



A Study to Assess the Knowledge and Attitude Regarding Early Detection of Visual Impairments in Children Among Teachers in Selected Primary Schools at Bangalore with A View to Prepare an Information Booklet.

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“Vision is the art of seeing what is invisible to others.”

-Jonathan swift

INTRODUCTION

Vision is one of our five senses. Being able to see gives us tremendous access to learning about the world around us people's faces and the subtleties of expression, what different things look like and how big they are, and the physical environments where we live and move, including approaching hazards. When a child has a visual impairment, it is cause for immediate attention. That's because so much learning typically occurs visually. When vision loss goes undetected, children are delayed in developing a wide range of skills. While they can do virtually all the activities and tasks that sighted children take for granted, children who are visually impaired often need to learn to do them in a different way or using different tools or materials. Central to their learning will be touching, listening, smelling, tasting, moving, and using whatever vision they have. The assistance of parents, family members, friends, caregivers, and educators can be indispensable in that process.

Visual impairment refers to a significant loss of vision, even though the person may wear corrective lenses. The nature and degree of visual impairment may vary significantly, so each student may require individual adaptations to instructional practices and materials in order to learn effectively. The classroom teacher is the key to assess, plan and implement an effective educational program. The classroom teacher shares information collected during the information gathering stage is aware of the parents' or guardians' expectations for their child's program; and maintains ongoing communication with the student, parents and other.

Vision may fluctuate and be influenced by such factors as fatigue, light glare, lighting conditions and time of day. Therefore, special attention must be given in assessing the needs of the student with low vision at preschool, elementary and secondary level. The levels at 2 which basic skills and accommodations need to be developed are not discrete. The skills developed in the preschool years will flow into the elementary and secondary years. There are general guidelines for teaching students with low vision that apply to all levels. 1 Visual impairments may exist in combination with other disabilities. There are some students with visual impairments who also have developmental disabilities, are deaf or hard of hearing, or have physical disabilities. The student with a visual impairment has difficulty gaining information about the world. This is made more difficult if the student cannot conceptualize easily because of a developmental disability, cannot hear meaningful sounds or cannot physically move to explore. 1 Vision problems, including amblyopia, strabismus, and significant refractive error, are some of the most common disabling childhood conditions; they are estimated to occur in 2% to 5% of preschool children. Amblyopia or “lazy eye” is the most common cause of visual loss in children, affecting around 2%-4% of preschoolers. Estimates of the number of children with amblyopia range from 1%-5% of individuals depending on the population and study. Studies estimate that strabismus affects approximately 4% of the population, and that 5% to 7% of preschool children have visually significant refractive errors and 9.5% had reduced visual acuity. In BC, the Vision First Check Program screened 383 children ages 2 and 3 using the Modified Clinical Technique in 1998 and, consistent with other studies for this age group, found the incidence of amblyopia at 1%, strabismus at 1.8%, astigmatism at 2.6% and hyperopia at 5.5%. 2

Health is a fundamental part of early child development and of overall health and wellbeing. Early childhood is a sensitive period for the development of the visual system, and ocular disorders are one of the most common disabilities in children. Vision conditions in early childhood can lead to vision loss, visual impairment, or blindness, and may impact an individual's health, educational achievements, employment options and social functioning across the lifespan.

If identified early, many vision conditions can be corrected and others prevented. Amblyopia is a leading cause of visual loss in children. It develops in the early years of life when the brain suppresses visual input from one eye and relies more heavily on the other, stronger eye. The visual system of the child's underused eye is unable to develop in a typical way, resulting in decreased visual acuity (clearness of vision). The two most common causes of

amblyopia are strabismus (misalignment of the visual axes of the eyes) and major 3 refractive errors (nearsightedness, farsightedness and astigmatism). If amblyopia is not treated, the brain will lose the ability in the weaker eye, posing a significantly increased risk of blindness. 2 By an eye doctor in clinical setting to detect issues with distance vision, close vision, colour detection and binocular vision. The tools used for screening are Snellen's letters and number chart for school children. The school health committee (1906) assessed the standard of health and suggested ways and means to improve them and also suggests that basic eye health services should be provided in schools. 3 The treatment of visual system conditions includes optical surgery, behavioural modification, neuromotor or sensory integration exercises or combination of the above. In neurological or developmental problems prescribing exercises or lens to train the eye muscles or other therapies to stimulate the nerves to operate normally are done. Vision therapy is

perhaps the best kept secret in vision care. It includes the use of lenses, prisms, filters, computerized visual activities, non computerized viewing instruments. Another name often associated with vision therapy is 'orthoptics'. This term which literally means "straightening the eyes", the purpose of cosmetically straightening the eyes that are misaligned due to strabismus. It improves accuracy of eye movements used during reading and also near and far focusing skills can be improved. 4 Teachers have to identify school children who struggle to read and complete assignments, or who become disinterested in and avoid reading. Eyestrain, blurring, headaches, double vision, loss of place, failure to recognize letters or simple words, omissions and transpositions, difficulty copying from the desk or chalkboard and inability to sustain attention while reading are common symptoms of such vision disorders. When these vision disorders are detected early, they are usually treatable, often with significant gains in classroom performance. 5 Teachers are very close to the children, who observe them and spend a lot of time with them. Teachers are the first to come across any deviation or problem in children. So it is necessary for teachers to identify and have knowledge regarding vision problems, their signs and symptoms and treatment. Special clinics should be arranged in schools for the treatment and follow up service. 6

4 NEED FOR THE STUDY

"When life's got you down, keep your head up... you can't see the ground anyway" -nicole rae

Children are one third of our population and all of our future. In order to develop a healthy society, it is important that we have healthy children. Primary school age is a dynamic period of physical growth and development. Children develop as they interact with their surroundings. Vision is the complex process of acquiring meaning from what is seen 7 .Through vision the child interprets his environment and learns to live in the environment.

According to WHO statistics, every minute a child somewhere in the world goes blind (World Health Organization, 2009). More than 12 million children ages 5 to 15 are visually impaired due to uncorrected refractive errors as a result of near-sightedness, far-sightedness, or astigmatism (World Health Organization, 2009). Over 285 million people in the world are visually impaired, of whom 39 million are blind and 246 million have moderate to severe visual impairment (WHO, 2011) Approximately 90% of visually impaired people live in developing countries. An estimated 19 million children below 15 years are visually impaired.

Of these, 12 million children are visually impaired due to refractive errors, a condition that could be easily diagnosed and corrected. 1.4 million Are irreversibly blind for the rest of their lives and need visual rehabilitation interventions for a full psychological and personal development. It is predicted that without extra interventions, these numbers will rise to 75 million blind and 200 million visually impaired by the year 2020 (WHO, 2010). It is also estimated 5, 00,000 children become blind each year. In 2007 world sight in 2007, day theme was 'vision for children' and in 2014 it was 'Call to action'. This is to raise the public awareness on blindness among children. 8

In an American study Based on data from the 2004 National Health Interview Survey, approximately 19 million persons (8.8%) age 18 and over report having any trouble seeing, even when wearing glasses or contact lenses (Lethbridge-Cejku,Rose,&Vickerie,2006).Based on data from the Survey of Income and Program Participation (Steinmetz, 2006), 189,000 children age 6-14 years of age (0.5%) have difficulty seeing words and letters in ordinary newsprint even when wearing glasses or contact lenses. Of those, 42,000 have a severe vision impairment (unable to see words and letters in ordinary newsprint), and 147,000 have a non- severe vision impairment (Steinmetz, 2006). 8

5 South East Asia and Western Pacific account for 73% of moderate to severe visual impairment and 58% of blindness (WHO, 2011). 9

In India, the prevalence of totally blind persons found to be 156 per lakh population and the prevalence of low vision found to be 61 per lakh population. Among the major states of India, the prevalence of blindness found to be highest in Orissa (226 per lakh population) followed by Uttar Pradesh (204 per lakh population) and Andhra Pradesh (190 per lakh population) where as it is least in Assam (88 per lakh population) followed by Jharkhand and Gujarat (98 and 99 per lakh population respectively). The prevalence of low vision is also found to be highest in Orissa (188 per lakh population) followed by Andhra Pradesh (96 per lakh population). Jharkhand (18 per lakh population), Haryana (24 per lakh population) and Gujarat (27 per lakh population) are some states which shows the lowest prevalence of low vision in the country. The analysis of prevalence of visual disability by background characteristics found that the prevalence of both blindness and low vision is highest in rural areas compared to urban areas. The sex-wise differential shows that both blindness and low vision found to more prevalent among females than males. 10

A study on assessment of refractive errors by school teachers to assess a first level screening by teachers in the schools could be effective or not. Three teachers from three schools were selected and were given training to assess the visual acuity with theory and practical session. Total of 678 students were examined. Eighty three students (12.42%) were screened by teachers and were referred. Of these referred cases 70 cases (10.4%) diagnosed as having refractive errors. 11

A study on visual impairment in children in order to determine which manneristic behaviors are associated with visual impairment, and to establish why these behaviors occur and whether severity of visual impairment influences these behaviors. The main manneristic or stereotypic behaviors associated with visual impairment are eye-manipulatory behaviors, such as eye poking and rocking. The degree of visual impairment influences the type of behavior exhibited by visually impaired children. Totally blind children are more likely to adopt body and head movements whereas sight-impaired children tend to adopt eye-manipulatory behaviors and rocking. The mannerisms exhibited most frequently are those that provide a specific stimulation to the child. Theories to explain these behaviors include behavioral, developmental, functional, and neurobiological approaches. The age at which the frequency of these behaviors decreases is associated with the child's increasing development, thus those visually impaired children with additional disabilities, whose development is impaired, are at an increased risk of developing and maintaining these behaviors. Certain manneristic behaviors of the visually impaired child may also help indicate the cause of visual impairment. There is a wide range of manneristic behaviors exhibited by visually impaired children. Some of these behaviors appear to be particularly associated with certain causes of visual impairment or severity of visual impairment. Further research into the prevalence of these behaviors in the visually impaired child is required in order to provide effective management. 16

Considering the above facts, the researcher felt the emphasis to assess the knowledge and attitude regarding early detection of visual impairment in children among teachers in selected primary schools. Hence the purpose of the study is to promote the healthy growth and development of children by identifying the visual impairments in children at an early age. Teachers can play an important role in early detection of visual impairments in children. The present study aims at improving the knowledge of school teachers in early detection of visual impairments in children with a view to prepare an information booklet.

OBJECTIVES

1. To assess the existing level of knowledge regarding early detection of visual impairments in children among teachers in selected primary schools at Bangalore.
2. To find out the attitude regarding early detections of visual impairments in children among teachers in selected primary schools at Bangalore.
3. To test the association between knowledge and attitude in children among teachers with their selected demographic variables.

HYPOTHESIS

Based on the objectives the following research hypothesis was formulated.

H1: There will be a significant difference in level of knowledge and attitude among teachers regarding early detection of visual impairments in children.

H2: There will be a significant association between the level of knowledge and attitude among teachers regarding early detection of visual impairments in children with their selected demographic variables

OPERATIONAL DEFINITIONS

1. Assess

Assess refers to the statistical analysis of existing knowledge and attitude among teachers as elicited by the structured knowledge questionnaire.

2. Knowledge

Knowledge refers to acquiring information possessed by teachers to the questionnaires related to early detection of visual impairments.

3. Attitude

Attitude refers to correct response of teachers to the questionnaires related to early detection of visual impairments.

4. Teacher

Teacher refers to a person who is teaching in primary school setting from 1st to 5th standards.

5. Visual impairment:

Visual impairment refers to decreased visual capability among primary school children.

6. Children:

Children refers to those who are studying in selected primary schools from 1st to 5th standard.(6-10yrs)

7. Information Booklet

A small bound book or pamphlet with recent facts provided to teachers about the early detection of visual impairments in primary school children.

ASSUMPTIONS

The study will be based on the following assumptions

- Among teachers in selected primary schools will have basic level of knowledge regarding early detection of visual impairment.
- Many school children may have visual impairment

DELIMITATIONS

Study will be delimited to:

- School teachers working in selected primary schools in Bangalore.

MATERIALS AND METHODS:-

1. Sources Of Data : School teachers working in primary school of selected primary schools at Bengaluru. (SBIOA primary school)

Research Approach : Survey approach

Research design : Descriptive design.

Setting : selected primary schools at Bengaluru. (SBIOA primary school)

Sample size : Sample size is 60 primary school teachers in the specified age groups.

Sample technique : In this study, simple random sampling technique is used to select the sample based on the inclusive and exclusive criteria among the primary teachers

2. Inclusion criteria

Primary school teachers who are:

1. who have completed Teachers training programme or B.ed programme
2. present on that day at the time of data collection
3. Who are willing to participate in the study.

3. Exclusion criteria

Primary school teachers who are:

1. Working as temporary appointments or trainees
2. Absent on that day in the school at the time of collection
4. Method of collection of data Sampling technique: simple random sampling technique.

Research methodology

Research methodology organizes all the components of the study deals with the type of research approach used, the setting of the study, the population, sampling technique, sample selection, the inclusion and exclusion criteria, the development of the tool, collection of data, pilot study, procedure of data collection and plan for data analysis.

Research Approach

The selection of research approach is the basic procedure for the conduction of research enquiry. A research approach tells us so as to what data to collect and how to analyze it. It also suggests possible conclusions to be drawn from the data. In view of the nature of the problem selected for the study and the objectives to be accomplished, a descriptive survey research approach was considered as the best way to assess the knowledge and attitude of school teachers towards visual impairment. Descriptive design with survey method was used in this study.

Research Design

The research design refers to the researcher's overall plan for obtaining answers to the research question and its spells out strategies that the researcher adopted to develop information that is accurate, objective and interpretable. A descriptive survey design is used as a research design in this study as there is a need to conduct generalized assessment of the knowledge and attitude of school teachers regarding visual impairment.

Research Setting

Research Setting refers to the area where the study is conducted. It is the physical location and condition in which data collection takes place in a study. The study was conducted in S. Cadambi Vidhya Kendra primary school and state bank of India officers association primary school are selected for the study on the basis of:

- Feasibility of conducting the study
- Availability of the samples

Population

Population is the entire aggregation of the cases that meet a designed set of criteria. In the present study, the populations were school teachers in primary school of selected primary schools, Bengaluru.

Sample

Sample consists of the subject of the population selected to participate in a research study. In the present study school teachers are selected as target population or samples of the study.

Sample Size

The total sample size of the study consists of 60 school teachers.

Sampling Technique

Sampling refers to the process of selecting the portion of population to represent the entire population. Subjects were selected from the sampling frame to achieve simple random sampling technique. In the present study simple random sampling technique was adopted for 60 school teachers.

DATA COLLECTION PROCESS

Prior to data collection, permission was obtained from the concerned authority. The participants were informed about the purpose of the study and written consent was taken from them. Knowledge and attitude was assessed by using structured questionnaire on selected antenatal mothers on 15.09.16-16.0916. After assessing, the information booklet was given.

THE PLAN FOR DATA ANALYSIS

The data collected from the participant were grouped and analyzed with the help of statistical analysis. The data analysis was planned to include descriptive and inferential statistics

Statistical analysis of the data:

- Organization of data in master sheet
- Frequencies and percentages to be used for analysis of demographic data
- Calculation of mean, standard deviation of knowledge and attitude scores
- Chi-square test was used to determine the association between knowledge scores with selected demographic variables. 7
- The findings were presented in tables and graphs.

Development of Information Booklet

Information Booklet was developed on the basis of research findings of the study, review of Literature and consulting with experts.

The steps followed to develop information booklet was as follows:

The steps adopted in the development of Information booklet were:

- Preparation of first draft of Information booklet.
- Development of criteria checklist to evaluate the Information booklet.
- Content validity of Information booklet.
- Editing of Information booklet.
- Preparation of final draft of Information booklet.

SUMMARY

This chapter presents the summary of the study, its discussion, conclusion, its nursing implications and recommendations.

This is a descriptive study on assessing the knowledge and attitude of school teachers regarding visual impairment. A sample of 60 school teachers was selected by using simple random sampling. It was concluded that school teachers have inadequate knowledge and negative attitude regarding early detection of visual impairment.

Analyzing collected data for the purposes of summarizing information to make it more usable and/or making generalizations about a population based on a sample drawn from that population. 52

This chapter presents the analysis and interpretation of data collected from 60 school teachers to assess the knowledge and attitude on early detection of visual impairment among primary school children. The aim of the analysis was to reduce, organize and give meaning to the data.

The data collected were categorized and analyzed based on the study objectives and hypotheses by using descriptive and inferential statistics with the application of SPSS 20.0 version. visual impairment.

SECTION 1: DEMOGRAPHIC DATA OF SCHOOL TEACHERS ON EARLY DETECTION OF VISUAL IMPAIRMENT AMONG PRIMARY SCHOOL CHILDREN

Analysis of the data related to the background information of the demographic variables of school teachers namely age, gender, marital status, religion, education, no of years of experience, type of family, nature of residence and sources of information is shown in the table 1.

CONCLUSION

On the basis of findings of the study the below set conclusions were drawn. It also brings about the limitations of study in to practice. The implications are given on the various aspects like nursing education, nursing practice, nursing administrations and it also gives insight in to the future studies.

Many studies show that there is a lack of knowledge and negative attitude regarding visual impairment among school teachers present in primary schools at Bangalore.

Information booklet is the best method to improve knowledge and attitude regarding visual impairment among school teachers present in primary schools at Bangalore.

The knowledge and attitude of school teachers regarding visual impairment was inadequate and negative when assessed. So information booklet was given to maintain the adequate knowledge and positive attitude.

The study was based on the Pender's health promotion model (1996). It is one of the most widely used models to explain why people do or do not take preventive health actions.

Implications of the Study

The findings of the study have implications in the field of nursing practice, nursing education, nursing administration and nursing research.

1. Nursing Practice

Nursing professionals working in the community as well as in the hospital should educate regarding visual impairment for reducing the children morbidity.

Nursing professionals play a key role in enhancement of knowledge of visual impairment which could change the attitude and practice of towards the visual impairment.

2. Nursing Education

Nursing education is to bring changes in the behaviour of people so as to prepare them to play their roles effectively as an individual and as a good responsible citizen.

2 As a nurse educator, there are abundant opportunities for nursing professionals to educate the school teachers as well as to the children regarding visual impairment.

The study emphasizes significance of short term in service education programmes for nurses and peripheral health workers to educate for adopting visual impairment.

3. Nursing Administration

Nursing administration is to organise and direct human and material resources to achieve desired nursing outcomes.

- The nursing administrator can take part in developing protocols, regarding the health education programmes and strategies for school teachers regarding visual impairment.
- The nursing administrator can mobilize the available resource personnel towards the health education of school teachers regarding visual impairment.
- The nurse administrators should explore their potentials and encourage innovative ideas in the preparation of appropriate teaching material. She should organize sufficient manpower; money and material for disseminating health information.

4. Nursing Research

- Nursing research is to explore new solutions and remedies for overcome the health related problems.
- This study helps nurse researchers to educate the school teachers to participate in adopting this alternative method according to their demographic, socio-economic, cultural and political characteristics.
- Nurses should come forward to carryout studies on visual impairment and publish them for the benefit of public and nursing fraternity. The public and private agencies should also encourage research in this field through materials and funds.

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