerophthalmia 9,461 children aged 24 – 71 months 562 primary school age children and 191 pregnant or breast feeding women. The result showed that the over all prevalence of reported night blind ness was 12.5% at base line mean pupillary threshold (-1.52Vs-1555 log

d/m(2).P=0.501) .This study concluded that night blindness are a poor indicator of vitamin A deficiency in this population.

Czeptita, D et.al., (2002) [37] conducted study on the influence of low birth weight on the prevalence of refractive errors among school children. The aim of the study was to determine in a large population whether low birth weight has an influence on the prevalence of refractive errors among school children. The samples are used 3603 school children were examined Data analysis was performed using chi-square test P value of test than 0.05 were considered statistically significant. The results showed that the hyperopia was observed more frequently in 6-14 year old children whose birth weight was 2500 grams. This study concluded that the low birth weight may have an effect of the prevalence of refractive errors among school children.

Kartha, C et. al., (2000) [45] A Descriptive study to assess the impact of national vitamin A supplementation programme among 3143 children using simple random method. Overall prevalence of xeropthalmia was 17.25%.The prevalence was significantly higher (27.6%)in children who did not receive vitamin A supplements than those who received (6.48%)at P<0.001 level significance. Similarly the prevalence rates were higher (41.02%)in poor programme coverage areas than areas with better coverage. Prevalence of night blindness,

bitots spots and corneal xerosis were also higher than the WHO standards.

Tarik,K., (2000) [63] Conducted a descriptive study to determine the prevalence of vitamin A deficiency among 824 children aged 6-16 years using random sampling in northern India. A questionnaire was administered at home to mothers or female care givers in order to collect demographic and children studied and on socio economic and environmental factors of relevance to the households of the 824 children,48 had clinical signs of xeropthalmia. Most of them exhibited bitots spots and a few had conjunctival xerosis, corneal lesions, none had corneal scars. Girls had significantly lower liver vitamin A reserves than boys (P<0.004).

WHO,(2000) [66] states that a randomized controlled trial carried out in northern of sumatra provided a high dose of vitamin A supplement given to 12 to 20 years old children every six months in 229 villages(treated)and a supplement given only to those diagnosed with xeropthalmia in 221 villages(control).The impact of vitamin A supplementation on mortality was found to be significant in children 12 to 20 years of age 34% effectiveness of supplementation (RR=0.66, CI=0.44, 0.97) and on the prevalence of xeropthalmia decline from 1.9% to 0.3% in treated villages and 2.3%to 1.2% in control villages.

C) STUDIES RELATED TO KNOWLEDGE REGARDING REFRACTIVE ERRORS.

Uzma, N et.al.,(2009) [64] conducted a study to assess the prevalence of refractive error and common ocular diseases in school-aged children in urban and rural populations in and around Hyderabad, India. It was a cross-sectional study. A total of 3314 school children, 1789 from urban areas and 1525 from rural areas. The study results showed that myopia measured with auto refraction was observed in 51.4% of urban children and 16.7% in rural children. Hyperopia with auto refraction was found to be 3.3% in the urban and 3.1% in the rural group. Hyperopia was associated with younger age in the study group. Night blindness was reported in 3.2% of children in the rural group and 0.33% in the urban group. The study concluded that provision of health education, periodic visual screening programs, and primary eye care by trained health care personnel in the elementary schools will prevent the prevalence of refractive errors and common ocular diseases in school children.

Congdo,N et.al.,(2008) [36] conducted study on prevalence and determinants of spectacle non wear among rural secondary school children. The aim of the study spectacle wear among rural children. The study was conducted at Chinese among secondary school children.

Methods used visual acuity refraction, spectacle wear, and visual function were measured. Results showed that among 1892 subjects (84.7% of the sample, the mean age was 14.7 (0.8) years. Among 580 children 1 +9% did not wear them at school 476 children 25 %could not improve their visual acuity to better than 6/12 refractive errors of 2.06 (1.15) diopter (D) and 2.78 (1.32) A common reason for non wear (17.0%) was the belief that spectacles weaken the eyes. This study Concluded that half of the children could benefit from spectacle wear 62.3% were not wearing appropriate correction. These children have significant uncorrected refractive errors.

Sapkotu, D et.al., (2008)[59] Conducted study on the prevalence of visual impairment in school children**.** The aim of this study to assess visual impairment in school children. It was a randomized study. Study conducted on 43 schools in kathmand for comparison with rural jhapa district. Result showed that a total of 4.50%.children in grades 5-9 were enumerated. 4282 were examined. The prevalence of uncorrected, presenting and best – corrected visual impairment (< or = 20/40 better eye 18.6% rerfractive errors was a cause in 93.3% of children with uncorrected visual impairment. This study Conclude that visual impairment with myopic a among upper- middle socio economic school children in kathmant is higher than that in rural Nepal.

Adeoti,A et.al., (2008) [33] condcted study on refractive errors among hospital patients. The aim of the study to determine the magnitude and pattern of refractive errors in order to provide facilities for its management. It was a prospective study. The study was conducted at Mercyl and specialist hospital western Nigeria. The data was analyses using statistical package for social sciences 11.0 version .The Result showed that refractive errors was found in 1824 (53%7) patients there were 832 (45.61) males and 992 (54.39%) female with a mean age of 35.55 myopia was commonest – 1412 (39.21%) eyes hypermetropia 840 (23.33% eyes).This study concluded that refractive errors is common in this environment.

Robaei,I et.al., (2008) [57] conducted study on prevalence of hyperopia and association with eye findings in 6-12 years old. The aim of the study to describe the prevalence of hyperopia. It was a cross sectional study. The study was conducted at Sydney among 6 and 12 year children. The randomly selected samples. The result showed that prevalence of moderate hyperopic among children 6 and 12 were 13.2% and 5.% respectively.This study concluded that moderate hyperopia was strongly associated with many common eye condition .

Ackinct, A et. al., (2008) [32] conducted study on the correlation between head ache and refractive errors among children. The aim of the study to compare the prevalence of refractive errors in patients with headache and a control population. It was a retrospective study. The study was conducted at children hospitals turkey. The two test was done chi square and student t-test were used. The result showed that total prevalence of refractive errors was higher in the headache group ($p=0.002$) the rate of astigmatism was higher in the head ache (<0.0001) while that of myopia and hyperopia were similar in both groups.

Prema raju .K.,(2007)[56] conducted study on prevalence of refractive errors in rural south India. It was population based study. Association of refractive errors with age, sex, eye disorders were analysed. The result shows that 3924 responders. 2508 were eligible. Myopia (<0.50), high myopia (>0.50) were 50.60%, 26.99%, 3.71% and 18.70% and age and gender adjusted for the rural Tamilnadu population were 46.77%, 30.97%, 4.32%, and 17.94%, respectively. The prevalence of myopia and high myopia increased significantly with age ($p<0.001$) the study concluded that the refractive errors in this rural south Indian population is similar to those reported in other tropical regions of the world.

Ustianowska ,R et.al., (2007) [65] conducted study on the prevalence of refractive errors in school children 6 to 18 years of age. The aim of the study prevalence of myopia, hyperopia and astigmatism in school children. methods used for this study 5724children from elementary schools. Junior high schools and high schools were examined. [2765 boys and 295 a girls. Aged 6 – 18 years. The statistical analysis of data was performed by calculating the linear correlation coefficient and the coefficients for the regression equation. Results showed that 13% students in the age group of 6 to 18 were myopia 38% - students were hyperopia, 4% were astigmatic. This study concluded that positive correlation was found between the prevalence of myopia and age (P <0.001) as well as in negative correlation between prevalence of hypropia and age (P<0.001).

Nitm,U et.al., (2007) [54] conducted study on prevalence of refractive error and other eye diseases in school children. The aim of study to determine the prevalence of refractive error and other eye diseases .The study was conducted at accra region of Ghana in school children. It was a randomized study. The Result showed that 957 students aged 6 to 22 years were screened 67 had myopia with visual acuity of 6/12 or were in the better eye. 3 were unilaterally blind and 4 had unilateral low vision from macular scar other eye disease as

observed were congenitual glacoma (1), verbal conjunctives (2), infective conjunctivitis (6) the prevalence of refractive error reducing vision to at least 6/12 was 7.0%This study .concluded that the most common eye defect in the students were refractive error.

Jeddi and blouzan, L et.al.,(2007) [43] conducted study on management of hyperopia in children. The aim of the study prevalence of hyperopia in school – aged children. Methods used to 300 eyes of 150 children with hyperopia were selected. The mann_whitney test and chi square test was done. The result showed that the mean age was 9.5+/-2.7 years) girls were statistically more represented than boys the mean sphere measured over all was +2D (+/-/.65) Severe hyperopia was detected in 19%of the children it was latent in 35% children .This study concluded that children with hyperopia of +3.5 D or greater have an increased risk of amblyopia and squint that their visual function.

Bhatt and janardan ,T et.al.,(2006) [34] conduced study on prevalence of refractive errors in children age group 7 to 15 yrs**.** The aim of the study to assess the prevalence of refractive error and related visual impairment. It was a .Randomized study. The Result showed that a total of 452 children form 500 households was enumerated, and 417 (92.3%) were examined. The prevalence of uncorrected, baseline (presenting), and best corrected visual acuity of 20/40 worse in the

better eye was 2.7%, 2.6% and 078% respectively. This study Concluded that Refractive error was the main cause of visual impairment in children aged between examination. Because visual impairment can have a significant impact on a child's life in terms of education and development, it is important that effective strategies be developed to eliminate this easily treated cause of visual impairment.

Ellwein, L et.al., (2002) [40] conducted a study to assess the prevalence of refractive error and related visual impairment in school-aged children in an urban population in New Delhi, India. The sampling technique was used to select as samples 5 to 15 years of school children were selected as a samples. Children in 22 selected clusters were enumerated through a door-to-door survey and examined . The results showed that total of 7008 children from 3426 households were enumerated, and 6447 (92.0%) examined. Refractive error was the cause in 81.7% of eyes with vision impairment. There was an age-related shift in refractive error from hyperopia in young children (15.6% in 5-year-olds) toward myopia in older children (10.8% in 15-year-olds). Overall, hyperopia was present in 7.7% of children and myopia in 7.4%. Hyperopia was associated with female gender. Myopia was more common in children of fathers with higher levels of education. The study concluded that reduced vision because of uncorrected refractive

error is a major public health problem in urban school-aged children in India

Arlappa,C et .al.,(2002) [34] conducted study on prevalence of clinical and sub clinical vitamin A deficiency among pre school children. The aim of the study to assess the prevalence of vitamin A deficiency among rural School children. It was a cross sectional study. The study was conducted at Madhya Pradesh India among pre school children. Multi stage stratified random sampling technique was used .A total of 16 strata were selected randomly from the state. A sub – sample of 80villages 5 village per stratum. sample size for children vitamin A deficiency assuming the prevalence of bitot's spots as 1% assuming the prevalence of sub clinical vitamin A deficiency among school children of 95% The data was analyzed by using statistical package for social science version 15.0 for windows Bi variate analysis was shows that the prevalence of bitot's spots (1.4%) was more than the public health significance the bitot's spots was significantly ($p<.001$).

Dandona, R et.al., (2002) [39] conducted a study to assess the prevalence, distribution, and demographic associations of refractive error in the population of the southern Indian state of Andhra Pradesh. A total of 10 293 people underwent an interview and detailed dilated eye examination. The study results showed that in the participants < or

= 15 years of age, the prevalence of myopia was 3.19% (95% confidence interval [CI] 2.24-4.13%) and of hyperopia was 62.62% (95% CI 57.10-68.13%). In this age group, myopia increased with increasing age and was more prevalent in the urban study area, and hyperopia prevalence was greater in the participants < 10 years of age. In participants > 15 years of age, the prevalence of myopia was 19.45% (95% CI 17.88-21.02%) and of hyperopia was 8.38% (95% CI 6.91-9.85%). The study concluded that there is significant refractive error in this population.

Ajaiyeoba.A et. al., (2001) [31] conducted study on use of bitot's spot in screening for vitamin A deficiency in Nigerian. It was a cross – sectional study. Using a two – stage stratified stratified cluster sampling method. A total of 290s children between 6 and 71 months of age were screened for xeropthalmia and vitamin A deficiency. The result showed that vitamin A deficiency was 25% 95% confidence interval 25-4 31.0% and severe retinal deficiency /dl or 0.35% and was 7.0% (9 5% confidence interval 5.5-8.8%)

Sethis, G., (2000) [59] conducted study on prevalence of refractive errors in school children. The Aim of the study to prevalence of refractive errors in school children (12-17 years) of The study conducted at Ahmedabad city among school children. It was a cross sectional study. The sample size 1647 school children which include 828 males

and 819 females. The chi square test was done The result shows that 25.32 percent of the students were found to be having refractive errors of these 47 percent were females and 53 percent were males. Myopia 63.5 % hypermetropia 11.2%.This study concluded that these data support the assumption that vision screening of school children in developing countries could be useful in detecting correctable causes of decreased vision especially refractive errors and in minimizing long term visual disability.

Maul, E et .al., (2000) [47] conducted a study to assess the prevalence of refractive errors in school-age children in a sub urban area (La Florida). Children in the 26 selected clusters. The results showed that a total of 6,998 children from 3,830 households were enumerated, and 5,303 children (75.8%) were examined. The study concluded that Refractive error, associated primarily with myopia, is a major cause of reduced vision in school-age children in La Florida. More than 7% of children could benefit from the provision of proper spectacles.

D) STUDIES RELATED TO STRUCTURED TEACHING PROGRAMME REGARDING EYE DISORDERS.

Anitha,R (2004) [60] conducted study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. It was a randomized study. The samples are used 60 adolescent school children were examined .The pretest was conducted by using multiple choice questions. Structured teaching programme was given to children with flashcards. The post test was conducted The result showed that the mean posttest knowledge of eye defect is 15.78(SD 3.74),Which was increased than the mean pretest knowledge score 6.5(SD 2.41) and the mean posttest practice score is 10.93(SD 2.6)Which was increased than the mean pretest score 5.5(SD 2.41) For knowledge 't' value is 21.74 ($p<0.05$),For practice 't' value is 21.6 ($p<0.05$)Which shows the over all gain in knowledge and practice were highly significant. There was not associated with demographic variables.

Chitra,N (2001) [61] conducted study an experimental study to assess the effectiveness of structured teaching programme on vitamin A to mothers with under five children sixty mothers with under five children were selected using stratified random sampling technique. The pretest was conducted by using multiple choice questionnaire. Structured teaching programme was given to the mothers with slide show. On the 8th day after structured teaching programme, the post test was conducted. In pre test 60 (100%mothers had inadequate knowledge on vitamin A in pre test. In post test 48 (80%) mothers had adequate knowledge.

CHAPTER III

METHODOLOGY

The chapter deals with the Methodology adopted for the study. It includes Research approach, Research Design, Setting, Sample and Sampling technique, tool and scoring procedure, pilot study, method of data collection Procedure and Plan for Data analysis.

RESEARCH APPROCH

The evaluative approach is used to assess the effectiveness of structured teaching programme on eye disorders in terms of knowledge and practice among adolescent children.

RESEARCH DESIGN

The Research design selected for this study was Quasi experimental design as the study fulfils the criteria such as randomization and manipulation, the investigator has selected the Quasi experimental design, which includes the pre test and post test

Group	Pre test	Intervention	Post test
1	RQ_1	X	Q_2

THE SYMBOLS USED

GROUP 1 : The adolescent children between the age group of 14-16 years.

RQ_1 : Collection of demographic data,Pre test was done by structured self administered Questionnaire and Dichotomonous questionnaires.

X : structured teaching programme by using compact disc with Laptop.

Q_2 : Collection of demographic data, Post test was done by structured self administered, Questionnaires and Dichotomonous questionnaires.

SETTING OF THE STUDY

A study was conducted in four selected Higher Secondary School at Dharapuram who are studying 9^{th} standard within the age group of 14-16 years of age**.** (St.Aloysious Girls Higher Secondary School with 5 sections, In each section having 60-70 students. C.S.I Girls Higher Secondary School with 3 sections, In each section having 40 students Vivegam higher secondary school with 5 sections , In each section having 50-55 students and, C.S.I Boys Higher secondary school with 2 sections. In each section having 40-50 students)

POPULATION

The target populations of the study are adolescent children.

SAMPLE

The samples consists of adolescent children, who are studying in 9th standard.

CRITERIA FOR SAMPLE SELECTION

INCLUSION CRITERIA

- The age group between 14-16 years.
- Tamil medium students.
- Both boys and girls
- Children who are willing to participate in this study.

EXCLUSION CRITERIA

- Students who are absent on the day of data collection period
- Sick children.

SAMPLE SIZE

The sample size comprised of 200 children, Who met inclusion criteria was selected as samples.

SAMPLING TECHINIQUE

The samples are selected by stratified randam sampling technique. In each schools 50 samples were selected. 200 samples were selected from 4 higher secondary schools by using the same method.

INSTRUMENT AND SCORING PROCEDURE

DESCRIPTION OF THE TOOL

The tool consists of 4 parts.

PART I

It deals with demographic variables such as age, sex, type of family, diet pattern, residence and presence of any eye disorders.

PART II

It consist of Structured self administered questionnaire, to assess the knowledge regarding eye disorder among adolescent children. It consists of 25 multiple choice questions with four options among which one is the correct answer.

PART III

It consists of dichotomous questionnaire, to assess the practice regarding eye disorders among adolescent children. It consists of 10

questions with alternative response of 'yes" or "no". It has 6 positive questions, and 4 negative questions

SCORING PROCEDURE AND INTERPRETATION

PART I– Self administered questionnaire

The multiple choice questions are used to assess the knowledge regarding eye disorder. i). Correct answer was given a score of (1) one and wrong answer was scored as (0) zero. The total score on knowledge was 25 the Scores were interpreted as follows

LEVEL OF KNOWLEDGE	SCORE	PERCENTAGE
Adequate Knowledge	19-25	67-100
Moderatly adequate knowledge	9-17	34 – 66
Inadequate knowledge	0-8	0-33

PART II: Self administered dichotomonous questionnaire is used to assess the practice regarding eye disorders.

It consists of 10 questions. There were 2 responses 'yes" or "no". A score of one (1) was allotted to the correct response and zero(0)to the wrong response. The total score on practice was 10 .The scores were interpreted as follows;

LEVEL OF PRACTICE	SCORE	PERCENTAGE
Adequate practice	7-10	67-100
Moderately adequate practice	4 -7	34 -66
In adequate practice	1-3	0-33

VALIDITY AND RELIABILITY OF THE TOOL

VALIDITY

The validity of the tool was established by consultation with guide, five experts in the field of child health nursing and one medical expert. The tool was modified according to the suggestions and recommendations of experts.

RELIABILITY

The reliability of the self administered knowledge questionnaire regarding eye disorders was established by the test re -test method, the Karl Pearson co –efficient formula was used to find out the stability of the tool and found to be reliable (r=0.90). The split half method, where the spearman's brown prophecy test was used to find out the internal consistency of the tool and found to be reliable (R=0.82).

The reliability of the Dichotomonous practice questionnaire regarding eye disorders was established by the test re test method, the Karl Pearson co –efficient formula was used to find out the stability of the tool and found to be reliable (r=0.8).The split half method, where the spearman's brown prophecy was used to find out the internal consistency of the tool and found to be reliable (R=0.9).

PILOT STUDY

The pilot study was conducted in government higher secondary school, Thalavaipattinam. Formal permission was obtained from the District educational officer and headmaster of the school. The data collection was done for a period of one week. 20 Children who fulfilled the inclusion criteria were chosen as samples. Stratified random sampling technique was used to allot the adolescent children. There were two stratum (two sections).The investigator selected 20 study subjects by using lottery method, from two stratums, ten in each section.The self introduction about the investigator and information of nature of the study was explained. Selected subjects were combined together to administer the pre test questionnaire. Samples were assembled as small group in the school and structured teaching

programme was given for 10 students regarding eye disorders by using compact disc with laptop for 45 minutes . The post test was conducted on 7th day from the last day of teaching using the same structured self administered questionnaire. The findings of the pilot study showed that the mean pre test score is 8.02 and post test knowledge score is (20.2). The mean pre test of practice score is 6.48 (and post test practice score is (13.4) so the post test score is significantly higher than the mean pre test score. The pilot study showed that it is feasible and practicable to proceed with main study.

DATA COLLECTION PROCEDURE :

The data collection was done in 4 higher secondary schools in Dharapuram. Formal approval was obtained from the District educational officer and Head masters of the schools. The data collection was done for a period of four weeks in the month of August. It was done an all week days. The four higher secondary schools were included in the study, 50 students were selected per school. The school children who fulfills the inclusion criteria were selected by stratified random sampling technique. Each section of 9th standard was considered as a single stratum. The investigator selected the study participants from each stratum (each section) by using lottery method. Self introduction about the investigator and information regarding

nature of the study was explained. Selected participants were combined together in class room to administer the pre test questionnaire. The investigator imparted the teaching on eye disorders for 40 to 45 minutes by using compact disc with laptop on 2nd 3rd day for 6-7 children. Evaluation of structured teaching programme was done by conducting post test on 7th day from the last day of teaching programme. The same procedure was followed for 3 schools to obtain data from 200 samples.

PLAN FOR DATA ANALYSIS

The collected data was tabulated and analyzed using descriptive and inferential statistical method.

S. No	Data Analysis	Methods	Remarks
1.	Descriptive statistics	Frequency percentage	To describe the demographic variables of adolescent children with eye disorder.
		Mean, Standard deviation	1. To assess the pre test and post test knowledge regarding eye disorders among adolescent children. 2. To assess the pre test and post test practice regarding eye disorders among adolescent children.
2.	Inferential statistics	Z – test	To compare the pre test and posttest level of knowledge and practice scores regarding eye disorders among adolescent children.
		Karl	To correlate the post test knowledge and

		pearson Correlation	practice score regarding eye disorders among adolescent children.
		Chi Square test	1. To association post test knowledge scores regarding eye disorders with selected demographic variables. 2. To association post test practice scores regarding eye disorders with selected demographic variables.

PROTECTION OF HUMAN SUBJECT

The research was conducted after the approval of the dissertation committee prior to conducting the pilot study and the main study. The written consent was obtained from the Educational officer, Headmasters of higher secondary schools. The written consent of each study subjects were obtained by explaining the purpose of the study before collecting the data. It is assured that confidentiality will be maintained through out the study.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of data collected from ninth standard adolescent children with their demographic variables.

The present study was designed to assess the effectiveness of structured teaching program regarding eye disorders in terms of knowledge and practice among adolescent children. The collected data was organized and interpreted by using descriptive and inferential statistics and data were analyzed as per objectives of the study ..

ORGANIZATION OF DATA

The data has been tabulated and organized as follows:

Section A: Distribution of demographic variables.

Section B: Comparison between pre test and post test knowledge and practice score regarding eye disorders among adolescent children.

Section C: Correlation of posttest knowledge and practice scores regarding eye disorders among adolescent children.

Section D: Association between Post test knowledge scores regarding eye disorders among adolescent children with their selected demographic variables.

: Association between Post test practice scores regarding eye disorders among adolescent children with their selected demographic variables.

SECTION – A : DISTRIBUTION OF DEMOGRAPHIC VARIABLES AMONG ADOLESCENT CHILDREN

Table 1: Frequency and percentage of demographic variables of adolescent children.

N=200

S. No	Demographic variables	Frequency (f)	Percentage (%)
1.	**Age**		
	a) 14 years	102	51
	b) 15 years	70	35
	c) 16 years	28	14
2.	**Sex**		
	a) male	97	48.5
	b) female	103	51.5
3.	**Diet pattern**		
	a) Vegetarian	39	19.5
	b) Non vegetarian	161	80.5
4.	**Types of family**		
	a) joint	29	14.5
	b) nuclear	171	85.5
5.	**Area of resident**		
	a) Urban	124	62
	b) Rural	76	38
6.	**Presence of Eye disorder**		
	a)Yes	22	11
	b)No	178	89

Table 1 Showed that the distribution of demographic variables age, sex, type of family, diet pattern, area of residence and presence of eye disorders.

The school children who belonged to the age group of 14 years were 102(51%), 70 (35.%) children were belonged to 15 years,28 and (14%) children were belonged to 16years. (Fig 2)

With regard to sex, 97 (48.5%) male and 103 (51.5%) female school children were distributed. (Fig 3)

With regard to Diet pattern, 61 (80.5%) children were belonged to non vegetarian 39 (19.5%) children were vegetarian. (Fig 4)

With regard to type of family, 171 (85.5%) children were in nuclear family, and 29 (14.5%) children were in joint family. (Fig 5)

With regard to area of residence 124 (62%) children were from urban area, and 76 (38%) children were from rural area, (Fig 6)

According to their eye disorders 178 (89%) children have no eye disorders,and children were presence of eye disorder 22 (11%). (Fig 7)

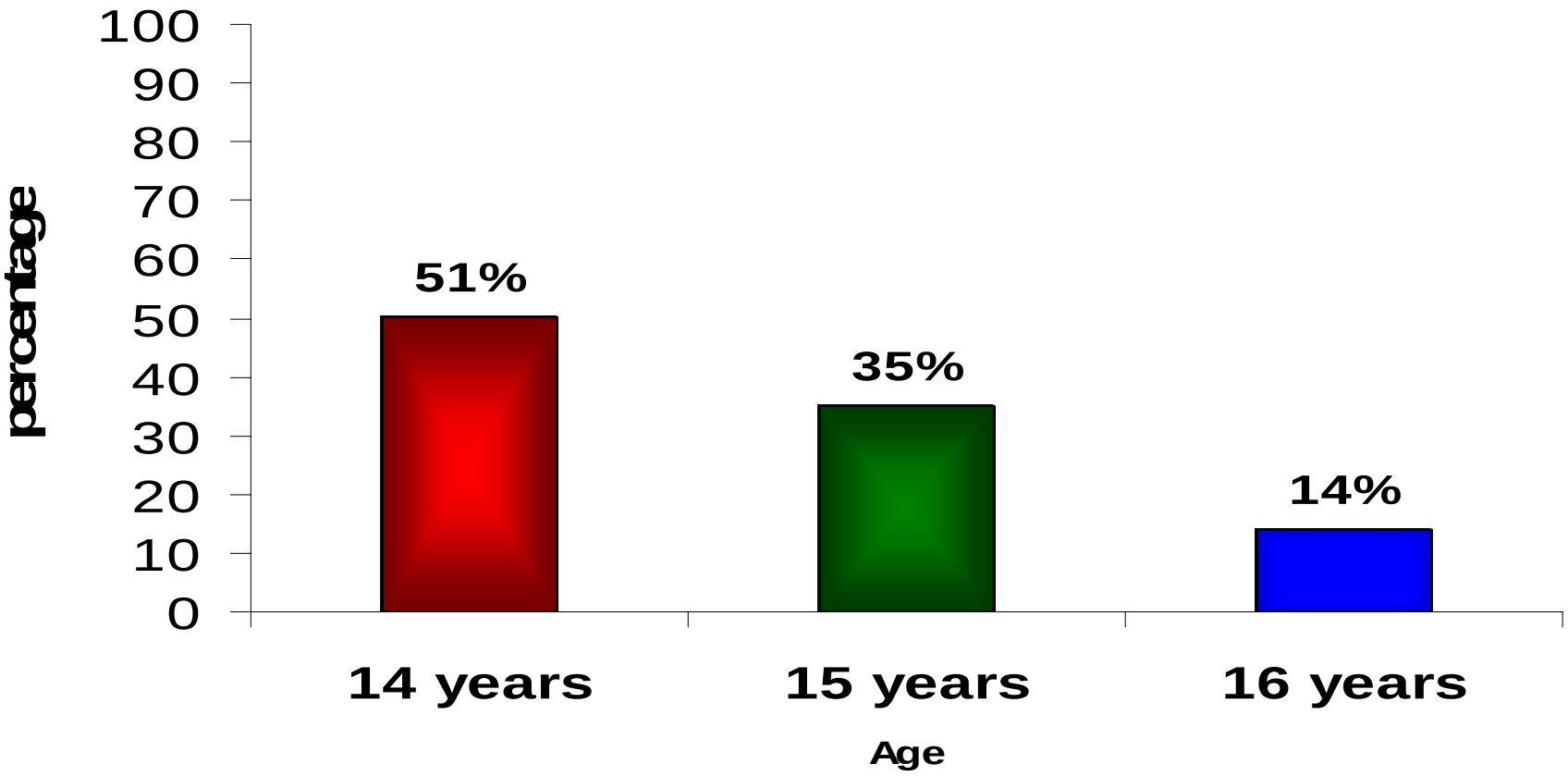


Fig-2: Bar diagram showing the Percentage distribution of adolescent children according to their age.

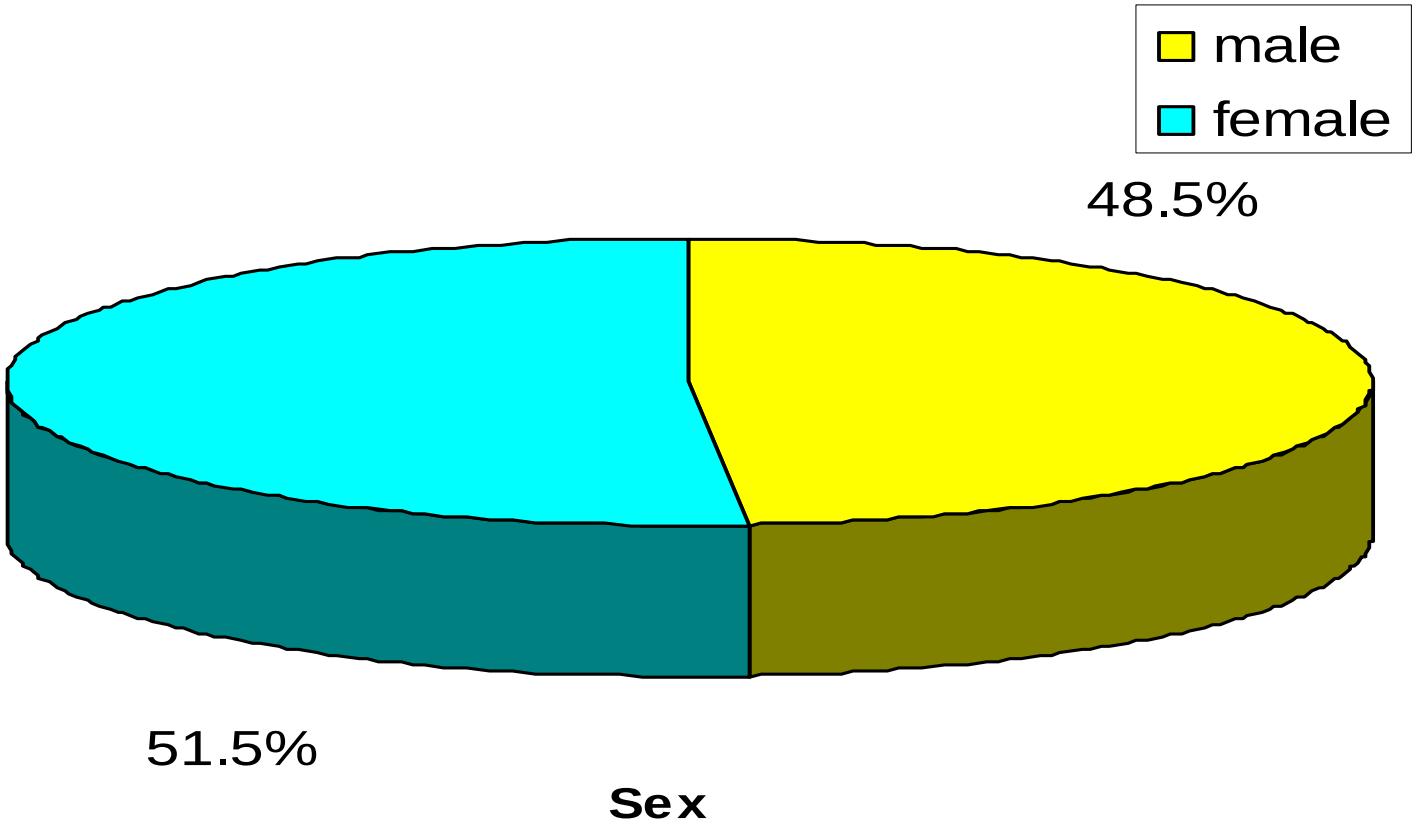


Fig-3: Pie Diagram showing the Percentage distribution of adolescent l children according to their sex.

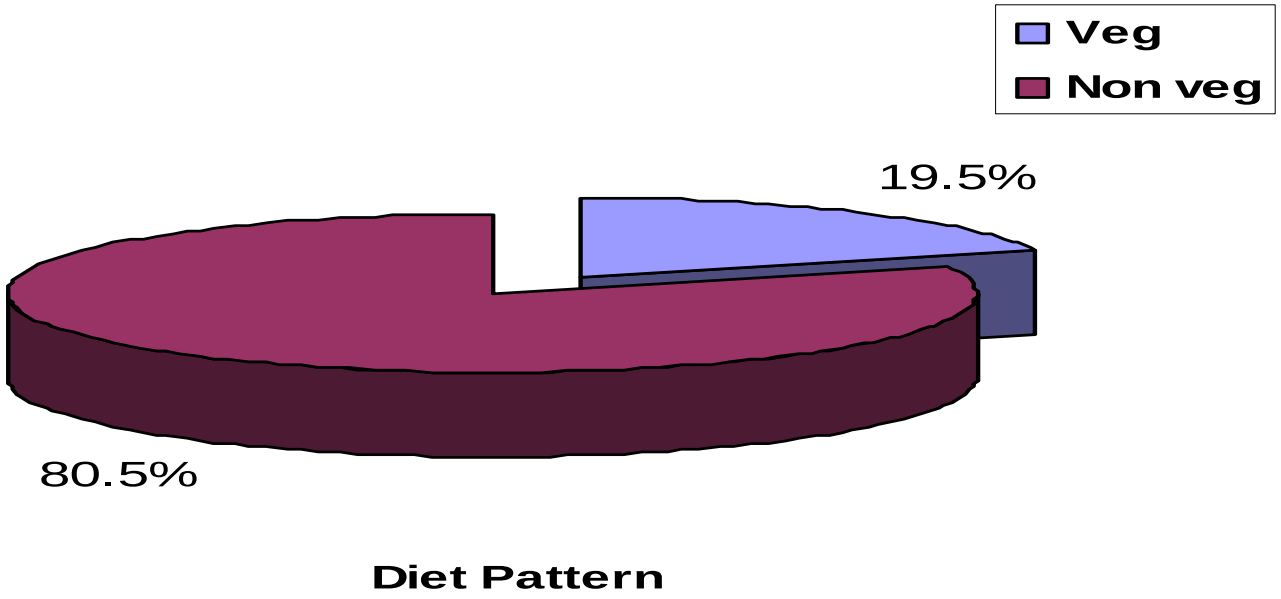


Fig-4: Pie Diagram showing the Percentage distribution of adolescent children according to their Diet Pattern

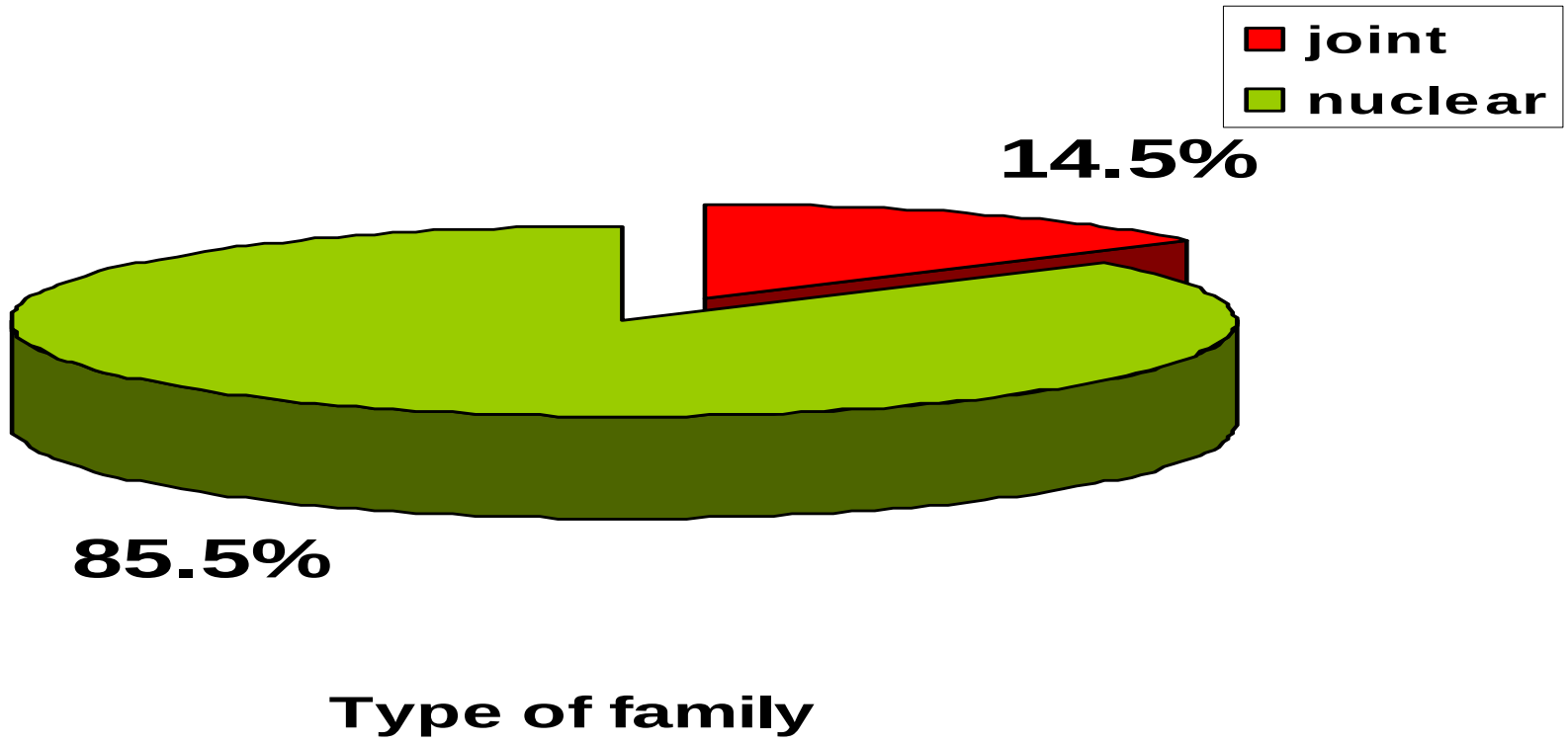

joint
nuclear
14.5%
85.5%
Type of family

Fig-6:Pie Diagram showing the Percentage distribution of adolescent children according to their area of residence

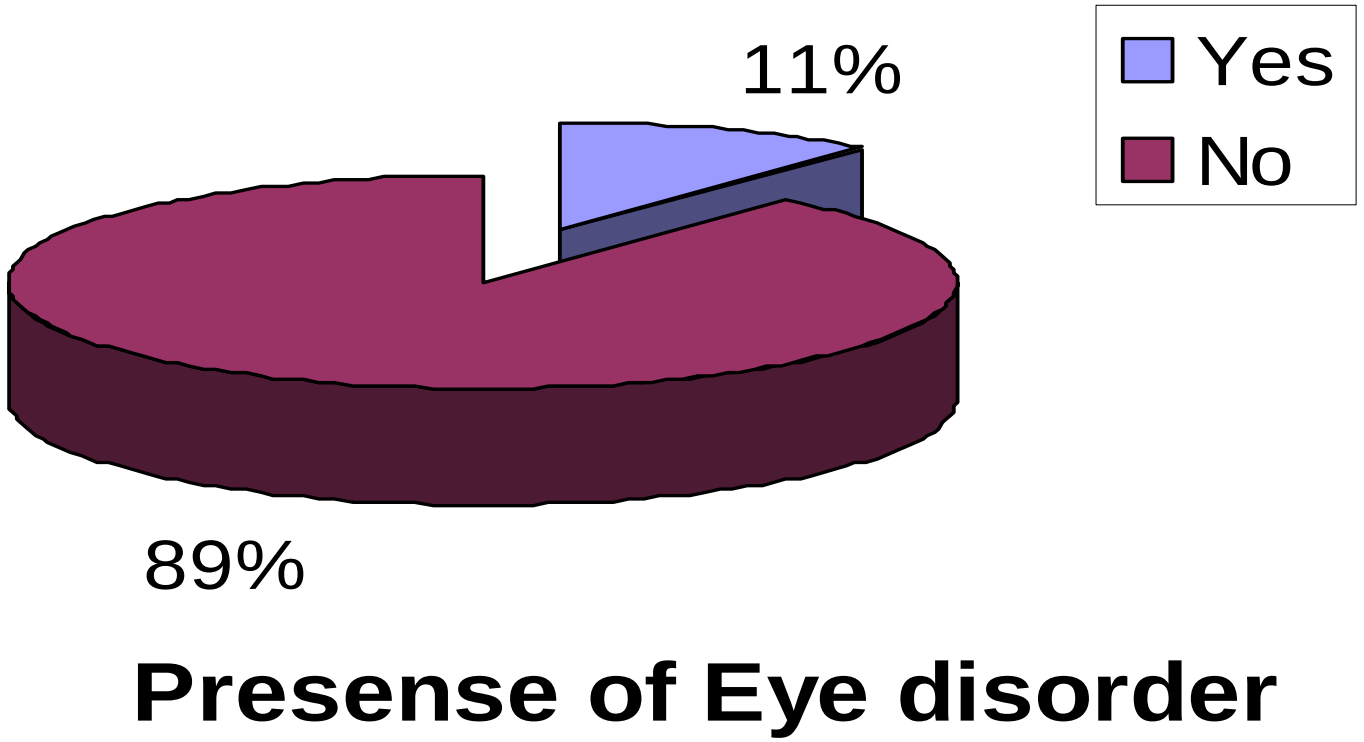


Fig-7: Pie Diagram showing the Percentage distribution of adolescent children according to their area of residence

Section –B: Comparison between pretest and post test knowledge and practice scores regarding eye disorders among adolescent children.

Table – 2: Comparition between pretest and post test knowledge scores regarding eye disorders among adolescent children.

N=200

Knowledge	Pretest		Post test	
	F	**%**	**F**	**%**
Adequate knowledge	16	8	143	71.5
Moderately adequate knowledge	64	32	57	28.5
Inadequate knowledge	120	60	_	_
TOTAL	**200**	**100**	**200**	**100**

Table 2 showed that, in pretest 120 (60%) of adolescent children had inadequate knowledge, 64(32%) adolescent children had moderately adequate knowledge and 16(8%) adolescent children had adequate knowledge regarding eye disorders.

In Post test majority of 143 (71.5%) adolescent children had adequate knowledge and 57 (28.5%) adolescent children had moderately adequate knowledge regarding eye disorders. None of them had adequate knowledge.

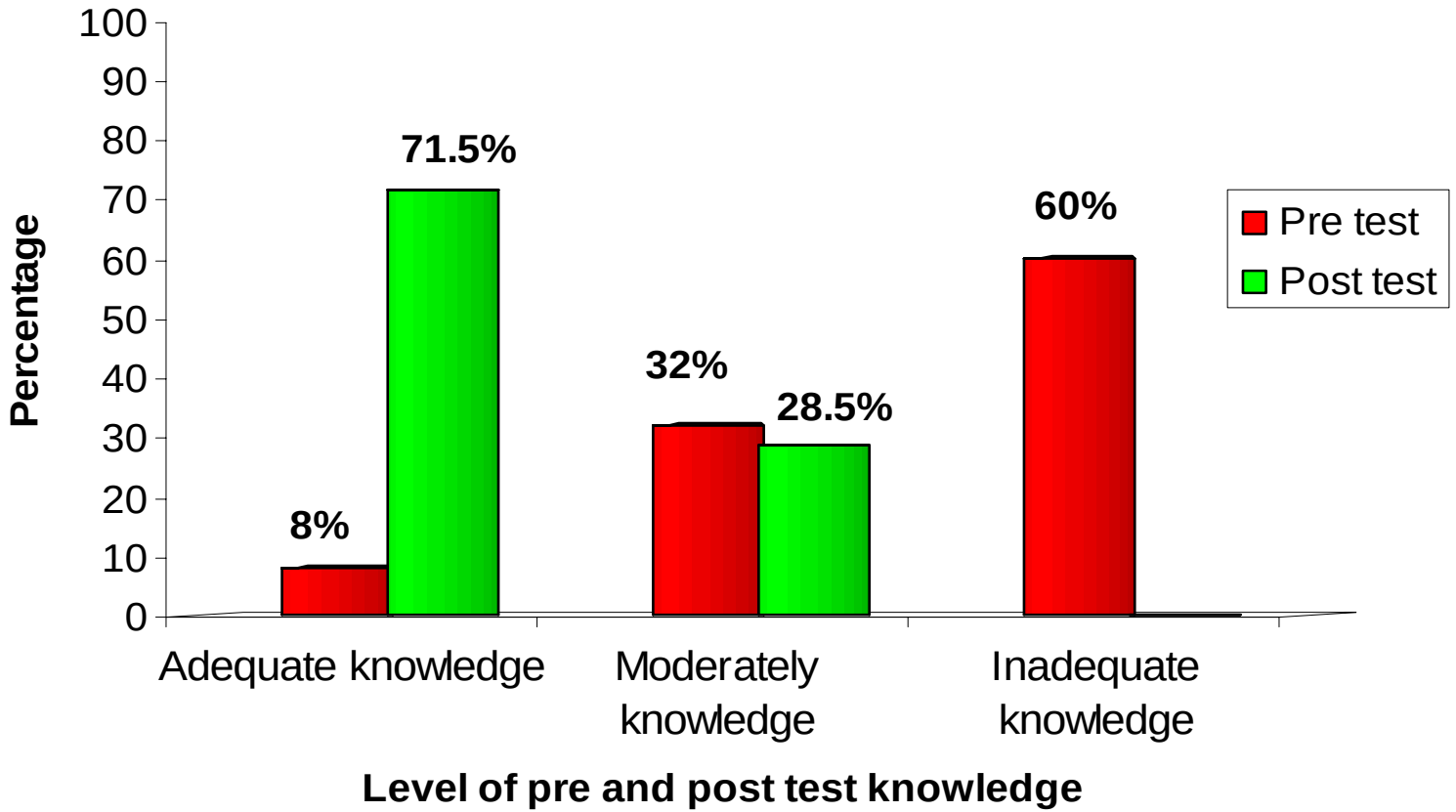


Fig-8.Bar Diagram showing the Comparison pretest and post knowledge scores regarding eye disorder among adolesend children.

Table-3: Comparison between pretest and posttest practice scores regarding eye disorders among adolescent children .

N=200

Practice	Pretest		Post test	
	F	%	F	%
Adequate Practice	13	6.5	155	77.5
Moderately adequate practice	74	37	45	22.5
Inadequate practice	113	56.5	_	_
TOTAL	**200**	**100**	**200**	**100**

Table 3 Showed that, in pretest , 113 (56.5%) adolescent children had inadequate practice, 74(37%) adolescent children had moderately adequate practice and 13(6.5%) adolescent children had adequate practice regarding eye disorders.

In Post test , majority of 155 (77.5%) adolescent children had adequate practice and 45(22.5%) adolescent children had moderately adequate practice scores regarding eye disorders and none of them had In adequate practice. It shows that post test practice scores is higher than the pretest practice scores regarding eye disorders.

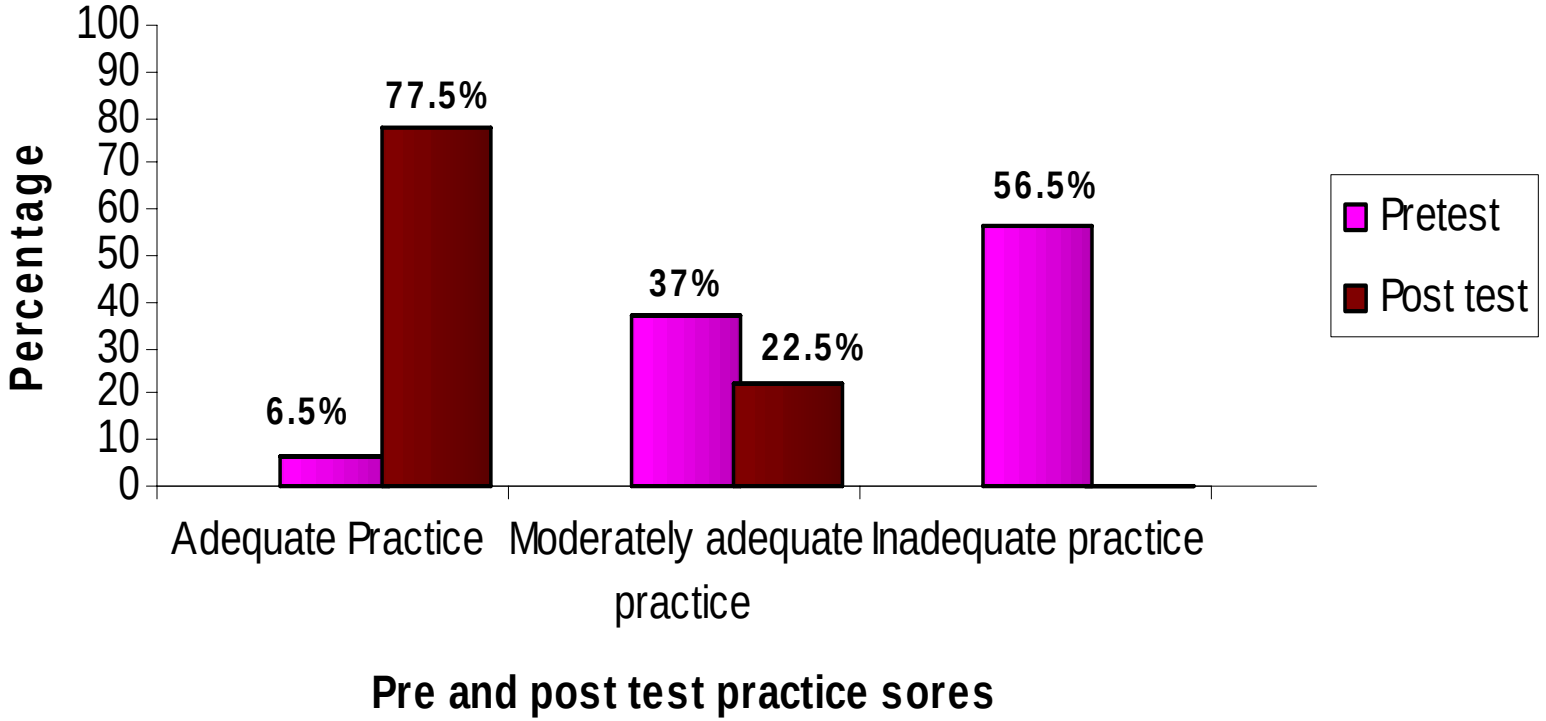


Fig-9. Bar Diagram showing the Comparison pretest and post practice scores regarding eye disorder among adolesend children.

Table 4 : Comparison of mean ,standard deviation and 'z' value score of pretest and post test knowledge scores regarding eye disorders among adolescent children.

N=200

Sl. No.	Variable	Mean	SD	Z test	Table value
1.	Pretest	9.1	3.3	26.5	1.96
2.	Post test	19.5	4.6		

Df=198 ($p<0.05$)

Table 4 showed that mean score of pretest and posttest of knowledge regarding eye disorders were 9.1 (SD 3.3) and posttest 19.5 (SD4.6) respectively. The table 'Z' value is 1.96 and the calculated value is 26.5,which was significant at the level of 0.05 from the mean scores, it was clear the adolescent children gained knowledge after implementing structured teaching programme.

Table 5: **Comparition of Mean, standard deviation and 'z' value score of pretest and posttest practice regarding eye disorders among adolescent children .**

N=200

Sl. No.	Variable	Mean	SD	Z test	Table value
1.	Pre test	4.11	1.44	23.5	1.96
2.	Post test	8.12	2.13		

Df=198 (p<0.05)

The table 5 showed that mean score of pretest and posttest practice scores regarding eye disorders among were 4.11 (SD1.44) and posttest 8.12 (SD2.13) respectively. The table 'Z' value is 1.96 and the calculated value is 23.5 which was significant at the level of 0.05 From the mean scores, it was clear the adolescent children gained practice after implementing structured teaching programme.

Section – C: Correlation between posttest knowledge scores and practice scores regarding eye disorders among adolescent children.

Table - 6: Correlation between the mean posttest knowledge scores and practice scores regarding eye disorders among adolescent children.

N=200

Sl. No.	Variable	Mean Scores	'r' value	Table Value
1. 2.	posttest knowledge posttest practice	19.5 8.12	0.92	0.1638

Df=198 (P<0.05)

The table 6 showed that there was positive correlation (r=0.92)between mean post test knowledge and practice scores regarding eye disorders among adolescent children.

Section D : Association between the post test knowledge and practice scores of selected demographic variable regarding eye disorders among adolescent children.

Table - 7: Association between the post test knowledge scores with their selected demographic variables. regarding eye disorder among adolescent children.

N=200

S. No	Demographic Variable	Level of Knowledge						X^2	Table Value	Inference
		Adequate		Moderately adequate		Inadequate				
		F	%	F	%	F	%			
1	**AGE**									
1.1	14 years	52	26	50	22.5	-	-	1.94	3.841	
1.2	15 years	28	24	40	20	-	-	(NS)		NS
1.3	16 years	13	6.5.	17	6.5					
2.	**SEX**							1.26		
2.1	Male	33	16.5	72	36	-	-	(NS)	3.841	NS
2.2	Female	25	12.5	70	35	-	-			
								0.0071		
3.	**TYPE OF FAMILY**	48	24	76	38	-	-	(NS)		
3.1	Nuclear	18	14	58	29	-	-			NS

3.2	Joint								3.841	
4.	**AREA OF RESIDENCE**									
4.1	Urban	70	35	40	20	-	-	1.62	3.841	NS
4.2	Rural	60	30	30	15	-	-	(NS)		
5	**DIET PATTERN**									
5.1	Veg	62	31	48	24	-	-	14.91 (S)	3.841	S
5.2	Non Veg	50	25	40	20	-	-			
6	**PRESENCE OF EYE DISORDER**									
6.1	Yes	14	7	9	4.5	-	-	33.6 (NS)	3.841	NS
6.2	No	97	48.5	80	40	-	-			

Df=1 NS- Not Significant, S- Significant p<0.05 level

Table7: Showed that association of post test knowledge score regarding eye disorder among adolescent children with their selected demographic variables.

Chi square values were calculated to find out the association between the knowledge scores of adolescent children with (Age, sex, type of family. area of residence, diet pattern, presence of eye disorders).

It was found that the demographic variables such as age, sex, type of family, area of residence and presence of eye disorders were not significant at the level of $p<0.05$ with the post test knowledge scores regarding eye disorders. Only diet pattern is significantly associated with the post test knowledge scores regarding eye disorders among adolescent children.

Table - 8: Association between post test practice scores regarding eye disorder among adolescent children with their selected demographic variables.

N=200

S. No	Demographic Variable	Level of practice						X^2	Table Value	Inference
		Adequate		Moderately adequate		Inadequate				
		F	%	F	%	F	%			
1	**AGE**									
1.1	14 years	80	40	43	21.5	-	-	0.037	3.841	NS
1.2	15 years	25	12.5	20	10	-	-	(NS)		
1.3	16YEARS	18	9	14	7					
2.	**SEX**									
2.1	Male	50	25	20	10	-	-	0.61	3.841	NS
2.2	Female	95	42.5	35	22.5	-	-	(NS)		
3.	**TYPE OF FAMILY**									
3.1	Nuclear	113	56.2	30	15	-	-	0.025	3.841	NS
3.2	Joint	30	15	27	13.5	-	-	(NS)		

4.	**AREA OF RESIDENCE**									
4.1	Urban	80	40	48	24	-	-	1.42 (NS)	3.841	NS
4.2	Rural	40	20	32	16	-	-			
5	**DIET PATTERN**									
5.1	Veg	60	30	15	7.5	-	-	0.28 (NS)	3.841	NS
5.2	Non Veg	98	49	27	13.5	-	-			
6	**PRESENCE OF EYE DISORDER**									
6.1	Yes	28	14	23	11.5	-	-	0.62 (NS)	3.841	NS
6.2	No	99	49.5	50	25	-	-			

Df=1 , NS- Not Significant, S- Significant p<0.05 level

Table8: Showed that the demographic variables such as age, sex, type of family, area of residence, presence of eye disorders were not significant at the level of p<0.005.with the post test practice score regarding eye disorder among adolescent children with their selected demographic variables.

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CHAPTER - V

DISCUSSION

This chapter deals with description of the sample characteristics and objectives. The aim of this present study was to evaluate the effectiveness of structured teaching programme on eye disorders in terms of knowledge and practice among adolescent children at selected schools dharapuram.200 adolescent children were selected for the study by using stratified random technique, the data were selected by self administered questionnaire and dichotomonous questionnaire and statistically analyzed.

Description of the sample characteristics

The school children who belonged to the age group of 14 years were 102(51%), 70 (35.%) children were belonged to 15 years,28 and (12%) children were belonged to 16years.With regard to sex, 97 (48.5%) male and 103 (51.5%) female school children were distributed.With regard to Diet pattern, 161 (80.5%) children were belonged to non vegetarian 39 (19.5%) children were vegetarian.With regard to type of family, 171 (85.5%) children were in nuclear family, and 29 (14.5%) children were in joint family.With regard to area of residence 124 (62%)

children were from urban area, and 76 (38%) children were from rural area.According to their eye disorders 178 (89%) children have no eye disorders, and children were presence of eye disorder 22 (11%)

The findings of the study are discussed according to the objectives as follows:

1. Asses the pretest knowledge and practice scores regarding eye disorders among children.
2. Asses the posttest knowledge and practice scores regarding eye disorders among adolescent children .
3. Compare the Pre test and Post test Knowledge and practice scores regarding eye disorders among adolescent children.
4. Correlate the the posttest knowledge and practice scores regarding eye disorders among adolescent children.
5. Find out the association between Post test knowledge scores regarding eye disorders among adolescent children with their selected demographic variables.
6. Find out the association between Post test practice scores regarding eye disorders among adolescent children with their selected demographic variables.

Objective 1: Assess the pretest knowledge and practice scores regarding eye disorders among adolescent children

The assessment of knowledge score regarding eye disorders among 200 adolescent children 120(60%) had inadequate knowledge in pretest. Assessing the practice score of the 200 adolescent children regarding eye disorders, 113(56.5%) had inadequate practice in pretest. It revealed that there was a need for structured teaching programme for adolescent children regarding eye disorders.

The findings are consistent with the study findings of Anitha (2004) who had conducted a study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. The mean pretest knowledge score 48 (80%) the mean pretest practice score 40 (66.6%).

Objective 2: Assess the posttest knowledge and practice scores regarding eye disorders among adolescent children

The assessment of knowledge score regarding eye disorders among 200 adolescent children, 143(73.5%) had adequate knowledge in posttest. Assessing the practice score of the 200 adolescent children

regarding eye disorders, 155 (77.5%) had adequate practice in post test. It revealed that the knowledge and practice had increased after structured teaching programme.

The findings are consistent with the study findings of Anitha (2004) conducted a study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. The post test knowledge score was 48(80%) posttest practice was 40(66.6%)

Objective 3: Compare the pre test and post test knowledge and practice scores regarding eye disorders among adolescent children

The assessment of knowledge and practice scores of adolescent children after exposed to structured teaching programme had been increased as evidenced by the post test scores. It revealed that the level of knowledge of adolescent children in post test had a mean score of 19.5 (SD$\pm$3.3) which was increased compared to the mean score of 9.1 (SD$\pm$4.6) in the pretest at $P<0.05$ level of significance. H_1 - the mean post test knowledge score was significantly higher than mean pretest knowledge score, hence hypothesis was accepted.

The findings are consistent with the study findings of, Anitha (2004) conducted study on eye defects among adolescent children. The

aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. The post test knowledge mean score of 15.78(SD +3.74) Which was increased compared to the mean score of 6.5(SD+2.41) in the pretest significance at the level of($p<0.005$).

It revealed that the level of practice of school children in post test had a mean score 8.12 (SD$\pm$1.44) which was increased compared to the mean score 4.11 (SD$\pm$2.13) in the pretest at $P<0.05$ level of significance. H_2 - the mean post test practice scores was significantly higher than mean pretest knowledge score, hence hypothesis was accepted.

The findings are consistent with the study findings of Anitha (2004) conducted study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. The post test practice mean score 10.93(SD +2.6)Which was increased compared to the mean score 5.5(SD+2.41)in the pretest significance at the level of ($p<005$)

Objective 4: Correlate the post test knowledge scores with practice scores regarding eye disorders among adolescent children.

There was a positive correlation ($r=0.92$) between mean post test knowledge and practice scores of adolescent children regarding eye

disorders. Further it could be inferred that knowledge and practice depends on each other.

The present study has showed that, as the knowledge increases, the practice of the adolescent children also increases. Hence there was a positive correlation between post test knowledge score and practice score.

The findings are consistent with the study findings of Anitha (2004) conducted study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. The correlation of mean posttest knowledge score is (15.78%) the mean posttest practice score (10.93%). The correlation co efficient had positive correlations.(r= 0.93).

Objective 5: Find out the association of posttest knowledge scores regarding eye disorders among adolescent children with their selected demographic variables.

Chi square values were calculated to find out the association between the knowledge of adolescent children

There was an association between diet (14.91) other demographic variables such as age, sex, religion, type of family, residence, and

presence of eye disorders. Had no association with post test knowledge regarding eye disorders

The findings are consistent with the findings of **Prema raju (2007)** conducted study on prevalence of refractive errors in rural south India. It was a population based study. Association of refractive errors with age, sex, eye disorders were analyzed. The result shows that 3924 responders. 2508 were eligible. Myopia (SE<0.50DS), highmyopia (SE>0.50DS) were 50.60%, 26.99%, 3.71% and 18.70% and age and gender adjusted for the rural Tamilnadu population were 46.77%, 30.97%, 4.32%, and 17.94%, respectively. The prevalence of myopia and high myopia increased significantly with age (p<0.001)the study concluded that the refractive errors in this rural south Indian population is similar to those reported in other tropical regions of the world.

Objectives 6 : Find out the association of posttest practice scores regarding eye disorders among adolescent children with their selected demographic variables.

Chi – square values were calculated to find out the association (Tab.12) between practice scores of adolescent children with age, sex, religion, type of family, residence. And presence of eye disorders.

All the demographic variables such as age sex, religion, type of family and residence had no association with post test practice scores regarding eye disorders.

The findings are consistent with the findings of **Anitha (2004**) conducted study on eye defects among adolescent children. The aim of the study was to estimate the prevalence of selected eye defects. The study was conducted at Madurai. It was a randomized study. The samples were 60 adolescent school children were examined . The result showed that the mean posttest knowledge of eye defect is 15.78(SD 3.74),Which was increased than the mean pretest knowledge score 6.5(SD 2.41) and the mean posttest practice score is 10.93(SD 2.6)Which was increased than the mean pretest score 5.5(SD 2.41) For knowledge 't' value is 21.74 ($p<0.05$),For practice 't' value is 21.6 ($p<0.05$)Which shows the over all gain in knowledge and practice were highly significant. There was no association between demographic variables and knowledge scores.

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATIONS AND LIMITATIONS

This chapter deals with

- Summary of the study
- Conclusion of the study
- Implication for nursing
- Recommentation
- Limitation

SUMMARY OF THE STUDY

The focus of the study was to assess the effectiveness of structured teaching program regarding eye disorders in terms of knowledge and practice among adolescent children in selected schools at Dharapuram. The design used for this study was quasi experimental in nature, the conceptual frame work was based on modified Wieden Bach's helping art of clinical nursing theory(1969)The participants were selected by stratified random sampling technique and were assessed for knowledgeand practice regarding eye disorders before and after a structured teaching programme

MAJOR FINDINGS OF THE STUDY

- Higher percentage of school children age group were 14 years125 (62.5%)
- Majority of 103 (51.5%) adolescent children were females.
- Higher percentage of 161(80.5%) adolescent children's were non vegetarion
- Majority of 171(85.5) adolescent children were nuclear family.
- Highest percentage of 124(62%) adolescent children were from rural residences.
- During pre test 120(60%) of adolescent children had inadequate knowledge. The highest percentage of 143(71.5%) adolescent children were had adequate knowledge after the structured teaching programme.
- During pre test 74(37%) of adolescent children had moderately adequate practice. The highest percentage of 155(77%) adolescent children were had adequate knowledge after the structured teaching programme.
- Significant difference was found between pretest and post test knowledge and practice scores ($P \leq 0.05$).
- There is no significant association found between post test knowledge scores of adolescent children with their demographic

variables, except diet of the adolescent children's where significant association (χ^2 = 14.91) was found (P<0.05).

- There is no significant association found between post test practice scores of adolescent children with their demographic variables.

The study revealed that the knowledge and practice scores regarding eye disorders was significant after administration of structured teaching programme. Findings showed that the structured teaching programme was effective in increasing the knowledge and practice among adolescent children regarding eye disorders. Thus structured teaching program played an important role in improving the knowledge and practice of adolescent children.

CONCLUSION

The study findings revealed that there was a significant improvement in the knowledge(26.5) and practice (23.5)of adolescent children followed by structured teaching programme. Based on the statistical findings it is evident that the provision of such kind of structured teaching programme will motivate the school children and help them to acquire knowledge and correct practice regarding eye disorders.

IMPLICATIONS

The findings of the study have certain important implications for nursing service, education, administration and nursing research.

NURSING SERVICE

- Nurses can utilize self instructional meterial eye disorders for educating the adolescent children in school and community.
- The Nurses, as professional health care practitioners, will be able to make significant contributions to promote health status of the adolescent children.
- Community health nurses can utilize this instructional material for educating the adolescent children in their home setup and in school setup.
- Nurses can participate in effective initiation of practices and take appropriate action for guide the adolescent children.

NURSING EDUCATION

- Students can utilize the instructional material to give health education to the adolescent children.
- Teachers can utilize this material as a model to teach the students in class room.

NURSING ADMINISTRATION

- Nursing administrators can utilize the instructional material while conducting inservice education program for directing motivating staff towards the education of the school children regarding eye disorders.
- Nursing administrators of hospital, Nursing and Community health departments can use the present instructional material as a model for preparing other teaching materials such as booklets, posters etc.

NURSING RESEARCH

- This study finding can be effectively utilized by the emerging researchers.
- Conducting individual teaching in home setting.

RECOMMENDATIONS

Based on the findings of the study, the followings recommendation has been made for further study.

- Same study can be conducted by using small samples group to generalize the findings.

- A comparative study can be conducted on knowledge and practice on eye disorders between rural and urban schools among adolescent children.
- The study can be conducted regarding management of eye disorders.
- The study can be conducted regarding complications of eye disorders.

LIMITATION

It was more time consuming to explain the children because of the difference in their level of understanding.

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59. Chitra,N., (2001) ''A Experimental study to assess the effectiveness structured teaching programe on vitamin A mothers with underfy children, Ramakrishna institute of Para Medical Science

WEB SITES:

60. http://www.lighthouse.com
61. http://www.medscape.com
62. http://www.childbirth.org
63. http://ww.fdz.dk/English/reserach/reports/htm.

RESEARCH TOOL

SUBMITTED TO: **Mrs. LAKSHMI PRIYA, M.Sc(N).,**
LECTURER.

SUBMITTED BY: **S. ILAVARASI**
II YEAR M.Sc(N).,

PLANNED HEALTH TEACHING PROGRAMME ON EYE DISORDERS

Topic	:	Eye disorders
Group	:	Adolescent Children
Place of teaching	:	Schools, Dharapuram.
Instructor	:	Ms. S. Ilavarasi, M.Sc., (N) II Year
Time	:	45 Mts
Methods of teaching	:	Lecturer and Discussion
A.V.Aids	:	Compact disc

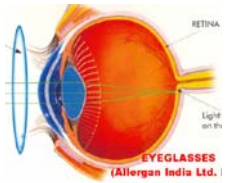
CENTRAL OBJECTIVE :

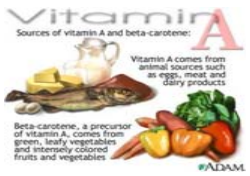
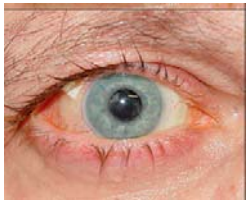
At the end of structure teaching programme the children are able to gain adequate knowledge and practice on eye disorders, improve skills and they will apply knowledge in their day to day life.

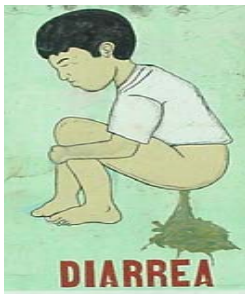
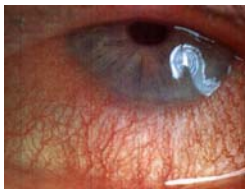
SPECIFIC OBJECTIVES :

The children's are able to

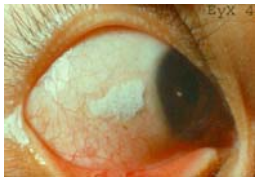
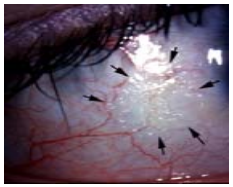
- understand of eye disorder
- define eye disorders
- list out the types of eye disorders
- discus the functions of vitamin A
- explain the causes of vitamin A deficiency
- enumerate the symptoms of vitamin A deficiency
- disorders due to deficiency of vitamin A
- explain the sources of vitamin A
- explain the complications of vitamin A deficiency.
- discuss the prevention of vitamin A deficiency
- define refractive errors
- list out the types of refractive errors
- define myopia
- explain the causes of myopia
- list out the clinical manifestation of myopia.
- explain the management in myopia.
- define hyperopia.
- explain the causes of hyperopia
- list out the clinical manifestation of hyperopia
- explein the prevention refractive errors
- explain the preventive measures of eye disorders

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
understand of eye disorder define eye disorders List out the types of eye disorders	**INTRODUCTION** Vision the most complex sense, has been recently focus some of the greatest medical and surgical innovations. Disorder that affect the eye generally lead to vision loss or impairment. Routine ophthalmic examinations and early treatment can help to prevent it. **EYE DISORDERS** It is defined as the most common ocular condition representing moderate to severe Vitamin A deficiency. Disorders can affect any part of the eye. They often affect vision and some can result in blindness, if not treated adequately. **TYPES OF EYE DISORDERS** ➢ Conjunctivitis ➢ Refractive errors ➢ Cataract ➢ Glaucoma ➢ Vitamin A deficiency disorders ➢ Disorders of the eye lashes, eye lids and lacrimal duct	Lecture cum discussion Using Compact Disc    	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
discusses the functions of vitamin A	**VITAMIN A** Vitamin A deficiency (hypovitaminosis) is a nutritional disorder caused by a lack of vitamin A in the body. The vitamin A is absorbed mainly in the intestine. **FUNCTIONS** • It is essential for normal vision. It contribute to the production of retinal pigments which are needed for vision in dim light. • Formation and maintenance of epithelial tissue such as eyes and skin. • Normal bone growth. • It is anti infective.	  	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

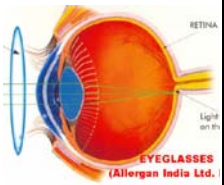
SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
explain the causes of vitamin A deficiency list out the symptoms of vitamin A deficiency	**CAUSES** ➢ Repeated Diarrhea ➢ Inadequate vitamin A in the diet ➢ Disorders in the absorption of vitamin A. ➢ Malabsorption ➢ Malnutrition ➢ In disease of the liver and pancreas **SYMPTOMS** **Eye symptoms** ➢ Reduced night vision ➢ Night blindness ➢ Dry eyes ➢ Eye inflammations **Others Symptoms** ➢ Rough skin ➢ Dry skin	   	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
enumerate the disorders due to deficiency of vitamin A	➢ Respiratory infection ➢ Urinary infection ➢ Growth retardation **DISORDERS DUE TO DEFICIENCY OF VITAMIN A** **Night blindness** Lack of vitamin A, first causes night blindness or inability to see in dim light. **Clinical Manifestation** ➢ The individual cannot see well in dim light ➢ Dry eyes ➢ Difficulty in reading at night	  	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

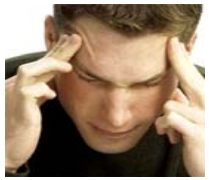
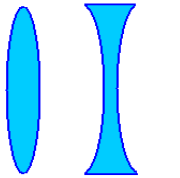
SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
	Conjuctival xerosis The conjuctiva becomes dry, Wrinkled, Pigmented. **Clinical manifestation :** ❖ The conjuctiva will become thickened ❖ Muddy appearance ❖ Acumalation of Debris on its surface **Bitots spot** Bitot's spots are pearly white or yellowish colour, triangular shape. **Clinical manifestation :** ➢ Conjuctival epithelium thickened ➢ Foamy spots on the bulbar conjuctiva on either side of the cornea. **Corneal xerosis** The cornea appearance becomes dry	   	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

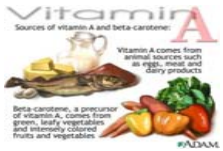
SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
explain the sources of vitamin A.	**Clinical manifestation :** ➢ Cornea appears dull, dry and opaque ➢ Corneal ulceration **SOURCES OF VITAMIN A** **Animal foods** ➢ Liver, Eggs ➢ Cow's milk, whole milk ➢ Beaf, beaf liver ➢ Butter, Cheese, Vanaspathi ➢ Fish and fish liver oil **Plant foods** **Fruits** Papaya, mango, pumpkin, bananas **Green leafy** ➢ Spinach, amaranth ➢ Drumstic leaves ➢ Coriander leaves **Roots** Carrot	    	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
explain the complications of vitamin A deficiency. discuss the prevention of vitamin A deficiency	**COMPLICATIONS** ➢ Blindness ➢ Respiratory infection ➢ Urinary tract infection **PREVENTION** ➢ Vitamin A solution is administered once in 6 months. ➢ Vitamin A solution should be administered 2 laksh for 1 to 6 years age group of children. ➢ The daily diet should contain green leafy vegetables, yellow fruits, yellow vegetables, yellow of egg, liver, butter milk and fish. ➢ Reducing the frequency and severity of contributory factors eg. Protein Energy Malnutrition respiratory tract infections.	   	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
define refractive errors list out the types of refractive errors define the myopia. explain the causes of myopia	**REFRACTIVE ERRORS** Refractive error occurs when the eye doesn't bend light correctly as it enters the eye, resulting in blurred image. **Types of Refractive Errors** ➢ Myopia ➢ Hyperopia **MYOPIA** Nearsightedness – Ability to see objects clearly at close range but not at far distance. **CAUSES** Rays of light coming from an object at a distance of 6 m (20 ft) or more are brought in to focus in front of the retina	 	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
List out the clinical manifestation of myopia. explain the management in myopia. define hyperopia. explain the causes of hyperopia.	**CLINICAL MANIFESTATION** ➢ Holds books close to eyes ➢ Is unable to see objects clearly ➢ Rubbing eyes excessively, watering of the eye ➢ Headache **MANAGEMENT** ➢ Correct with concave lens that focus rays on retina. ➢ Regular vision testing once in a year. **HYPEROPIA** Ability to see objects at far distance and unable to see close objects. **CAUSES** Rays of light coming from an object at a distance of 6m (20 ft) or more are brought in to focus behind the retina.	  	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
list out the clinical manifestation of hyperopia explain the management of hyperopia explain the prevention of refractive errors	**CLINICAL MANIFESTATIONS** ➢ Head ache ➢ Squint eye ➢ Find difficulty in reading, writing and looking at near objects. ➢ Eye strain while trying to read for long hours. **MANAGEMENT** ➢ Correct with convex lens. ➢ Surgical correction for squint eye. **PREVENTION OF REFRACTIVE ERRORS** ➢ Encourage vision testing at early age ➢ In older children consult an ophthalmologist if the child reports symptoms like inability to read the black board, headache, irritation of the eyes or watering from the eyes. ➢ Educate the child to avoid watching TV closely. ➢ Avoid viral infections like measles chicken box. ➢ Correct the defect with lens at an early stage itself.	    	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme

SPECIFIC OBJECTIVES	CONTENTS	TEACHER'S ACTIVITY	STUDENTS ACTIVITY	EVALUATION
explain the preventive measures of eye disorders	**PREVENTIVE MEASURES OF EYE DISORDER** ➢ Avoid reading books and writing in dim light ➢ Avoid pouring oil into the eyes ➢ Avoid watching TV closely on the screen ➢ Consult the doctor if any mild changes in the vision occurs. ➢ No 'eye drops' or 'ointment' should be instilled in the eyes unless prescribed by a doctor. ➢ Avoid wearing others spectacles. ➢ Add Vitamin A contents in the diet daily, such as milk, egg, fish, green leafy, yellow vegetables and yellow fruits. ➢ Avoid seeing bright lights and lightenings. ➢ Take vitamin A drops if it is given in the schools. ➢ Participate in eye camps conducted in the schools. ➢ Prevent eye injuries.	     	Listening	Post test by using Self administered questionnaire & checklist on 7th day after structured teaching programme