

A Study to Assess the Effectiveness of Self-Instructional Module on Level of Knowledge Regarding Dyslexia and Its Management in School Children Among School Teachers of Selected Schools, Bangalore

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Abstract:

Globally reading and writing skills are in increasing demand, the impact on dyslexia on individuals and society can be devastating. The study was undertaken to assess “The effectiveness of self-instructional module on level of knowledge regarding dyslexia and its management in school children among schoolteachers of selected schools, Bangalore” “The conceptual framework adopted for this study was modified Ludwig von Bertalanffy general system theory. An evaluative approach with one group pre-test and post-test design was adopted for this study. 60 schoolteachers were selected using non-probability convenient sampling technique. The data collection was carried by using structured knowledge questionnaire followed by self-instructional module was administered to the sample and post-test was conducted. Data collected from the sample are analysed by using descriptive inferential statistics. The study results shows among 60 school teachers, majority 35(58.3%) school teachers had moderately adequate knowledge 25(41.6%) had inadequate knowledge and none of them had adequate knowledge in pre-test and after the delivery of self-instructional module on dyslexia and its management there is an significant increase in the level of knowledge among school teachers, in post-test majority 57(95%) had adequate knowledge 3(5%) had moderate knowledge and none of them had inadequate knowledge. Thus the effectiveness of self-instructional module in post-test was found to be significant (2.00) at $p < 0.05$. Findings of the study reveals that the self-instructional module is effective in all areas of improving knowledge of the schoolteachers regarding dyslexia and its management in school children.

CHAPTER I

INTRODUCTION

“Education means all round drawing out of the best in child and man body, mind and spirit”.

-Mahatma Gandhi

The Hindu philosophy places teacher on a pedestal – even God and just after the parents. Children spend most part of their working hours in school with teachers who play an important role in moulding their future. A teacher is responsible for the integrated all round development of a child. Like a gardener; he provides all suitable conditions for their best growth.

The term “Dyslexia” coined in the year 1960. Dyslexia is also termed as “Specific Academic Skill Disorder” or “Specific Learning Disability”. It commonly affects the person to have difficulty in verbal skills, abstract reasoning, hand-eye coordination concentration, perception, memory and social adjustment.

National join committee on Dyslexia defines Dyslexia as “A heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities”.

A Learning Disability is a neurological disorder. In simple terms, a learning disability results from a difference in the way a person ‘s brain “wired”. Children with Learning disabilities are as smart as or smarter than their peers.

According to UNESCO records (1998) in European Countries, the percentage of students with dyslexia in special school’s ranges between 2.5 and 4.5 and 10 – 15% of the school age population is in special educational need, which includes defects of speech, major behavioural problems and various forms of Learning Disabilities. 4.5% of students (2.8 million) in schools had been identified as having Dyslexia. Ethnic/Racial breakdown of students with Dyslexia underscore the fact that it is a serious national problem and cannot be attributed to poverty, immigration or locality.

Dyslexia is a classification including several disorders in which a person has difficulty learning in a typical manner, usually caused by the unknown factor or factors. The unknown factor is the disorder that affects the brains ability to receive and process information. This disorder can make it problematic for a person to learn, write or concentrate as quickly or in the same way as someone who is not affected by Dyslexia. Dyslexia is not an indicative of intelligence level. Rather, people with Dyslexia have trouble performing specific types of skills for completing tasks if left to figure things out by themselves if taught in conventional ways.

Identification of disorder prior to school age is difficult due to the instability of results obtained from formal testing procedures. Teachers are the first person to notice that the child is not learning as expected. They often exhibit some challenging behaviours also. There is no magic bullet to cure Dyslexia. Shaw and Mac Guire stated that for students with Learning Disabilities skills such as “Planning, Monitoring, Regulating and Scheduling are difficult.

The students of dyslexia require continuous help to adapt to learning situations. Selvin in an analysis of challenging behaviours among people with Dyslexia suggest that these children are a major challenge for teachers and members of caring families. The successes of these children are determined by the response of the school personnel to the needs of this children.

The quality of children’s life solely depends on the type of family environment, school and neighbourhood. Unhealthy social surrounding can put them into stress and can increase their vulnerability to develop emotional disorders. The prevalence rate of 20-30 % of psychiatric disorders in school children are found in Indian setting. Among them Dyslexic constitute 3-7%.

The Disability Discrimination Act gives people the right to ask for ‘reasonable adjustments’ to take account of a disability. They can complete high school classes and have read all the class assignments. College programs can be mastered by these students so they can become statisticians, lawyers, biologists, teachers, journalists, etc. All this is possible because of the new technologies that allow people to "read" what they cannot read and to "write" when they cannot spell. All the print that they need to read can be read using alternative methods for reading. And the writing that they need to do can be done using alternative methods for writing.

From the studies of learning disabilities a teacher should take a few things. They should use new and varied teaching tactics for everyone, to possibly help people that we don't recognize as needing aid. Since learning disorders are just part of the spectrum, what aids a learning disorder may also aid an average learner. They can also take advantage of these deficits to help Dyslexics better understand the processes in the brain, such as conversion of short-term memory to long-term, complex analyses, and many other questions Dyslexics have about the brain.

For those with dyslexia, the prognosis is mixed. The disability affects such a wide range of people, producing different symptoms and varying degrees of severity that predictions are hard to make. The prognosis is generally good, however, for individuals whose dyslexia is identified early, who have supportive family and friends and a strong self-image, and who are involved in a proper remediation program. The teacher is a dynamic force in the school. A teacher's place in a child's upbringing is of vital importance. Teachers strive with heart and soul to raise children up to highest perfections of mankind to such a degree so that every one of them will be trained in the use of mind in acquiring knowledge.

Only an efficient and an understanding teacher can identify the capacities, strength and weakness innate in each student.

NEED FOR THE STUDY

"Children are no different than roses in their development and they are born with the capacity and desire to learn, they learn at different ways. If we can meet their needs, provides a safe, nurturing environment, and keep from interfering our doubts, anxieties, and arbitrary timetables, then like roses they will all bloom at their own best time.

The world-wide statistics shows that 10 out every 100 school children are said to suffer from Dyslexia. Nearly 3 million students receive special education services every year and of those halves are diagnosed with Dyslexia, which is 15% of US Population. Today almost 3 million school age students receive special education services because of Dyslexia.

According to the National Assessment of Educational Progress (NAEP), 38% of all fourth grade students are "below basic" reading skills. They are at or below the 40th percentile for their age group. Nationwide 20% of the elementary school population is struggling with reading. 30% of children with dyslexia also have at least mild forms of AD/HD (Attention Deficit/Hyperactive Disorder)

Dyslexia is a major educational problem, but the studies on genetics of dyslexia are very limited in India, because the inheritance pattern of dyslexia is not well established in our population. About 5% of the population will have enduring, severe reading disabilities that are very difficult to treat. In India around 13-14% of all school children suffer from learning disorder, unfortunately most of the schools fail to lend a sympathetic ear to their problems. As a result these children are branded as failures.

Viewing Scholastic backwardness in terms of poor academic achievement or repeated failure in grades, schools in Karnataka have recorded prevalence rate that range between 20 and 50%. An epidemiological survey of 1403 children between the ages of 8 and 12 in Bangalore showed a prevalence of childhood psychiatric disorders of 9.4%.

A study was conducted to assess the awareness and sensitivity among parents, teachers, school management and counsellors regarding Dyslexia in 35 schools of Bangalore. About the conceptual understanding of Dyslexia 52% of teachers had no awareness, 37% had minimal awareness and 11% had adequate awareness. About etiology 72% had no awareness, 14% had minimal awareness and 14% had adequate awareness. About the types of dyslexia 75% of teachers were not aware.

A Study was conducted to assess the factors affecting Dyslexia in Nepal. 58 Dyslexic boys and 46 dyslexic girls from 29 rural and 15 urban schools participated in the study. The analysis of these 104 Dyslexia student's bio data revealed that the factors related with dyslexia were 'poor instruction', 'parent's adverse behaviour to them; and 'teacher's negligence in the class.

A study revealed on attitude and knowledge on dyslexia among school teachers, The aim of the study were to investigate teachers knowledge and attitude towards dyslexia. forty six high school teachers were divided into two types. 25 teachers taught at as academic school and 21 teachers taught at special education school. The overall for positive attitude was 75%. However this score was higher for education school teachers.

One in five students, or 15-20% of the population, have a language-based learning disability. Dyslexia is probably the most common of the language-based learning disabilities. Dyslexia is perhaps the most common neurobehavioral disorder affecting children, with prevalence rates ranging from 5-20% in the US. Dyslexia is the most common cause of reading, writing and spelling difficulties. Of people with poor reading skills, 70-80% are likely dyslexic. It is the most common type of language-based learning disabilities. Nearly the same percentage of males and females has dyslexia. And the same percentage of people from different ethnic and socioeconomic backgrounds have dyslexia.

Parents and teachers who are unaware about Dyslexia may label the management, otherwise bright and creative child as lazy and disinterested. Even in cities, schools are hostile towards dyslexia at large; and ignorant about characteristic features and specific academic difficulties. The lack of necessary facilities for identification, along with delay in referral and remediation results in severe damage to their self-esteem and motivation to study leading to a vicious cycle of academic, emotional and behavioural problems. There looms a large degree of ignorance among schoolteachers about the diagnosis of dyslexia, resulting in a hostile attitude towards the child.

With sound information children with dyslexia can build better conceptions of their disability, their strengths and weaknesses. Educators and parents must talk to children and help them understand what science is telling us about the dyslexic brain. The investigator will assess the teacher's knowledge and develop a self-instructional module to enhance the target population. Based on the above mentioned literature, the Researcher felt the need to identify Dyslexia among the school children. But with this information comes the challenge of making it practical and useful. One way to do this is to provide the latest, best, scientific information we have, to the teachers who need it most, and the children with dyslexia. These instigate the researcher to select this topic and do the research for the favour offering knowledge to primary school teachers for the bright future of children.

CHAPTER – II

OBJECTIVES

“The only way to reach your long-range goal is through achieving your short range objectives”

PROBLEM STATEMENT

“A STUDY TO ASSESS THE EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON LEVEL OF KNOWLEDGE REGARDING DYSLEXIA AND ITS MANAGEMENT IN SCHOOL CHILDREN AMONG SCHOOL TEACHERS OF SELECTED SCHOOLS, BANGALORE”

OBJECTIVES

- To assess the level of Knowledge regarding dyslexia and its management in school children among

schoolteachers.

- To evaluate the effectiveness of Self Instructional Module regarding dyslexia and its management in school children among school teachers.
- To find out the association between post-test knowledge scores of schoolteachers regarding dyslexia and its management in school children with their selected socio demographic variables.

OPERATIONAL DEFINITIONS

Assess:-

It refers to the measurement of level of knowledge regarding dyslexia and its management in school children among school teachers.

Effectiveness:-

It refers to the significant gain in knowledge as determined by statistical approach regarding dyslexia and its management in school children among school teachers.

Self- Instructional Module:-

It refers to systematically arranged and developed Booklet which includes the information regarding dyslexia and its management in school children.

Knowledge:-

It refers to the verbal response given by the school teachers regarding dyslexia and its management in school children.

Dyslexia:-

It refers to a learning disorder in children who despite conventional classroom experience, fail to attain the language skills of reading, writing and spelling commensurate with their intellectual abilities.

Children:-

It refers to the school children who have been noticed with dyslexia among the age group of 6-12 years.

Teachers:-

It refers to the school teachers who teach in selected Primary and Upper primary schools.

HYPOTHESIS

H₁: There will be a significant increase in post-test knowledge score among school teachers regarding dyslexia.

H₂: There will be a significant association between the post-test knowledge scores with the selected demographic variables.

ASSUMPTIONS

The study assumes that

1. The school teachers may have inadequate knowledge regarding dyslexia and its management.
2. The Self Instructional Module may improve the Knowledge in school teachers regarding dyslexia and its management in children.
3. The knowledge of the school teacher's regarding dyslexia and its management in children may vary according to their demographic variables.

DELIMITATIONS

The study is delimited to:

- Selected school teachers who have completed teacher training programme.

- School teachers who are working only in selected schools in Bangalore.

Conceptual Framework of the Study

A conceptual framework is a theoretical approach to the study of problems that are scientifically based and emphasizes the selection, arrangement and classification of its concepts. Concepts are words that describe objects, properties or events and are basic components of theory. The conceptual framework is a general amalgam of all the related concepts in the problem area.

Conceptual framework deals with abstraction or concepts that are assembled by virtue of their relevance to a common theme. Conceptualization is a process of forming ideas which is utilised and forms conceptual framework for development of research design. It helps the researchers by giving direction to go about entire research process.

The present study aims “to assess the effectiveness of Self Instructional Module on knowledge regarding dyslexia in school children among primary school teachers in selected schools, Bangalore.” The conceptual framework of the study is based on general systems theory with input, throughput, output, and feedback. This theory was first introduced by Ludwig Von Bertalanffy (1968).

According to this theory, systems can be open or closed. All living systems are open, in that, there is continuous exchange of matter, energy and information. Open systems have varying degree of interaction with environment from which the system receives the input gives output in the form of matter, energy or information. The system returns output to the environment in an altered stage, affecting the environment. The feedback is the response of the system. The systems may be positive, negative or neutral.

In the present study applications the concepts are as follows:-

INPUT:

The input refers to the information resources, energy or matter which enters the system. Input is the variables that contribute towards the knowledge of primary school teachers regarding dyslexia.

THROUGHPUT:

It refers to the action needed to accomplish the desired task to achieve the same output. It is the self – instructional module on dyslexia.

OUTPUT:

Output refers to the end results product of the system. In the present study, evaluation of the effectiveness of self- instructional module on dyslexia in school children is the output that may be regarded as the product of process. This is achieved by comparing the pre-test and post-test knowledge scores of the respondents. The outcome of the knowledge of the study would be either desirable with adequate knowledge or undesirable with inadequate knowledge.

FEEDBACK:

It is the process whereby the output of the system is redirected to the input of the same system. If the knowledge is found to be inadequate, the system input, throughput has to be re-evaluated, which is not included in the present study. The feedback is the environmental response of the system, feedback emphasizes on input and throughput to strengthen it.

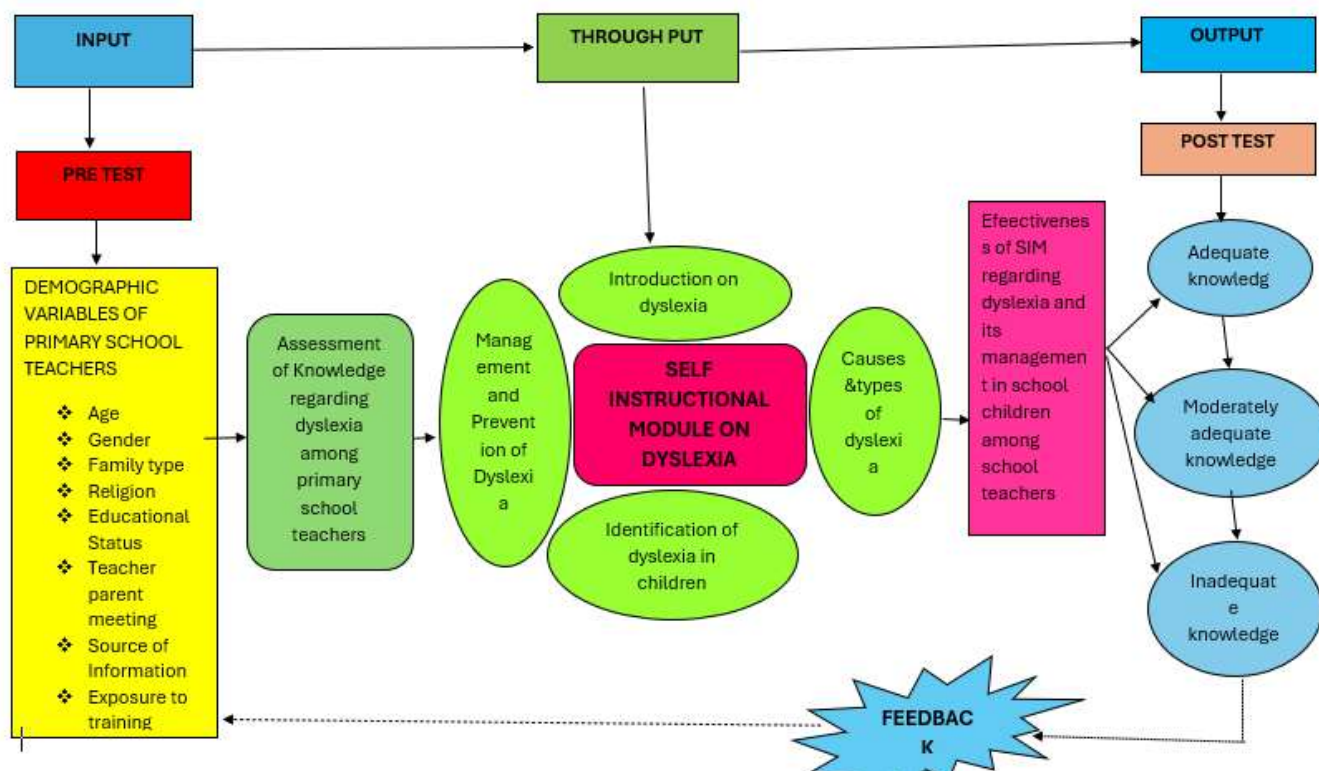


FIG: 1 Conceptual Framework based on general system module Ludwig Von Bertalanffy (1968)

CHAPTER III

REVIEW OF LITERATURE

The review of literature is defined as a broad, comprehensive, in-depth systematic and critical review of scholarly publication, unpublished scholarly print materials, audio-visual material and personal communication.

A Study conducted to assess the Effectiveness of Self Instructional Module on the Knowledge of dyslexia among selected primary school teachers at Karat. An evaluative approach is used to assess the effectiveness of self-instructional module among primary school teachers, quasi experimental one group pre-test and post-test design was used. Teachers were selected by using purposive random sampling technique. The mean knowledge score in relation to total knowledge score shows that in pre-test 15.1 and in post-test 21.62 by using students paired 't' test significant difference is found in mean knowledge score in pre and post-test i.e. $t=6.52$ and $p=0.043$ which is less than 0.05. The overall knowledge mean in the pre-test are 15.1 with standard deviation of 2.978 and in the post-test 21.62 with standard deviation of 2.311.

An experimental study was conducted to determine the effectiveness of structured teaching on identification of Dyslexic students among CBSE school teachers. The study revealed that mean post-test knowledge score of the experimental group was found to be significantly higher than the mean pre-test knowledge score of the control group $t=9.24$. $P < 0.05$. This suggests that structured teaching process for an experimental group was effective which indicates it as an effective teaching strategy in bringing about change in the knowledge among teachers.

A study was conducted in Leuven school Belgium to assess the effectiveness of the structured teaching program on dyslexia in childhood. One group pre-test post-test research design was used. The findings

obtained were mean knowledge score of pre-test and post test revealed that the post-test mean knowledge score was higher (24.52 %) with the SD of +9.52 when compared with pre-test mean knowledge score value which was 16.62% with SD of +6.733. From this study it was clear that there was significant increase in the knowledge level of the teachers regarding Learning disabilities in childhood which would help the teachers to identify Dyslexia at a very initial stage.

A study was conducted to develop, teach, and supervise a structured teaching program for identifying Dyslexia and to evaluate its effect on teacher's knowledge, skills, and attitudes toward dyslexic children. To evaluate the entire structured teaching program teachers were surveyed. The authors obtained 95% response of 144 surveys. They had administered to 72 consecutive teachers rotating through the schools. Fresher's had little confidence in their ability to identify Dyslexia, but after exposure to the program, their perceptions of these abilities increased (all $P < .05$). Eighty-five percent of the teachers felt that attending supervision of the structured teaching process was useful or extremely useful, but only 51% viewed the lecture/small-group session about the program as useful. The study concluded that the structured teaching program improved the participating teacher's perceptions of their knowledge and their ability to identify Dyslexic children effectively.

A Cross sectional study was conducted in Mumbai to compare the cognition abilities in children with dyslexia. The study group consisted of 95 newly diagnosed dyslexic child and the control group consist of 125 non impaired children of age group between 9-14 years. An academic achievement of two years below the actual grade placement on educational assessment with a curriculum based test was considered diagnostic of dyslexia. A battery of 13mcognition function tests based on Guilford's structure of intellect model was administered to each child on four areas of information viz. figural, symbolic, semantic, and behavioural. The study showed that children with dyslexia had significantly lower scores in all area of information. Maximally in the symbolic area (18.4 ± 4.83 vs. 28.36 ± 4.29 , mean difference 9.64, $p < 0.0001$, $df = 218$, 95% CI 8.43-10.86), followed by semantic (18.72 ± 4.29 vs. 28.30 ± 4.29 , mean difference 8.64, $p < 0.0001$, $df = 218$, 95% CI 7.40 -9.87), figural (17.10 ± 3.36 mean difference 8.04, $p < 0.0001$, $df = 218$, 95% CI 6.89-9.19). The study concluded that cognition abilities in children were significantly impaired with dyslexia.

A quasi experimental study was conducted by NIMHANS Bangalore, to assess the effectiveness of structured teaching programme on the level of knowledge of teacher trainees towards dyslexia .The samples were 32 teacher trainees from second year D.Ed. programme at Shree Vijayendra D.Ed. College, Kolar Gold fields. The tools used for the study comprised of socio demographic data, knowledge about dyslexia questionnaire and opinion about dyslexia questionnaire .The pre-test knowledge mean score was 28.78, standard deviation was 4.19 and the post-test knowledge mean score was 28.78, standard deviation was 5.41. The paired difference between the pre-test knowledge and post- test knowledge showed the gain and the value was 11.3 and 'p' value was significant at 0.001. The indicated that study was effective in improving knowledge of teachers on dyslexia.

A survey was conducted to determine the knowledge level of dyslexia among 144 teachers in two regular high schools, 38 teachers in two special schools, and 165 pre-services teachers in a teacher education college in metropolitan city in south state in India. One- way analysis of variance (ANOVA) showed that the knowledge level of dyslexia among teachers working in regular schools was statistically different .Among the three groups, the pre-services teacher group scored the lowest ($M = 60.76$, $SD = 13.36$, $N = 165$) which was below the mean score group ($M = 66.32$, $SD = 13.37$, $N = 347$). The study concluded that teaching

experience and familiarity with persons with dyslexia did not affect the knowledge of 3 group of participants.

A study conducted to assess the effectiveness of structured teaching programme on Dyslexia in children among school teachers in Karnataka. A total 40 school teachers were recruited as samples. Findings of the study revealed that the overall mean pre-test knowledge score obtained by the subjects was 19.38 (41.22%) with the SD 3.93 indicates inadequate knowledge. The overall mean post-test knowledge score was 39.53 (84.10%) with SD 2.86 reveals the significant improvement in the knowledge. The total difference in the mean of overall pre-test and post-test knowledge score was 19.38 and 39.53 respectively with the obtained 't' value of 25.779 was found to be highly significant at the level of $p < 0.001$. It means there is a significant difference between pre-test and post-test level of knowledge of school teachers regarding dyslexia.

A study conducted to evaluate the effectiveness of Self-Instructional Module Regarding Learning Disabilities of Primary School Children among Primary School Teachers in Selected Schools at Coimbatore. The research design adopted for this study was quasi experimental design and research approach adopted for this was to evaluative the educative approach. The sample size was 60 teachers. In this, 30 teachers were selected for experimental group and 30 for control group by purposive sampling method. Teachers were selected in selected schools at Coimbatore. Data was collected by using structured questionnaire, this consists of two sections. Section I on Demographic variables and Section II on Questionnaire regarding knowledge. The finding of the experimental group of teacher's pre- test knowledge and mean score was 16.6 (41.50%) and level of knowledge was inadequate. In post- test knowledge score was 33.3 (83.25%) and the level of knowledge was adequate in experimental group. Similarly in the control group pre- test knowledge mean score was 17.2 (43.00%) and post- test knowledge mean score was 19.1 (47.75%). In the comparison of experimental group and control group. In the pre-test there is no significance difference between the experimental and control group but after self-instruction module it is observed significant difference between experimental and control group. Teachers gained knowledge above 41.75% more knowledge on learning disabilities after administration of self-instruction module.

The study was done among 75 school Teachers to know the effectiveness of Self Instructional Module of Dyslexia among school children on school teachers in Karnataka. The mean percentage of Knowledge in the pre-test was 57.35% with the mean + SD 21.22 + 3.818 and mean percentage of knowledge in the post test was 91.67% with mean + SD 33.92 + 1.700. Overall findings of the study revealed that 52% of teachers had poor knowledge on learning disabilities and only 2% had good knowledge on Dyslexia.

A cross sectional multi staged stratified randomized sampling study was conducted in JN Medical college, in Belgium to measure the prevalence of specific learning disabilities such as dyslexia, dysgraphia and dyscalculia among primary school children. It was conducted among Children's aged 7 to 9 years from 3rd and 4th standard. The prevalence of specific learning disabilities was 15.17% in sampled children, where as 12.5%, 11.2% and 10.5% has dysgraphia, dyscalculia, and dyslexia respectively. This study concludes that the prevalence of specific learning disability is at a higher side of previous estimations in India. The study is unique due to its large geographically representative design and identification of the problem using simplified screening approach and tools.

A study conducted to focus on predicting Dyslexia in children ahead of formal literacy training. Because Dyslexia is a constitutional impairment, risk factors should be seen in preschool. A questionnaire was given to caretakers of 120, 5-year-old children, and a risk index score was calculated based on questions

regarding health, laterality, motor skills, language, special needs education and heredity. It is concluded that it was possible to identify children at the age of 5 who will have Dyslexia at the age of 11 through a questionnaire approach.

A Comparative study was conducted to investigate the incidence of dyslexia among young offenders in Kuwait. A total of 91 children 8 juvenile delinquent welfare centres across Kuwait were interviewed and tested. A measure of non-verbal reasoning ability was used to exclude those with low general ability. The remaining 53 participants were tested on their ability to identify alliteration and rhyme, retain and manipulate sequence of digit and letter names, decode novel letter strings and identify words within letter chains. The result indicated that the percentage of individuals presenting evidence of dyslexia was much larger (greater than 20%) in this population of young offenders than would be expected based on the National average (around 6%) of dyslexic in Kuwait derived from a nationwide study. This study concluded that there is a previous evidence for an increased frequency of dyslexia among young offenders. A descriptive study was conducted on specific dyslexia among 35 children in the age range of 7 – 14 years (both boys and girls) at post graduate institute of medical education and research, Chandigarh to find out the deficits in language and writing skills. The study results revealed 3% of girls and 2% of boys had deficit in language and writing skills and impairments in specific areas of memory, executive functions and perceptual motor tasks.³⁷

A cross sectional study was conducted on cognitive abilities between groups of children with specific learning disability having average, bright normal and superior nonverbal intelligence to assess whether cognition abilities vary in children with specific dyslexia having different grades of non-verbal intelligence. For this study 95 children with specific dyslexia (aged 9-14 years) were assessed. A battery of 13 cognition function test (CFT's) devised by Janna Prabodhinis Institute of psychology, Pune based on Guilford's structure of Intellect model was administered individually on each child in the four areas of information viz. Figural, symbolic, semantic and behavioural. The study revealed there were no statistically significant differences between their mean CFT's scores in any of the four areas of information. The researcher concluded the cognition abilities are similar in children with specific dyslexia having average, bright normal and superior nonverbal intelligence.

A descriptive study was conducted to know the proper statistical data and to show the incidence of dyslexia in Indian population. Aiming to establish the inheritance pattern of dyslexia in 23 selected families, they have ascertained 23 dyslexic problems and their families from the state of Karnataka. Individuals with above 8 years of age, normal performance intelligence quotient (more than 85) and remarkable deviation in reading and writing skills compared to chronological age were considered for the study. Based on the effectiveness the dyslexia phenotypes were classified into 4 types: severe reading, spelling deficit, mild reading spelling deficit, severe spelling deficit and mild spelling deficit. Severe dyslexia phenotypes were more frequent than mild phenotypes. Study concluded that the family history of dyslexia is a consistent risk factor, therefore this knowledge can be applied to the prevention and remediation of dyslexia.

A study was conducted in U.S regarding dyslexia: a specific learning disability that affects an individual's ability to process written language. Consequently, elementary school teachers are teaching students who struggle with inaccurate or slow reading, poor spelling, poor writing, and other language processing difficulties. Findings from studies have indicated that teachers lack essential knowledge needed to teach struggling readers, particularly children with dyslexia. Thus, the purpose of the present study was to examine elementary school teacher's knowledge of basic language concepts and their knowledge and perceptions about dyslexia. Findings from the present study indicated that teachers, on average, were able

to display implicit skills related to certain basic language concepts (i.e. syllable counting), but failed to demonstrate explicit knowledge of others (i.e. phonics principles). Also, teachers seemed to hold the common misconception that dyslexia is a visual processing deficit rather than phonological processing deficit.

A descriptive study was conducted by using Baron and Kenny (1986) criteria for mediation to investigate the extend to learn about dyslexia in the class room. The prevalence is 76.6% of the children may not have chance to affect, and 33.3% are having chances of the learning disability. The sample size is 100 children in school performance, so, the researcher investigates that twenty two children with and 22 children without a diagnosis of learning disability. The results showed that 50% of the student is having problems with learning and teachers were diagnosed during their studies.

A quasi experimental study conducted on impact of an education programme on parental knowledge of specific learning disability at Municipal Medical College and General Hospital Mumbai with the aim to investigate parental knowledge of specific learning disability (SpLD) and to evaluate the impact of an educational intervention on it. The study results shown that, after the intervention, there was significant improvement in parental knowledge on meaning of the term specific dyslexia the researcher concluded that parental knowledge of their child's specific dyslexia significantly improved by a single-session educational programme.

A retrospective study was conducted to explore the experiences of teachers on dyslexia at Childers University Manchester. Qualitative methodology was used and semi structured interviews are carried out with a convenience sample of 7 teachers with formally diagnosed dyslexia. Data were analysed using a thematic network approach. Fear of ridicule and discrimination exit for students with dyslexia and delays in identification, referral and testing may adversely affect learning. Requirements for support relate to personal attributes, knowledge and perception. A perceived lack of caring in teachers for dyslexics is of concerned. The study concluded that the early diagnosis of dyslexia enables provision of appropriate support. Professional and legislative guidance provides information for those working with students who have a disability.

A study was conducted to examine elementary school teacher's knowledge of basic language concepts and their knowledge and perception about dyslexia. Consequently, elementary school teachers are teaching students who struggle with inaccurate or slow reading, poor spelling, poor writing and other language processing difficulties. Findings from studies have indicate that teachers lack essential knowledge needed to teach struggling readers, particularly children with dyslexia. However, few studies have sort to assess teacher's knowledge and perception about dyslexia in conjunction with knowledge of basic language concepts related to reading instruction. The study concluded that teachers on average were able to display implicit skills related to certain basic language concept, but failed to demonstrate explicit knowledge of others.

A study was conducted to assess the knowledge level of teachers of students with reading disabilities, converting a meta-analysis to practice. This study reviews the result of a meta-analysis of the experimental published literature that compares the academic, cognitive and behavioural performance of students with regarding disabilities with average achieving readers. The meta- analysis shows that the deficits in the understanding levels of teachers independent of the classification measures emerging for students with reading disability on measures of vocabulary, maths spelling and specific cognitive process related to naming speed, phonological processing and verbal memory. The study concluded that the teachers had yielded greater deficits related to identifying student's average reading counterparts in the same low range.

A study was conducted in Queen Mary School, Hong Kong, to evaluate and analyse the knowledge of teachers regarding Identification of dyslexia characterized by lack of flexibility and impairment in social interaction. A validated self-administered questionnaire was distributed to all the teachers. Findings showed that out of 30 participants, 17 were having basic skills training language disorders, other 13 had formal training in teaching. The study concludes that 62% of respondents were aware of dyslexia as a learning disorders in a classroom settings.

A retrospective study was conducted in Birkevaenget Holback, Denmark to assess the knowledge level of teachers on social skills training for dyslexia in children aged 5 to 10years. Randomized trials were considered according to the Cochrane Handbook for systematic reviews of interventions. The study suggest that the instructors possess deficient knowledge and there is little evidence to support social skills training for children with dyslexia. There is need for more trails, with low risk of bias and with a sufficient number of participants, investigating the efficacy of social skills training versus no training for children.

A study conducted to explore the academic learning experiences on dyslexia among teachers in a skill based programme. It was examined using a self-report questionnaire which was distributed to 29 teachers. 27 responses were received and were assessed in terms of peer support, shared knowledge, life experiences, level of understanding, motivation and learning. They valued the support of peers, and shared existing knowledge and skills to help each other to learn. The study concluded that teachers develop a strong learner identify and had different needs to their non-secondary peers. More work is required to explore the specific learning needs of teachers.

A study conducted on impairments in auditory processing and speech perception of pre-school children identified with Dyslexia. The findings indicated that impairments in auditory processing and speech perception are not merely an epiphenomenon of reading failure. Although no specific directional relations were observed between auditory processing, speech perception and phonological awareness, the highly significant concurrent and predictive correlations between all these variables suggested a reciprocal association and corroborated the evidence for the auditory deficit theory of Dyslexia.

A descriptive study was conducted to know the depth of proper statistical data and to show the incidence of dyslexia in Indian population. Aiming to establish the inheritance pattern of dyslexia in 23 selected families, they have ascertained 23 dyslexic propends and their families from the state of Karnataka. Individuals with above 8 years of age, normal performance intelligence quotient (>85) and remarkable deviation in reading and writing skills compared to chronological age were considered for the study. Based on the affectedness, the dyslexia phenotypes were classified into four types: severe reading spelling deficit, mild reading spelling deficit, severe spelling deficit and mild spelling deficit. Severe dyslexia phenotypes were more frequent than mild phenotypes. The study concluded that the Family history of dyslexia is a consistent risk factor; therefore this knowledge can be applied to the prevention and remediation of dyslexia.

A study was conducted to assess the incidence and prevalence of Dyslexia in Nemours Bright Start School Dyslexia Initiative, Jacksonville, Florida. The incidence and prevalence of learning disabilities were estimated using a mathematical method from International statistics. Results reveal that the incidence is described from 2002- 2004 and projected to the year 2007; prevalence has been reported from the years 2001- 2005. The prevalence has continued to increase due to 3 main factors which include, improper teaching methods, insufficient interventions and less manpower to deal children with special needs in a educational setup.

A study was conducted in Harvard School, Boston, Massachusetts with a purpose to determine the underlying causes of the language and literacy difficulties experienced by dyslexic children. Dyslexic children have been found to exhibit timing difficulties in the domains of language, music, perception and cognition, as well as motor control. The researcher suggested that group music lessons, based on singing and rhythm games, might provide a valuable multisensory support tool for dyslexic children by encouraging the development of important auditory and motor timing skills and subsequently language skills. The study concluded that classroom music lessons had a positive effect on both phonologic and spelling skills, but not reading skills. Results also indicated that dyslexic children showed difficulties with musical timing skills while showing no difficulties with pitch skills. The results of the research program are the potential relationship between musical training and improved language and literacy skills.

A study was conducted to determine the prevalence of Psychological depression in children with Dyslexia in Auckland, New Zealand. This study has precipitated the development of programmes aimed at preventing the onset of depression. This review evaluates evidence for the effectiveness of these prevention programmes. The determinants for inclusion were that the trial included a psychological and educational prevention programme for children aged 5 to 10 years old who did not fall into the clinical range on standardized, validated, and reliable rating scales of depression. The study concluded that although there is insufficient evidence to warrant the introduction of depression prevention programmes currently, results to date indicate that further study would be worthwhile. There is a need to compare interventions with a placebo or some sort of active comparison so that study participants do not know whether they are in the intervention group or not, to investigate the impact of booster sessions, and to consider practical implementation of prevention programmes.

A retrospective study was conducted to know the mounting evidence of the neurodevelopmental disorder dyslexia in its neurobiological and neurocognitive bases. The study confirms that, neurobiological, dyslexia is characterized by dysfunction of the normal left hemisphere language network and also implicates abnormal white matter development. Studies concluded that the accounting for reading experience demonstrate that many recorded neural differences showing causes rather than effects of dyslexia. Six predisposing candidate genes have been identified, and evidence shows gene by environment interaction.

An exploratory descriptive design was used to determine the Response to intervention for dyslexia in the primary grade reading. The purpose of this article is to describe the current research base and identify research needs related to response to intervention (RTI) frameworks in primary-grade reading. Research is reviewed on early reading instruction and intervention, the implementation of multitier reading interventions, and the determination of intervention responsiveness. The study concluded that Although RTI research may be expensive and difficult to implement, it may contribute to improved reading outcomes for Dyslexic students who are otherwise at risk of serious negative life consequences.

A study was conducted in Yale University School, New Haven to determine the effectiveness of social skills groups for improving social competence, social communication, and quality of life for students with dyslexia who are six to 10 years of age. Randomized control trials (RCTs) were taken. Outcomes sought were standardized measures of social competence, social communication, quality of life, emotion recognition, and any other specific behaviours. Researchers independently selected and appraised studies for inclusion and assessed the risk of bias in each student. The study concluded that there is some evidence that social skills groups can improve social competence for some children with learning disorders. More

research is needed to draw more robust conclusions, especially with respect to improvements in quality of life.

A study was conducted to observe the effectiveness of structured teaching education on reading skills (that is, oral reading skills, reading comprehension, reading fluency, phonological awareness, and spelling) in children with dyslexia. Randomized controlled trials were included. The primary outcomes were related to the main domain of the reading: oral reading skills, reading comprehension, reading fluency, phonological awareness, and spelling, measured through validated instruments. The secondary outcomes were self-esteem and academic achievement. Two researchers independently screened all titles and abstracts identified through the search strategy to determine their eligibility. The study concluded that there is an evidence available from randomized control trials to base a judgement about the effectiveness of STP for the improvement of reading skills in children.

A study determined the effectiveness of self-instructional module on the knowledge of Dyslexia and its management. The study showed statistical difference between pre-test score and post-test on knowledge at .001 level. It suggested Self-instructional module was an effective teaching and learning material in bringing a change in the knowledge. And it was also accepted by majority of the subjects as a useful material for learning.

CHAPTER IV

METHODOLOGY

This chapter deals with the methodology adopted for assessing the knowledge of school teachers regarding dyslexia in school children. It includes the description of research approach, research design, setting of the study, sample and sampling technique, development of data collection tool, development of self-instructional module, procedure for data collection and the plan for data analysis.

RESEARCH APPROACH:

Research approach used in the study was evaluative approach.

RESEARCH DESIGN:

The research design adopted for the present study is pre-experimental design. One group pre-test and post-test design. The design chosen for the study is presented in the figure as

GROUP:		Pre-test (day 1)	Intervention	Post-test (day 8)
Primary Teachers	School	O ₁	X	O ₂

Key: O₁ – Assessment of level of knowledge (pre-test)

X – Self-Instructional Module on dyslexia (intervention)

O₂ – Assessment of level of knowledge (post-test)

SETTING:

Setting is a physical location in which data collection takes place based on the geographical proximity, feasibility of conducting the study, economy of time and money, and availability of the samples, the

present study was conducted in schools which are about 2kms away from Noor college of Nursing, Bangalore.

The study is planned to be conducted in the following schools:

1. Government Urdu H.P school, Bhoopasandra, Bangalore.
2. New Florence public school, Nagashettyhally, Bangalore
3. S.M.E.H school, Bhoopasandra, Bangalore.

VARIABLES:

INDEPENDENT VARIABLE:

In this study the independent variable is the Self Instructional Module regarding dyslexia and its management in children.

DEPENDENT VARIABLE:

In this study the dependent variable is the knowledge level of school teachers regarding dyslexia and its management in children.

EXTRANEIOUS VARIABLES:

It consists of Demographic variables includes Age, Gender, Religion, Type of family, Educational status, Source of information, Exposure to training, and Parent teachers meetings.

POPULATION:

The population referred to as the target population, which represents the entire group or all elements like individuals or objects to meet certain criteria for inclusion in the study. The target population of the present study comprised of school teachers who are working at selected schools, Bangalore.

SAMPLE:

Sample is a subset of a population selected to participate in the study. The sample consists of 60 school teachers.

SAMPLE SIZE:

The sample size consists of 60 school teachers who fulfilled the inclusion criteria during the period of this study.

SAMPLING TECHNIQUE:

Sampling defines the process of selecting a group of people or other elements with which to conduct a study. In the present study, non-probability convenient sampling technique was adopted to select the samples based on the inclusion criteria.

SAMPLING CRITERIA

Inclusion Criteria:

The school teachers who are

- working in primary and upper primary section.
- willing to participate in the study.
- available during the time of data collection.

Exclusion Criteria:

The school teachers who

- are not interested to be a part of study.
- does not understand English or Kannada.
- are working in high school.

SELECTION AND DEVELOPMENT OF TOOL:

Based on the objectives of the study, a self-administered questionnaire was prepared in order to assess the knowledge of the school teachers regarding Dyslexia and its management in children. The main strengths behind developing the tool was, related review of literature, based on the opinions and suggestion of experts, discussions with colleagues and personal experience in clinical settings, books, journals, internet etc. All of them provided relevant data necessary to construct the tool on dyslexia and its management.

DISCRIPTION OF THE TOOL USED IN THE STUDY:

The self-administered questionnaire consist of two parts;

Part 1: Consist of socio demographic variables consist of 8 items.

Part 2: Consist of structured knowledge questionnaire consist of 30 items.

DEVELOPMENT OF SELF-INSTRUCTIONAL MODULE

SIM regarding dyslexia and its management in school children was developed, based on review of literature. The self-instructional module was given for schoolteachers it includes the definition, types, causes, clinical features, assessment, diagnosis, management and prevention of dyslexia. At the end of session, clarification was done.

The steps adapted on review of literature were:

- Preparation of first draft of information booklet.
- Content validity by experts.
- Editing of information booklet.
- Preparation of final draft of information booklet.

TESTING OF INSTRUMENT:

Content validity:

Content validity of the tool obtained on the basis of opinion from different experts, in the field of paediatric medicine, paediatric nursing, and other nursing departments. Necessary changes were made in the structured knowledge questionnaire and then the tool was finalized.

Reliability:

Reliability of the research instrument is defined as the extent to which the instrument yields the result on repeated measures. It is concerned with consistency, accuracy, precision, stability, aquiline, and homogeneity. The reliability of the tool was established by using split-half method and the tool was found to be reliable.

PILOT STUDY:

Pilot study is a small-scale version or trial run of major study. The purpose of the pilot study is to obtain information regarding accessibility and feasibility of the study.

The pilot study was conducted to assess the feasibility and reliability of the tool. Six (6) teachers were randomly selected from selected school, Bangalore and the pre-test is administered using structured questionnaire on knowledge regarding dyslexia and its management. Then the Self-Instructional Module is given on the same day. After 7 days, the post test was conducted by using the same questionnaire to evaluate the effectiveness of Self-Instructional Module. The subjects selected for the pilot study were not included in the main study.

PROCEDURE FOR DATA COLLECTION:

Formal administration permission was obtained from the principal of Florence public school & S.M.E.H School, prior to data collection. The main study data collection was done from 01-02-2018 to 17-03-2018. Subjects were selected by non-probability convenience sampling technique. The investigator explained the purpose of the study to the respondents, then obtained consent and planned the time schedule for collecting the data.

To assess the knowledge of primary school teachers pre-test was conducted with the help of structured knowledge questionnaire. The self-instructional module was administered on the same day after the pre-test. After 7 days, post-test was conducted using same structured knowledge questionnaire to evaluate the effectiveness of self-instructional module. Confidentiality and autonomy was maintained throughout the study.

PLANS FOR DATA ANALYSIS:

In the present study, data obtained were analysed on the basis of the objectives of the study using descriptive and inferential statistics. A master data sheet was prepared with responses given by subjects. Descriptive statistics such as mean, mean percentage, Standard deviation and inferential statistics such as paired 't' test and chi square tests were used to analyse and interpret the data.

SL.NO	STATISTICAL ANALYSIS		DESCRIPTION
	DATA ANALYSIS	METHOD	
1	Descriptive statistics	-Frequency - percentage distribution, mean and standard deviation	Distribution of school teachers according to the demographic variables to assess the knowledge level of primary school teachers.
2	Inferential statistics	Paired 't' test	Comparison of pre-test and post-test knowledge scores of primary school teachers.
		Chi square	Association of post-test knowledge scores of primary school teachers with their selected demographic variables

SCORE-INTERPRETATION

Each item has an option with only one correct response. The score of one (1) was allotted to each correct response and a score of zero (0) was given to wrong response. Thus the total knowledge questionnaire has a minimum of score zero and a maximum of score 35 and it is used for the assessment of knowledge in pre and post test.

FINAL SCORING

Knowledge questionnaire are sub divided under following aspects:

Level of Knowledge	Score
Inadequate knowledge	<40%
Moderate knowledge	41-80%
Adequate knowledge	>80%

ETHICAL CONSIDERATION:

1. In order to clear the ethical consideration permission obtained from the ethical committee of Noor College of Nursing, Bangalore to conduct the present study.
2. To collect the data needed for the study from the sample, the prior permission has taken from the higher authorities of selected schools, Bangalore.
3. Consent was obtained from the sample those who are willing to participate in the study.

SAMPLE SIZE OF ESTIMATION

SAMPLE:

The sample is a subset of population under the study.

SAMPLE SIZE:

A sample is the subset of population element, which are the most basic unit about which data are collected. The sample for this study is school teachers, Bangalore.

The formula is given below-

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right)^2 \sigma^2}{d^2}$$

Were,

$$Z_{1-\frac{\alpha}{2}} = 1.96 \text{ at } .05$$

$$Z_{1-\beta} = 1.28 \text{ at } 90\% \text{ power}$$

n = minimum sample size required

σ = population standard deviation of the outcome variance

=2.98 (based on pilot study)

d = clinically significant difference, = 1.29

So,

$$n = \frac{(1.96+1.28)^2 + (2.98)^2}{(1.66)^2} = 56.11$$

After the calculation sample size estimated was 56. So, total of 60 schoolteachers are taken in the present study.

CHAPTER V RESULTS

Analysis is the process of categorizing, ordering, manipulating and summarising the data to obtain answers to research questions. The purpose of analysis is to reduce data to indelible and interpretable from the relations of research problems can be studied and tested.

The chapter deal with the systematic presentation of the analysed data followed by the interpretation of the data. The collected information is organized, tabulated, analysed and interpreted using descriptive and inferential statistics. Based on the objectives of the study, the finding were organised in the following sections.

OBJECTIVES:

- To assess the level of Knowledge regarding dyslexia and its management in school children among school teachers.
- To evaluate the effectiveness of Self-Instructional Module regarding dyslexia and its management in school children among school teachers.
- To find out the association between post-test knowledge scores of schoolteachers regarding dyslexia and its management in school children with their selected socio demographic variables.

Presentation of data

The analysed data has been organised and presented in the following sections.

Section 1: Dealt with socio demographic variables of the primary school teachers.

Section 2: Dealt with level of knowledge among primary school teachers regarding dyslexia and its management in school children.

Section 3: Dealt with effectiveness of self-instructional module on knowledge regarding dyslexia and its management in school children.

Section 3: Dealt with association between post-test knowledge scores of the primary school teachers with selected socio demographic variables.

SECTION A

Sociodemographic variables of Primary School Teachers

Distribution of sample according to age

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
1	Age in years		
	a) 21-30 years		
	b) 31-40 years	26	43.3
	c) 41-50 years	18	30
	d) 51 and above	10 06	16.7 10

TABLE 1: The above table shows the age of school teachers majority 26(43.3%) were in the age group of 21-30 years, 18(30%) were in the age group of 31-40 years and 10(16.7%) were in the age group of 41-50 years and 6(10%) were in the age group of 51 and above.

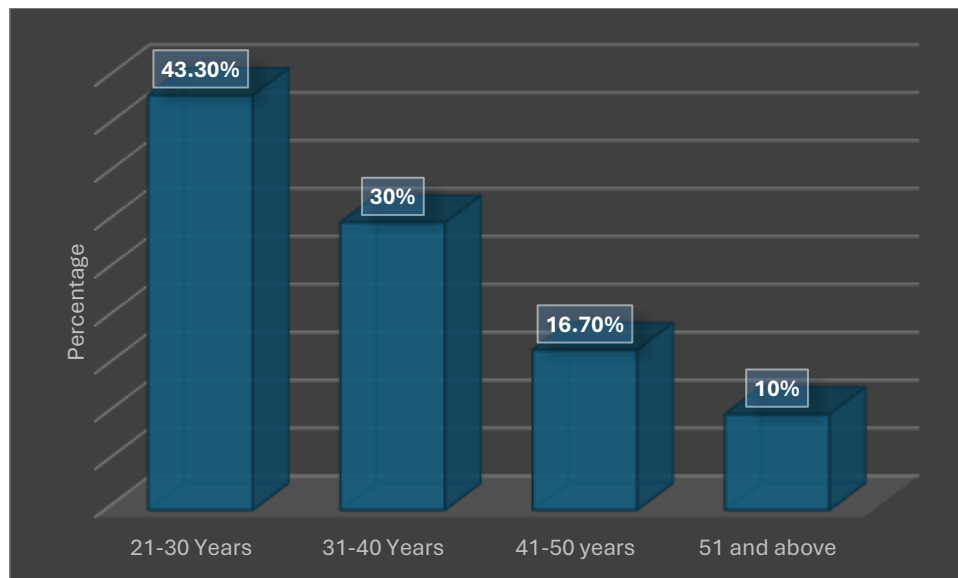


Figure 2: Bar diagram showing the distribution of sample according to age

Distribution of sample according to gender

N= 60

S.NO	Demographic Variables	Frequency(F)	Percentage (%)
2	Gender		
	a) Male	12	20
	b) Female	48	80

Table 2: The above table shows the gender of primary school teachers, majority 48 (80%) were females and 12(20%) were males.

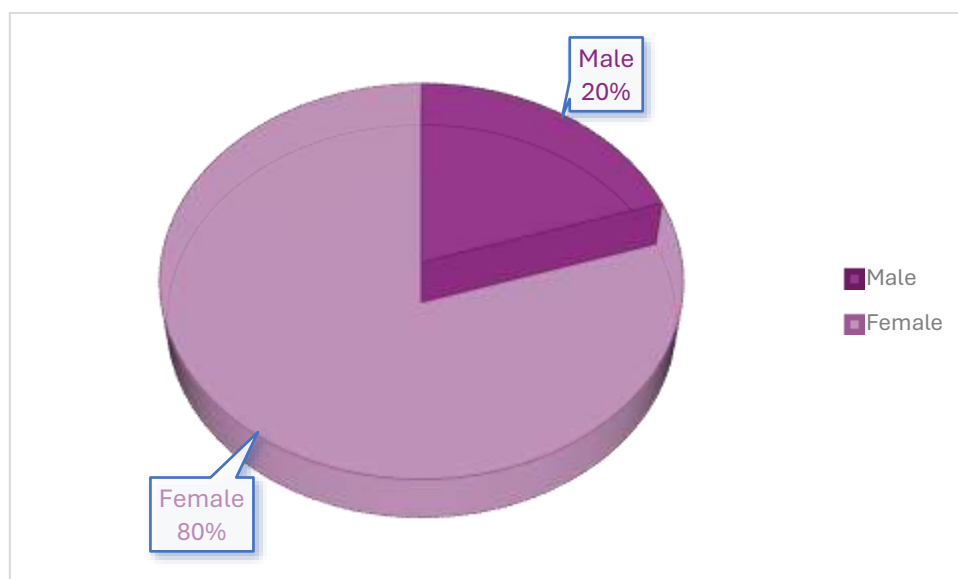


Figure 3: Pie diagram showing the distribution of sample according to gender

Distribution of sample according to type of family.

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
3	Type of family		
	a) Nuclear family	34	56.7
	b) Joint family	24	40
	c) Extended family	02	3.3

TABLE 3: The above table shows the type of family of school teachers, majority 34 (56.7%) were from nuclear family, 24 (40%) were from the joint family and 2 (3.3%) were from extended family.

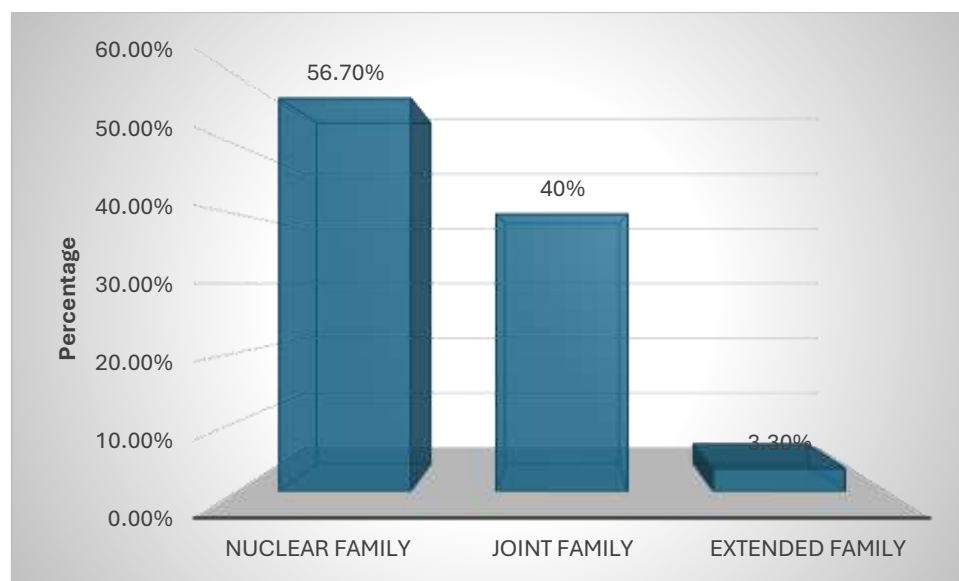


Figure 4: Bar diagram showing the distribution of sample according to type of family

Distribution of Sample according to religion

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
4	Religion		
	a) Hindu	34	56.7
	b) Christian	13	21.7
	c) Muslim	07	11.7
	d) Others	06	10

Table 4: The above table shows the religion of primary school teachers, majority 34 (56.7) belongs to Hindu religion, 13 (21.7%) belong to Christian religion and 7(11.7%) belongs to Muslim religion and 6(10%) belongs to other religion.

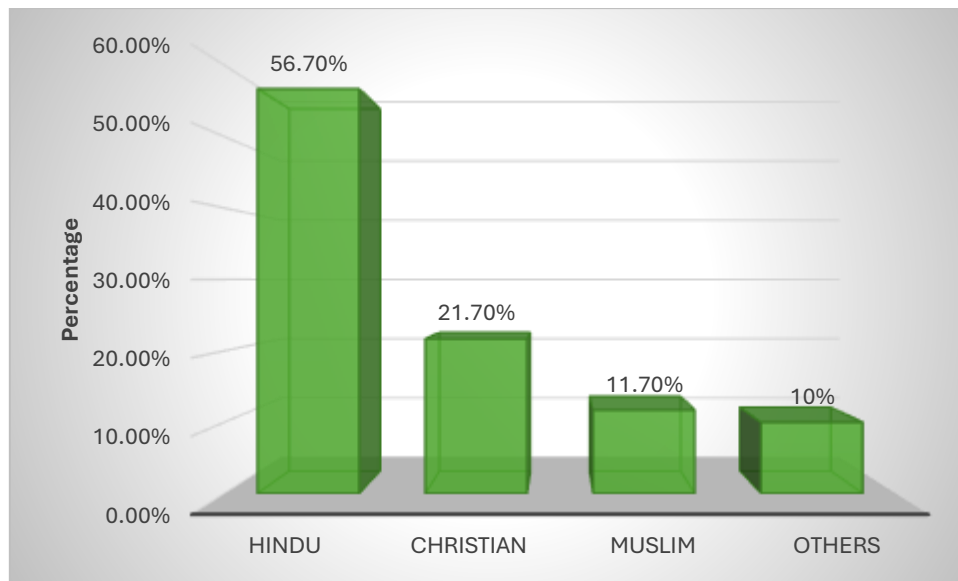


Figure 5: Bar diagram showing the distribution of the religion among school teachers.

Distribution of sample according to Educational Status.

N=60

S.NO	Demographic Variables	Frequency	Percentage%
5	Educational Status		
	a) Graduate	21	35
	b) Post graduate	15	25
	c) TCH OR D Ed	4	40

Table: 4 the above table shows the Educational Status of School Teachers, majority 24(40%) completed TCH or D Ed, 21 (35%) completed Graduation and 15(25%) completed Post graduation.

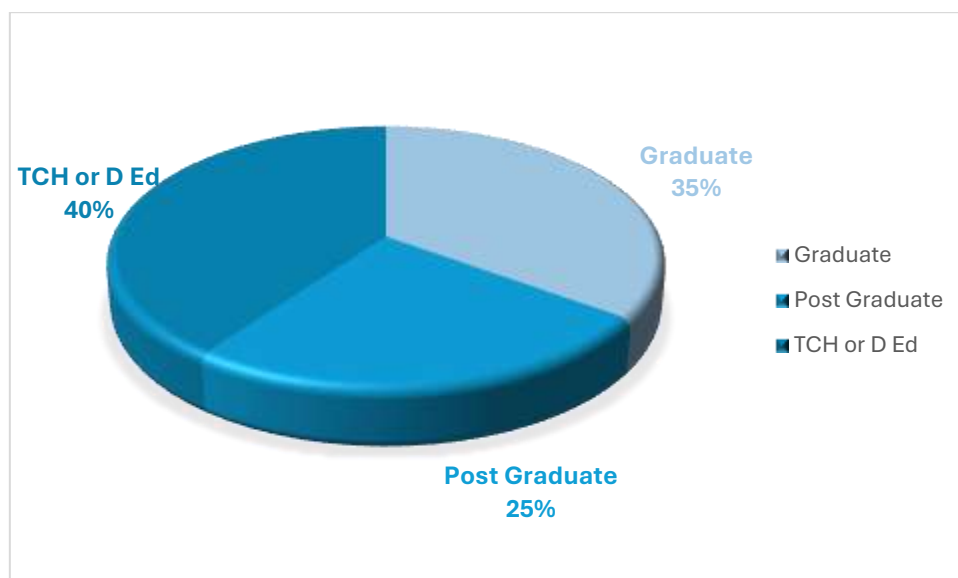


Figure 6: Pie diagram showing the distribution of Educational Status among school teachers.

Distribution of sample according to source of information about dyslexia and its management in children.

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
6	Source of information		
	a) Electronic media	42	70
	b) Print media	14	23.3
	c) Health personnel	04	6.7

Table 6: Regarding the source of information on dyslexia and its management in children majority 42(70%) received information from Electronic Media 14(23.3) received information from the print media and 4(6.7%) received information from the health personnel.

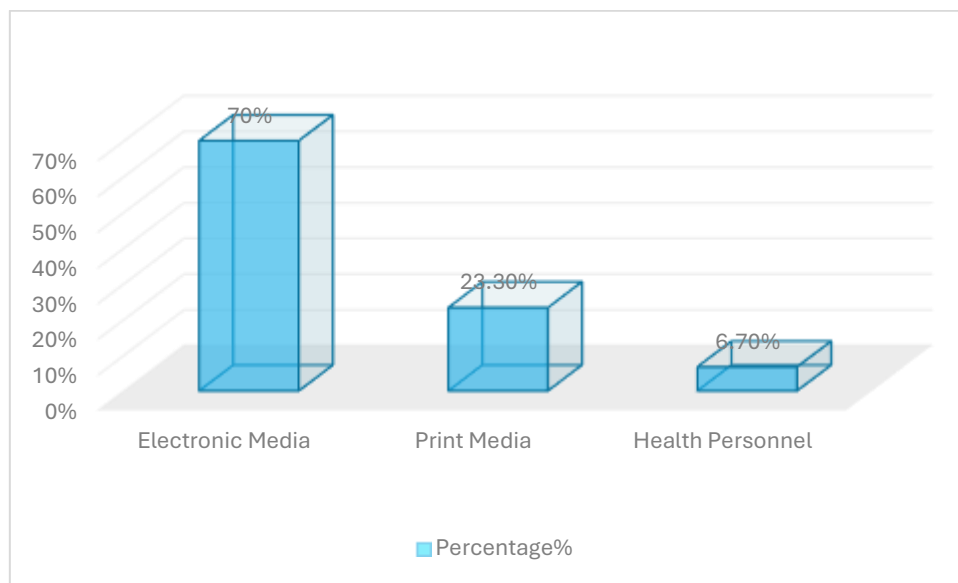


Fig 7 bar diagram showing the distribution of sample according to source of information regarding dyslexia and its management.

Distribution of samples according to the teacher parent meetings

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
7	Teachers parents Meetings		
	a) Yes	30	50
	b) No	30	50

Table 8: The above table shows the teacher parent meeting conducted among the school teachers, 30(50%) responded Yes and 30(50%) responded No

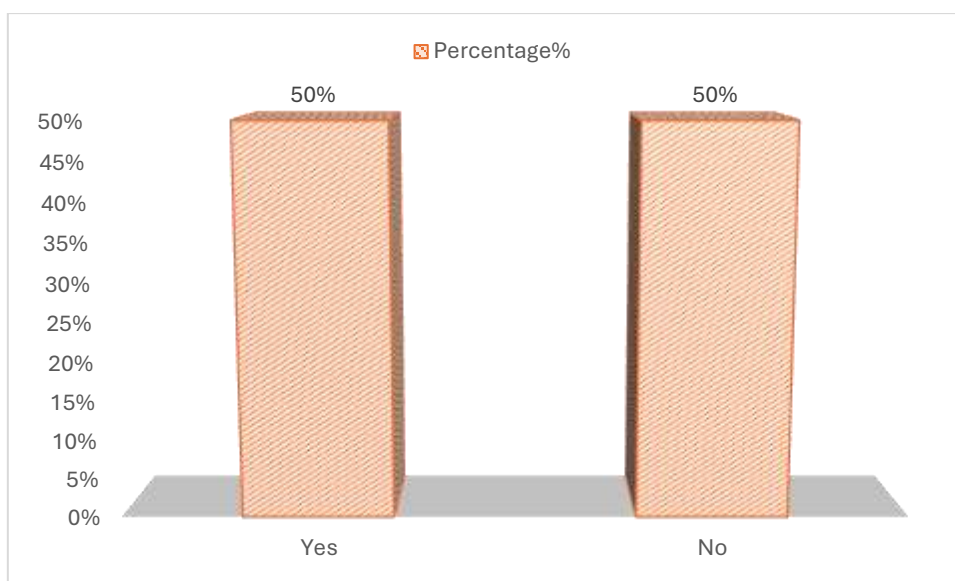


Figure 8: Bar Diagram showing the distribution of teacher parent meetings among school teachers.

Distribution of sample according to exposure to training programmes

N=60

S.NO	Demographic Variables	Frequency(F)	Percentage%
8	Exposure to training		
	a) Yes	28	46.7
	b) No	32	53.3

Table 8: The above table shows the, exposure to training programme of dyslexia and its management, majority 32(56.3%) responded No and 28(46.7%) responded Yes.

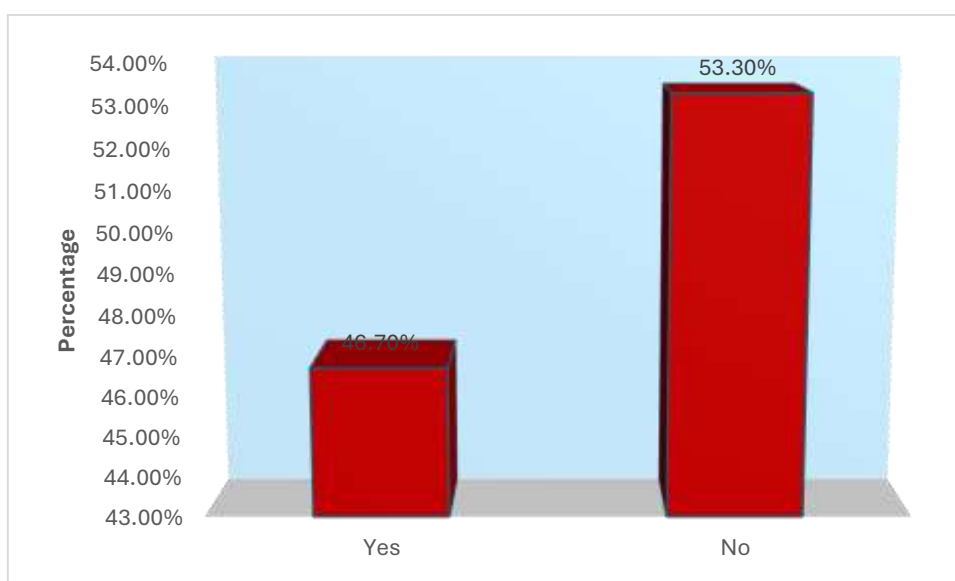


Figure 9: Bar diagram showing the distribution of exposure to training programme regarding identification of dyslexia and its management in children among school teachers.

SECTION – II

Aspects wise pre-test knowledge scores of school teachers regarding dyslexia and its management. (N=60)

Knowledge	Maximum Score	Mean	Mean percentage%	SD
Introduction	4	1.46	36.5	0.42
Causes and Clinical features	4	1.33	33.25	0.67
Types	2	0.83	41.5	0.39
Identification and Assessment	9	3.4	37.7	1.58
Management and Prevention	11	5.31	48.27	1.41

Table 11 Aspect wise pre-test knowledge score sof school teachers regarding dyslexia and its management.

The above table shows aspect wise mean, mean percentage and standard deviation pf pre-test knowledge scores among school teachers regarding;

With regard to introduction to dyslexia and its management 1.46 mean and 36.5% mean percentage found. In relation to causes and clinical features 1.33 mean and 33.25% mean percentage was identified. Related to types 1.68mean and 84% mean percentage has found. With regard to identification and assessment 3.4 mean and 37.7% mean percentage was identified. Related to management and prevention 5.31 mean 48.27% mean percentage has identified.

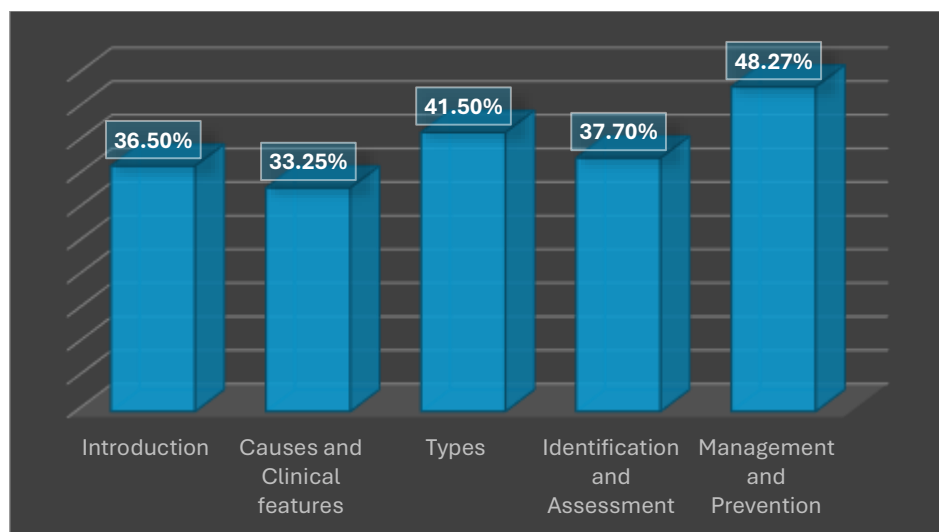


FIG 10: Bar diagram showing the aspect wise pre-test knowledge scores of school teachers regarding dyslexia and its management.

Level of knowledge in school teachers regarding dyslexia and its management

(N=60)

Knowledge	Maximum Score	Score range	Mean	Mean percentage%	SD
Introduction	4	0 - 4	3.85	96.25	0.28
Causes and Clinical features	4	0 - 4	3.76	94	0.76
Types	2	0 - 2	1.68	84	0.43
Identification and Assessment	9	0 - 9	7.91	87.8	1,03
Management and Prevention	11	0 - 11	9.93	90.27	1.68

Table 11 Aspect wise post-test knowledge scores of school teachers regarding dyslexia and its management.

The above table shows aspect wise mean, mean percentage and standard deviation pf post-test knowledge scores among school teachers regarding;

With regard to introduction to dyslexia and its management 3.85 mean and 96.25% mean percentage found. In relation to causes and clinical features 3.76 mean and 94% mean percentage was identified. Related to types 1.68mean and 84% mean percentage has found. With regard to identification and assessment 7.91 mean and 87.8% mean percentage was identified. Related to management and prevention 9.93 mean 90.27% mean percentage has identified.

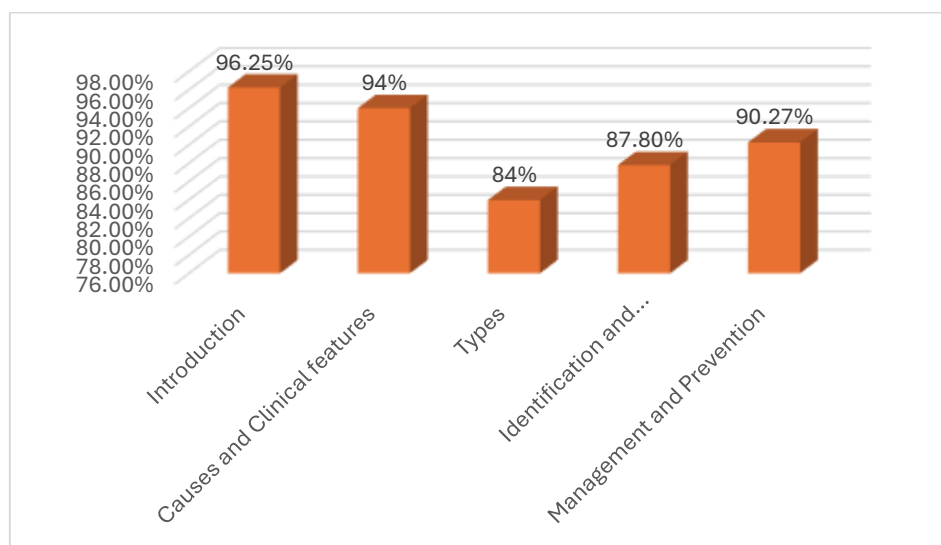


FIG 11: Bar diagram showing the aspect wise post-test knowledge scores of school teachers regarding dyslexia and its management.

Assessment of overall pre-test and post-test knowledge score regarding dyslexia and its management in children among school teachers.

(N=60)

Level of Knowledge	Pre-test		Post-test	
	Frequency	Percentage%	Frequency	Percentage%
Inadequate (<40)	25	41.6	0	0
Moderately Adequate (41-80)	35	58.3	3	5
Adequate (>80)	0	0	57	95

Table 14 shows that the majority 35(58.3%) school teachers had moderately adequate knowledge 25(41.6%) had inadequate knowledge and none of them had adequate knowledge in pre-test and after the delivery of self-instructional module on dyslexia and its management there is an increase in the level of knowledge among school teachers, in post-test majority 57(95%) had adequate knowledge 3(5%) had moderately adequate knowledge and none of them had inadequate knowledge.

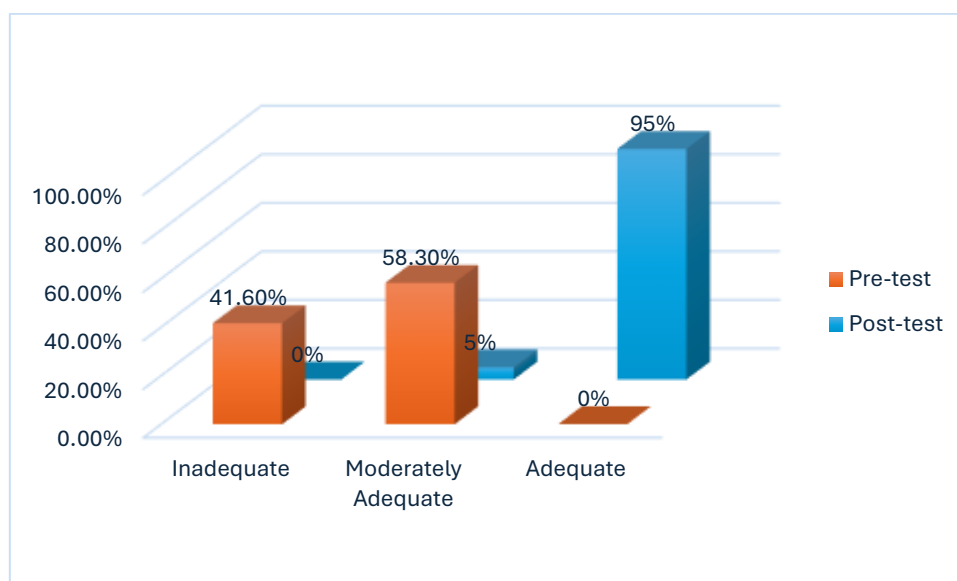


Fig 13 distribution of knowledge scores among school teachers in pre and post-test

SECTION III

Assess the effectiveness of self-instructional module on dyslexia and its management among school teachers.

(N=60)

Knowledge	Mean	Mean%	Mean difference	S.D	df	Paired't' test value	Paired 't'table value	Significance
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Pre-test	12.35	41.16	14.8	2.3	59	37.15	2.00	P<0.005
Post-test	27.15	90.5		2.1				

S* Significance $p < 0.05$**

Table 13: paired 't' test value between pre-test and post-test knowledge scores among school teachers regarding dyslexia and its management.

The above table shows that pre-test knowledge mean was 12.35(41.16%) and 27.15(90.5%) in post-test with a mean difference 14.8, the calculated paired't' value at df (59) obtained was 37.15 at $p < 0.05$ level of significance. The calculated paired't' value is greater than the table value (2.00) at 0.05 level of significance. Therefore H_1 self-instructional module on dyslexia and its management among school teachers has shown effectiveness in the knowledge of school teachers was proved and accepted.

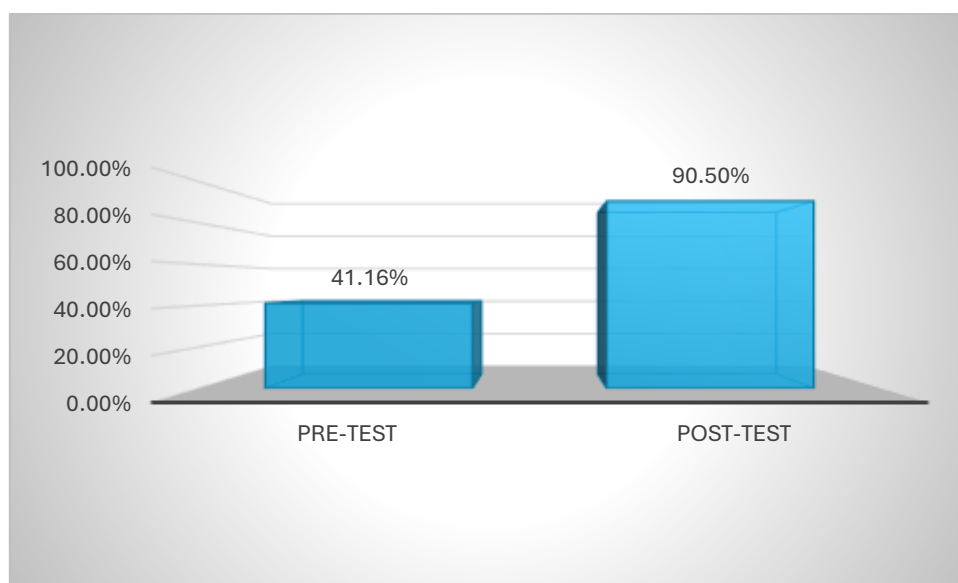


Fig12 Bar diagram showing the distribution in the overall pre-test and post-test knowledge scores.

SECTION IV

Association between the post-test knowledge scores of school teachers with their selected demographic variables.

S N O	Demographi c Variables	Category	Knowledge Level		Total	d f	Chi squa re value	t- valu e	Significanc e
			Moderat e	Adequat e					
1	Age in years	21-30	2	24	26	3	10.2	3.18	p < 0.05 S***
		31-40	1	17	18				
		41-50	0	10	10				
		50 & above	0	6	6				
2	Gender	Male	0	12	12	1	0.78	12.7	p > 0.05 NS
		Female	3	45	48				

3	Family Type	Nuclear Family	0	38	38	2	6.3	4.3	$p < 0.05$ S***
		Joint Family	3	17	20				
		Extended Family	0	2	2				
4	Religion	Hindu	0	34	34	3	11.2	3.18	$p < 0.05$ S***
		Christian	1	12	13				
		Muslim	2	5	7				
		Others	0	6	6				
5	Educational Status	Graduate	3	18	21	2	5.86	4.3	$p < 0.05$ S***
		Post graduate	0	15	15				
		TCH or DEd	0	24	24				
6	Source Of Information	Electronic Media	2	40	42	2	0.35	4.3	$p > 0.05$ NS
		Print Media	1	13	14				
		Health Personnel	0	4	4				
7	Teachers Parents Meetings	Yes	1	29	30	1	1.84	12.7	$p > 0.05$ NS
		No	2	28	30				
8	Exposure to Training	Yes	0	28	28	1	2.76	12.7	$p > 0.05$ NS
		No	3	29	32				

Table 16 association between the post-test knowledge scores of school teachers with their selected socio demographic variables.

The above table reveals that there is a significant association between post-test knowledge scores and selected demographic variables such as age, family type, religion and educational status as their obtained chi-square value is greater than the table 't' value at $p < 0.05$ level of significance.

There is no significant association between post-test scores and selected demographic variables such as gender, teacher's parents meetings, and exposure to training, source of information regarding dyslexia and its management. Their obtained chi square value is lesser than the table 't' value at $p > 0.05$ level of significance. Therefore H_2 there is a significant association between post-test knowledge scores of school teachers with their selected demographic variables was proved and accepted.

CHAPTER VI DISCUSSION

The discussion section is devoted to the thoughtful insightful analysis of the finding, leading to a discussion of their clinical and theoretical utility. The present study was designed to "assess the

effectiveness of self-instructional module on the knowledge of dyslexia and its management in children among primary school teachers in selected schools at Bangalore.”

OBJECTIVES

- To assess the level of Knowledge regarding dyslexia and its management in school children among schoolteachers.
- To evaluate the effectiveness of Self Instructional Module regarding dyslexia and its management in school children among school teachers.
- To find out the association between post-test knowledge scores of schoolteachers regarding dyslexia and its management in school children with their selected sociodemographic variables.

In this study an evaluative research approach was used. The research design selected for the study was pre-experimental one group pre-test and post-test design. The independent variable was self-instructional module and dependent variable was knowledge of primary school teachers on dyslexia. The sample of this study comprised of 60 schoolteachers from selected schools at Bangalore. Nonprobability convenient sampling technique was used to draw the sample for the study. The obtained data was analysed in terms of using descriptive and inferential statistics.

The findings have been organised and discussed under the following sections:

Section 1: Demographic variables of school teachers.

Section 2: Level of knowledge of school teachers regarding dyslexia and its management in children.

Section 3: Association between post-test knowledge scores and selected demographic variables of school teachers.

Section 1: Demographic variables of samples:

The distribution of samples according to the demographic variable revealed that

- The age of primary school teachers majority 26(43.3%) were in the age group of 21-30 years, 18(30%) were in the age group of 31-40 years and 10(16.7%) were in the age group of 41-50 years and 6(10%) were in the age group of 51 and above.
- Regarding the gender of primary school teachers, majority 48 (80%) were females and 12(20%) were males
- Regarding the type of family of primary school teachers, majority 34 (56.7%) were from nuclear family, 24 (40%) were from the joint family and 2 (3.3%) were from extended family.
- Regarding the religion of primary school teachers, majority 34 (56.7) belongs to Hindu religion, 13 (21.7%) belong to Christian religion and 7(11.7%) belongs to Muslim religion and 6(10%) belongs to other religion.
- Regarding the Educational Status of School Teachers, majority 24(40%) completed TCH or D Ed, 21 (35%) completed Graduation and 15(25%) completed Post graduation.
- Regarding the source of information on dyslexia and its management in children 42(70%) majority received information from Electronic Media and 14(23.3) received information from the print media and 4(6.7%) received information from the health personnel.
- Regarding the teacher parent meeting conducted among the primary school teachers, 30(50%) responded Yes and 30(50%) responded No
- Regarding the exposure to training programme of dyslexia, majority 32(56.3%) responded No and 28(46.7%) responded Yes.

Section 2: Knowledge of primary school teachers regarding dyslexia:

It reveals that the majority 35(58.3%) school teachers had moderately adequate knowledge 25(41.6%) had inadequate knowledge and none of them had adequate knowledge in pre-test and after the delivery of self-instructional module on dyslexia and its management there is an increase in the level of knowledge among school teachers, in post-test majority 57(5%) had adequate knowledge 3(5%) had moderate knowledge and none of them had inadequate knowledge.

Section 3: Association between post-test level of knowledge scores and selected demographic variables of primary school teachers:

The study shows that there is a significant association between post-test level of knowledge regarding dyslexia and its management among school teachers with their selected demographic variables such as age (3.18*), family type (4.30*), religion (3.18*), educational status (4.30*). However, it is found there is no significant association between post-test level of knowledge regarding dyslexia and its management among school teachers with their selected demographic variables such as source of information (4.30), gender (12.71), teacher's parents meeting (12.71), and exposure to training (12.71) at 0.05 level of significance.

Therefore the present study is supported with similar study **“A study to assess the effectiveness of structured teaching program on learning disabilities among school teachers in selected schools at Bangalore”**

The samples selected for this study are teachers working in selected primary schools of Bengaluru. The sample of this study consists of 40 school teachers who teach children aged 6-12 years. In the present study, non-probability purposive sampling technique is used. Findings related to the effectiveness of structured teaching programme regarding learning disability had the total difference in the mean of overall pre- test and post- test knowledge score was 19.38 and 39.53 respectively with the obtained ‘t’ value of 25.779 was found to be highly significant at the level of $p < 0.001$. It means there is significant difference between pre- test and post- test level of knowledge of school teachers regarding learning disability. Findings revealed that there was a statistically significant association between the knowledge scores of school teachers with selected socio- demographic variables in pre- test in areas like educational status, number of children at the level of $p < 0.05$. And not significant association at the level of $p > 0.05$. Hence, as a whole, the research hypothesis stated that there will be significant association between the knowledge scores of school teachers regarding learning disabilities with selected demographic variables was accepted.

CHAPTER VII**CONCLUSION**

The chapter deals with conclusion, implications, and recommendations and limitations drawn for the study, **“A study to assess the effectiveness of Self-instructional Module on knowledge regarding dyslexia and its management in children among primary school teachers in selected schools at Bangalore”**.

The present study evaluated the effectiveness of self-instructional module on knowledge regarding dyslexia and its management among primary school teachers and following conclusions was drawn on the basis of findings of the study. The finding shows that in pre-test, 58.3% of samples had moderately adequate knowledge, 41.6% of samples had inadequate knowledge and none of them had adequate knowledge regarding dyslexia and its management.

In post-test 95% of samples had adequate knowledge, 5% of samples had moderately adequate knowledge, and none of them have inadequate knowledge. It shows that there is significant improvement in knowledge after the self-instructional module with a mean difference 14.8. The paired 't' test value obtained was 37.15 at the level of $p < 0.05$ significance.

NURSING IMPLICATIONS

The result of the study has scope in Nursing practice, Nursing administration, Nursing education and Nursing research.

NURSING PRACTICE

The nursing personnel should be prepared as stake holder to take leadership role in all levels of prevention, promotion and treatment. Nurse's active participation in school health programmes by providing direct and indirect care helps to achieve these goals of health services. Teachers deficit in knowledge regarding dyslexia indicate the need for arranging education sections in related topics.

NURSING ADMINISTRATION

The major responsibility of nurse administrators in nursing service department is to plan and implement health awareness and education programmes regarding dyslexia and its management in children among school teachers.

NURSING EDUCATION

Nursing curriculum is a measure for motivating the students to hunt for knowledge equips nurses with essential knowledge, skill for prevention, promotion, early detection and management of illness. Developmental childhood disorders are important in paediatrics, psychiatry and community health nursing. School health services play an important part in the care of such children. Students should be given necessary theoretical and practical knowledge on school health programmes and how to utilize other professionals like teachers in health care. Curriculum should give additional in developing communication skill of the student nurses for the better utilization of available resources.

NURSING RESEARCH

Researcher found scarcity in literature and research done on dyslexia in nursing. So the investigator recommends conducting periodic research on childhood disorders and role of nurses.

SUGGESTIONS FOR FURTHER STUDY

- A similar study can be undertaken on a larger scale for making a more valid generalisation.
- A comparative study can be arranged among teachers in urban and rural schools.
- A study can be done to analyse the practice of teachers towards dyslexic children.
- A follow up study can be conducted to evaluate the effectiveness of the learning module.
- A similar study can be arranged for parents of school children.

RECOMMENDATIONS

- Periodic revision of the teachers training programmes are recommended for the inclusion of more practical knowledge regarding dyslexia and its management in children.

- Periodic assessment of teacher's knowledge regarding health related problems to be conducted.
- A study can be carried out to evaluate the efficiency of various teaching strategies like pamphlets, learning module, leaflets and computer assisted instruction on dyslexia and its management.
- A study can be conducted among primary school teachers on other mental health problems like conduct disorders, attention deficit hyperactive disorders (ADHD) and emotional disorder.
- A concentrated study should be made to increase the awareness among the primary school teachers regarding their role in school mental health services.
- Arrange an orientation programme for teachers in various special schools.

PROJECTED OUTCOMES

The present study shows that through teachers possessed lacking knowledge, skill and practice in managing such children. Based on the assessment the researchers prepared a learning module which explains the meaning, types, and causes, management and prevention of dyslexia and identification of a dyslexic child. This can be useful to all those who are handling children.

SUMMARY

The main aim of the study was to assess the knowledge of primary school teachers regarding dyslexia and its management in children. It also aimed finding out the association between knowledge scores of primary school teachers with selected socio-demographic variables. The main study was conducted in three selected schools in Bangalore

The review of related literature enabled the researcher to develop the conceptual Framework, self-administered knowledge questionnaire, determine the methodology for the study, plan or the analysis of the data and for the development of information booklet in most efficient and effective way.

The research design adopted for the study was pre-experimental design. The instrument developed and used for the present study is self-administered questionnaire, consist of 2 sections.

Section 1 demographic variables consist of 08 items.

Section 2 structured knowledge questionnaire consist of 30 items.

Non-probability convenient sampling technique was used to draw the sample for the study. A conceptual framework is an analogous to frame of a house. Just as the foundation supports a house, a theoretical framework provides a rational for predictions about the relationship among variables of a research study. A conceptual framework used in the study is based on modified Ludwig Von Bertalanffy general system theory.

The tool developed and used for data collection was self-administered questionnaire. The tool validated by experts from different medical and nursing departments and it's was found to be reliable and feasible. Pilot study was conducted as apart of major study and the tool prove to be comprehensive, feasible and acceptable. Data collection procedure began after obtaining permission from schools and consent from teachers. The investigator personally explained the need and assured the confidentiality of their responses. The data gathered was analysed and interpreted according to objectives. Descriptive statistics were mean and standard deviation and inferential statistics include paired 't' test, Chi square (X^2) test to test hypothesis at different level of significance and data obtained are presented in graphical form.

Finding related to demographic variables:

- In relation to age of primary school teachers majority 26(43.3%) were in the age group of 21-30 years.

- With regard to the gender of school teachers, majority 48 (80%) were females.
- Regarding the type of family of school teachers, majority 34 (56.7%) were from nuclear family.
- In relation to the religion of school teachers, majority 34 (56.7) belongs to Hindu religion.
- Regarding the Educational Status of School Teachers, majority 24(40%) completed TCH or D Ed.
- With regard to the source of information on dyslexia and its management in children 42(70%) majority received information from Electronic Media.
- Regarding the teacher parent meeting conducted among the school teachers, 30(50%) responded Yes and 30(50%) responded No respectively.
- Among 60 school teachers majority 32(56.3%) responded no to the exposure to training programme on dyslexia and its management.

Findings related to knowledge scores of primary school teachers:

It reveals that the majority 35(58.3%) school teachers had moderately adequate knowledge 25(41.6%) had inadequate knowledge and none of them had adequate knowledge in pre-test and after the delivery of self-instructional module on dyslexia and its management there is an increase in the level of knowledge among school teachers, in post-test majority 57(5%) had adequate knowledge 3(5%) had moderate knowledge and none of them had inadequate knowledge.

Findings related to Association between post-test knowledge scores and selected demographic variables:

The study shows that there is a significant association between post-test level of knowledge scores regarding dyslexia and its management among primary school teachers with their selected demographic variables such as age (3.18*), family type (4.30*), religion (3.18*), educational status (4.30*) as their obtained chisquare value is greater than tabulated t value. However, it is found there is no significant association between post-test knowledge score regarding dyslexia and its management among primary school teachers with their selected demographic variables such as source of information (4.30), gender (12.71), teacher's parents meeting (12.71), and exposure to training (12.71) as their obtained chisquare value is lesser than the tabulated t value.

CHAPTER VIII

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