

**EFFECTIVENESS OF CONCENTRATION ENHANCEMENT
ACTIVITY ON ATTENTION AND CONCENTRATION
AMONG SCHOOL AGE CHILDREN**



Dissertation Submitted To

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY
CHENNAI**

IN PARTIAL FULFILMENT OF REQUIREMENT FOR THE AWARD OF
DEGREE OF

MASTER OF SCIENCE IN NURSING

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**A STUDY TO ASSESS THE EFFECTIVENESS OF
CONCENTRATION ENHANCEMENT ACTIVITY
ON ATTENTION AND CONCENTRATION
AMONG SCHOOL AGE CHILDREN IN
MADHA MATRICULATION SCHOOL
AT CHENNAI 2013 – 2014.**

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ABSTRACT

Attention is the concentrated direction of the mind, especially to a problem or task. Concentration is the ability to keep one's attention on a particular object or domain. We use our attention and concentration skills every day, often with little effort and without really noticing them. Attention and concentration cause problems with everything from maths test to social relationships to motivation for learning. In order to function effectively, one needs to be able to concentrate on and pay attention to the task at hand.

A study was conducted to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children. The hypothesis formulated was that there is a significant association between concentration enhancement activity on attention and concentration among school age children. The review of literature included studies which provided a strong foundation for the study including the basis for conceptual framework and formation of tool.

The research design used for this study was pre experimental one group pre test post test design. It was carried out with 30 samples those who fulfilled the inclusion criteria. Purposive sampling technique was used to select the sample. A modified attention profile and card game was used to assess the pre test and post test level of attention and concentration. Concentration enhancement activity was conducted for the duration of 30 minutes for six days. The post test was assessed on seventh day by using same tool.

The analysis revealed that the pre test level of attention mean score was 29.83 with the standard deviation of 6.73 and the post test level of attention mean score was 18.53 with standard deviation of 5.14. The pre test level of concentration mean score was 21.57 with standard deviation of 4.78 and post test level of concentration mean score was 13.83 with standard deviation of 3.60. The paired 't' test value of attention was 9.72 and concentration was 6.71 which showed very high significant at the level of $p < 0.001$. The Karl Pearson correlation coefficient value of $r = 0.56$ at the level of $p < 0.01$ which showed moderate correlation between post test level of attention and concentration among school age children. Hence it indicates the effectiveness of concentration enhancement activity on attention and concentration among school age children. So the research hypothesis was accepted for the study.

CHAPTER I

INTRODUCTION

“Success in any endeavor requires single minded attention to detail and total concentration”

-Willie Sutton

Attention is taking possession of the mind, in clear and vivid form, of one out of what may seem several simultaneously possible objects or trains of thoughts. It implies withdrawal from some things in order to deal effectively with others (James, 1890). Concentration is the ability to keep one’s attention on a particular object or domain. Moreover, concentration is a prerequisite for common daily behavior such as reading and listening. Whether an individual reads the newspaper or listens to the news, he or she needs to stay focused in order to understand the information around them.

Attention allows tuning out information, sensations and perceptions that are not relevant at the moment and instead helps to focus energy on the information that is important. Concentration is a behavior of the mind that selects and constructs the contents of the mind. In other words, concentration is the mechanism that manipulates the focus in a desired way and can be seen as a meta cognition. Moreover, concentration involves not only focusing on an object but also avoiding those stimuli that are not part of the focus. Mikulas (2002) stated that the individuals shift attention in more complex ways and usually without conscious control. A person can learn to refocus when one’s attention drifts away, one can learn to sustain the focus in the presence of less salient stimuli, and can learn to skillfully shift one’s attention from one object to another without getting stuck or caught up in irrelevant objects.

Children who have attention difficulties immediately compromise their ability to learn, as they are not focused on the information presented. Children are facing the havoc of low concentration these days. Because of so many activities surrounding them, so many distractions, children find it difficult to concentrate on one single thought or activity. This in turn affects their life and ability to perform. Concentration

is a high attribute in an individual's personality. It helps in observing things around us sharply and enhances the memory.

A good concentration level is needed in all the spheres of life. An individual with low concentration problem suffers from bad memory, which leads to under performance. The capacity to understand, pick up from the environment, retain facts, everything is affected, which ultimately leads to below average results. Concentration levels can be improved from the childhood if the problem is identified earlier. If the child is involved in different kinds of activities that enhances concentration, then he will grow up to be sharp and quick.

Every individual use attention and concentration skills, often with little effort and without really noticing them. These skills help us to select and focus on what is important as to what the teacher is saying, ignore irrelevant or distracting things that is not needed to pay attention, for example what is happening outside the classroom window, and maintain or sustain our effort or attention over time such as concentrate for the whole period. Sometimes we need to pay attention to two or more important things at the one time, and may need to switch back and forth between activities quickly like copy work from the board while the teacher goes through the information and explains it.

Having good attention and concentration helps children to learn. Most skills in life need to be learnt through repeated practice, things like tying shoelaces, writing, using scissors, riding a bike. Children need to be able to focus on a task and practice an activity to improve their skills. Learning to concentrate and complete activities helps reduce impulsive behavior and can lower activity levels.

Attention and concentration are greatest in short activities. Frequent and brief drills or lessons covering small chunks of information will result in greater learning. Attention may flag on the second presentation of a task. Attention can be maximized by presenting the material in slightly different ways or with different applications or resources. A consistent routine, with an organized format to complete activities is ideal for learning. Well planned activities and smooth transitions from one activity to the next should enhance the learning environment.

Attention and concentration cause problems with everything from maths test to social relationships to motivation for learning. While basic attention abilities may be inborn, the good news is that many attention skills can be learned. These core abilities are rooted in the physiology of the brain, but home and school environments have a great deal to do with how a child learns to use his particular attention mechanisms. These days children are distracted because of the presence of a lot of technology around them. They play games on information pads and tablets, instead of actually going out and playing in the parks. They prefer to sit and watch kids television than playing the solitary games with blocks.

Although, this technology and highly educational television is good for them in more than one way but, there are no doubts in the fact that it is killing their natural instinct to observe and practice concentration. Everything is readily available for them, they do not have to work for it, is just a click away, which means that there is absolutely no need for their minds to work hard or think hard over anything.

This leads to the mind losing its capacity to comprehend and come up with solutions. This is why scientists and psychologists say that, spending more time on television and computers leads to a dumb child. It also makes children non social and lethargic. Parents are very concerned about this situation with their children. It is an important concern as it affects the quality of rest of their life.

Poor concentration skills may lead to difficulties in studying, falling asleep, control over disturbing and intruding thoughts, poor listening skills and disobedience. Children who have attention difficulties immediately compromise their ability to learn, as they are not focused on the information presented. They may also have a language difficulty and cannot understand complex verbal information or they may have a memory difficulty and cannot store and hold onto information.

Concentration enhancement activity is essential for school going children to improve the lack of attention and concentration in all their activities. It would help them to perform better in academics as well as in other extracurricular activities. As nurses we should identify the lack of concentration among children and use the required skill to improve the attention span, and thereby help them to improve their future career.

NEED FOR THE STUDY

“Concentrate all the thoughts on the task at hand. The sun’s rays do not burn until brought to a focus.”

-Alexander Graham Bell

Attention is a term given to a perceptual process that selects certain inputs for inclusion into our conscious experience or awareness in a given period of time (Mishra, 2008). From the external environment, some information is selected, filtered and taken into the centre of consciousness while other information remains in the background. Attention develops over one’s lifespan and assists a person to regulate his or her behavior and adapt to environmental demands. Attention processes improve with age and develop rapidly during infancy and early childhood. Infants and young children remember information and consciously try to attend to tasks, especially those that are novel in nature.

Children in middle childhood from 6 to 12 years are more in control of their attention processes and hence are able to sustain it well (Lee, 2005). Concentration is the cognitive process of selectively paying attention to one thing to the exclusion of others over a period of time. Concentration difficulty is a decreased ability to focus the thoughts on something. It can be related to difficulty staying awake, impulsiveness, intrusive thoughts, over activity or inattention.

Attention and concentration problems are one of the most prevalent and widely recognized problems in children. Worldwide about 140 millions of students are affected by attention and concentration. The possible causes in children are lack of sleep, personal circumstances, motivation and interest, surrounding conditions like school environment, distracted teens, teacher trouble, health problems, lack of exercise, family environment, diet, neglected children and ineffective child rearing practices.

Attention changes with age such as a normal lack of inhibition in a four year old become a serious problem in a ten year old. Moreover, a regularly bumptious child usually a boy may seem very much out of place in an overly restrictive and stressful classroom. When normally active youngsters are condemned to desks and

routine pencil and paper tasks all day, we should not be surprised if they show up with problems. Many schools are increasingly restricting children's free play time, children who need to work off physical energy don't have much of a chance. Moreover, many of today's children are so heavily scheduled that they are actually sleep deprived. All these factors may masquerade as an attention problem.

Attention difficulties are also found in many children with language or reading problems, sometimes treating the underlying condition makes it easier to focus on learning. Too much time with television and video games also exacerbates attention difficulties. A recent study linked that the amount of preschool television exposure enhanced later symptoms of attention deficit hyperactivity disorder. It was found that violent entertainment doubled the possibility of development of attention problem five years later.

Most children suffer with poor memory and attention difficulty almost every day. This affects many areas of their life. It is difficult for them to do well in school, perform required activities and even participate in normal conversations due to their attention and concentration problems. Students are particularly in need of good attention skills. They must be able to attend to instructions, focus on the details of assignments, and stay on task until an assignment is completed. Children with attention difficulties frequently experience problems in studies and with their peers.

They may be seen as flighty, disorganized and irresponsible. They don't pay attention to details, make careless mistakes, have trouble staying focused, are easily distracted, experience difficulty in remembering things and following instructions, have trouble staying organized, get bored with a task before it gets completed, get frustrated easily, have mood swings, find it difficult to complete assignments and frequently tend to lose or misplace homework, books, toys, or other items (Fowler, 2004). Issues such as enthusiasm and skill for task in hand, motivation, emotional and physical state and surrounding environment affect the child's ability to concentrate (Blerkom, 2009).

Peck. et al., (2005) reviewed that intervention can help students with attention and concentration problems by improving their ability to concentrate and also to reduce anxiety, headaches, general tension and stress symptoms, and development of

positive attitude towards oneself. The incidences in 2004 at India reported that about 68% of children with lack of attention and concentration don't pay attention to details and they often accompany academic skill disorder and can seriously interfere with academic performance.

The result of a study in 2006 stated that regular habit of eating breakfast had beneficial influence of attention and concentration, memory and school achievement. Children are often unmotivated to pay attention in class, as they find the lessons uninteresting and dull. The way the teacher manages the class and school environment have significant impact on attention and concentration ability of children. In order to function effectively, one needs to be able to concentrate on and pay attention to the task at hand.

Prot. et al., (2012) has conducted a study on correlations between attention problems in childhood and video game play. High excitement and rapid changes of focus that occur in many video games may weaken children's abilities to maintain focus on less exciting tasks such as schoolwork and shorten their attention spans.

In a longitudinal study on video game use and attention problems, video game play predicted children's attention problems 13 months later, even while controlling for other relevant variables such as earlier attention problems, television viewing, and gender. A 3-year longitudinal study of more than 3000 children found evidence of a bidirectional relation between attention problems and videogame playing, and found a stronger relation between the amount of gaming and later attention problems than for the content of gaming.

Children suffering from attention and concentration problem have to face hardships on a daily basis. Their difficulties need to be understood by parents and those around them so that they do not become victims of unreasonably high expectations. Familiarizing parents with the causal factors of this problem can help them in taking preventive steps so that further development of the problem among children may be curbed. It is important to focus on the problems faced by such children so that they may be provided with proper interventions.

Among children with attention problems, there is excessive brain activity which makes it difficult for these children to focus. Thus concentration enhancement

activities are essential like letter cancellation, storytelling, dots joining, missing numbers, tongue twisters etc to improve the attention and concentration in children.

When the investigator noticed the children in the neighborhood and also during school visit, she observed lack of attention and concentration among school children due to various reasons and thus leading to poor performance in academics and in extracurricular activities. Considering these facts, the investigator felt it as a strong need to provide concentration enhancement activity to improve the attention and concentration among school children.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children in Madha Matriculation School at Chennai.

OBJECTIVES

1. To assess the pretest level of attention and concentration among school age children.
2. To assess the post test level of attention and concentration among school age children.
3. To determine the effectiveness of concentration enhancement activity regarding attention and concentration among school age children.
4. To correlate the post test level of attention and concentration among school age children
5. To associate the post test level of attention and concentration among school age children with their selected demographic variables.

HYPOTHESIS

There is a significant association between concentration enhancement activity on attention and concentration among school age children.

OPERATIONAL DEFINITIONS

Effectiveness: Refers to the outcome of concentration enhancement activity in improving attention and concentration among school age children.

Concentration Enhancement Activity: Refers to set of activities which include letter cancellation, color cancellation, dots joining, missing numbers, puzzle solving, and tongue twisters in improving attention and concentration among school age children.

Attention: Refers to the concentrated direction of the mind, especially to a problem or task.

Concentration: Refers to enhancing the mind to focus on a single task for a while.

School Age Children: Refers to children who are in the age of 10 years in Madha Matriculation School.

DELIMITATIONS

- The data collection period was delimited to 4 weeks.
- The sample size was delimited to 30 children who are in the age group of 10years.

CHAPTER II

REVIEW OF LITERATURE

The review of literature is an essential aspect of the scientific research. It is a systemic identification, location, scrutiny and summary of written material that contains information related to the problem under study. The investigator gained insight in selected problem from an extensive review. This chapter is designed to include the review of literature and the conceptual frame work adopted for the study.

PART I- REVIEW OF RELATED LITERATURE

Attention is the act or state of applying the mind to an object of sense or thought. Concentrate refers to series of mental effort focused on a particular object or activity. The warning signs of concern due lack of attention and concentration are distraction, restlessness, boredom, difficulty or anxiety, nervousness in making decisions, difficulty paying or sustaining attention, easily frustrated, makes careless mistakes, makes critical remarks about self, preoccupied mind and day dreaming. The various benefits of attention and concentration include better studying, enables faster comprehension, improves the memory, helps in focusing on a task, job or goal, and therefore, achieving them more easily and efficiently.

The purpose of concentration enhancement activity is to improve attention and concentration among school age children. It helps to improve poor performance in academics and in extracurricular activities. The recommendations describe that these measures help to lessen the attention and concentration problems in children and helps them to follow the particular task in a directed way.

This chapter is organized systematically and classified in the following manner

- Literature related to attention.
- Literature related to concentration.
- Literature related to concentration enhancement activity.

PART II - CONCEPTUAL FRAMEWORK

PART I

REVIEW OF RELATED LITERATURE

Attention and concentration issues in children have parents and educators concerned. The ability to attend with focus, clarity, and purpose is a skill everyone needs. Students are particularly in need of good attention skills. They must be able to attend to instructions, focus on the details of assignments, and stay on task until an assignment is completed. Attention abilities are not just behavioral patterns but they are also cognitive skills.

The student's cognitive skills development, which includes attention training, not only provides the tools for strong learning, but improves the student's ability to perform in other academic areas. In addition, the training frequently improves the child's self-esteem. Strengthened attention skills frequently lead to greater success and much less frustration.

In order to improve the level of attention and concentration in children, they have to be periodically trained in certain enhancement activities and improve their focus on education. Some evidence suggested that the concentration enhancement activity must be implemented in schools to help inattentive and poor concentrated children to achieve maximum potential during their learning period in schools.

Literature related to Attention

Mocan. O., et al., (2014) had conducted a study on relating individual differences in internalizing symptoms to emotional attention set shifting in children. The study investigated attention shifting in a sample of 108 school age children aged 7 to 11 years using a task switching paradigm which required participants to alternate between emotional and non emotional judgements. The results indicated that higher levels of internalizing symptoms had a detrimental effect on performance efficiency but not on response accuracy. The results concluded that individual differences in internalizing symptoms play a role in children's ability to flexibly alternate between emotional and non emotional judgements.

Natasha. K., et al., (2014) had conducted a study to investigate the association and directionality between attention deficit symptoms and obesity from

childhood to adolescence in the general population. The study was conducted from 7 and 8 years to 16 years where the teacher reported attention deficit symptoms and parents reported body mass index via clinical examination and physically active play. The results showed that childhood attention deficit symptoms significantly predicted adolescent inattention. The study concluded that child attention deficit symptoms are at increased risk of becoming obese and physically inactive adolescents.

Silveria. A. A., et al., (2014) conducted a study on relationship between learning problems and attention deficit in childhood. The samples included in the study were 774 children from selected elementary schools. The child was assessed by his teacher using a standardized scale. The attention deficit hyperactivity disorder scale- teacher's version was used to evaluate attention deficit hyperactive disorder symptoms and learning problems. The result indicated that a very strong association was found between attention deficit and learning problems. The result concluded that attention deficit leads to learning problems.

Becker. K., et al., (2013) conducted a study on age, task complexity, and sex as potential moderators of attention focus effects. The study tested whether age, sex, or task complexity moderate the effect of attention focus on motor learning. Children were assigned to an internal or external attention focus and were timed while riding either a double pedalo with handles or without handles over a distance of seven meters. The study result showed that for simpler task, no time difference due to attention focus emerge but with the complex task an external focus resulted in faster times in retention than an internal focus, but only for males. The study suggested that attention focus affects children but task complexity and sex moderate these effects.

Dodge. K. A., et al., (2013) has conducted a study on attention problems and academic achievement. The study examined a negative association between children's attention difficulties and their academic functioning. The study was classified into four attention problem groups based on the presence versus absence of attention problems in first and second grade. The study result showed that those with attention problems in both grades showed a decline in reading and math achievement during the K-5 interval relative to children with attention problems in first grade only. Both groups of inattentive first graders also performed worse than comparison children. In contrast, children whose attention problems emerged in

second grade did not differ from comparison children on any achievement outcome performed significantly better than inattentive first graders.

Julia. D. I., et al., (2013) has conducted a study to evaluate whether the perceptual learning requires consciousness or attention. A textured figure ground stimuli and manipulated report ability either by masking or inattention was presented. 24 hours later, learning was assessed visually and behaviorally via differences in figure ground and detection task. The results suggested that learning requires consciousness and not attention, and further strengthens the idea that consciousness is separate from attention.

Lynda. M., et al., (2013) has conducted a study to examine whether age and developmental differences in selective attention influence young children's differential responses to interactive and passive distractions. Totally 65 three to six year old children were assessed by a test of selective attention and parents completed ratings of attention. The results showed that children benefited more from interactive distraction than from passive distraction. The study concluded that younger preschoolers can benefit from interactive distraction, provided that the distraction activity is developmentally appropriate

Oosterlaan. J., et al., (2013) had conducted a study on executive function and intelligent quotient mathematical and attention problems in very preterm children. The participants included 200 preterm and 230 term children without severe disabilities. Mathematics was assessed with Dutch pupil monitoring system, parents and teachers rated attention problems using standardized behavior questionnaires. Interactions with group were examined. The analysis was conducted separately for two subsamples for children in preschool and primary school. The results revealed that preterm children performed poorer on tests for mathematics and had more parent teacher rated attention problems than controls ($p < 0.01$). The result concluded that impaired executive function is over and above impaired intelligent quotient is an important predictor for poor mathematics and attention problems following preterm birth.

Venkata. J. A., et al., (2013) conducted a study on prevalence of attention deficit hyperactive disorder in primary school children. Totally 770 children aged

between 6 and 11 years were selected from four schools in Coimbatore district and were assessed by using Conner's abbreviated rating scale given to parents and teachers. The children identified as attention deficit were assessed for the presence of any co morbid factors by administering children's behavioral questionnaire to teachers and personal information questionnaire to the parents. The prevalence was found to be 11.32% and was found to be higher among the males 66.7% as compared to that of females 33.3%, also highest in the age group of 9 and 10 years. The study showed a high prevalence of attention deficit among primary school children especially among males than in females.

Giovanna. P., et al., (2012) has conducted a study on level of sustainability on the rehabilitative training of preterm children's attention. The samples included were a group of 55 healthy preterm children at mean age of 5.2 years, 55 mothers, 15 pediatricians, 5 neonatologists and 10 teachers. Specific questionnaires were administered to parents and teachers before and after training session and the trainer used techniques of narrative and descriptive observation. The results showed good levels of sustainability.

Linda. S., et al., (2012) has conducted a study to evaluate whether words cue children's attention in a visual search task. The children were assessed using a computer touch screen and tested the prediction that words can cue children's attention to the shape of objects. The result suggests that nouns rapidly cue attention to shape in children, providing a stepping stone to mechanic account of how words organize attention and early word learning.

Nowakowski. M. E., et al., (2012) conducted a study on joint attention in toddlerhood predicts internalizing problems at early school age. Fifty eight mothers and their children were observed in the home of laboratory engaging in one unstructured and four semi structured tasks designed to assess joint attention episodes when the children were toddlers. Then four years later, mother and child dyads were contacted again and mothers completed the child behavior check list as a measure of their children's socio emotional outcome at the early school years. The results showed that lower frequencies of joint attention episodes at toddlerhood predicted higher internalizing behaviors at early school age.

Richard. M., et al., (2012) has conducted a cohort study to evaluate the influence of relative age on diagnosis and treatment of attention deficit children. A total of 9, 37,943 children in the age group of 6 to 12 years were included in the study. The absolute and relative risk of receiving a diagnosis of attention deficit was evaluated. The results showed that boys were 30% and girls were 70% more likely to receive a diagnosis of attention deficit. The results interpreted that there was a relative age effect in diagnosis and treatment of attention deficit. The findings also raised concerns about the potential harms which include sleep, appetite and growth.

Shrensen. L., et al., (2012) had conducted a study on the impact of inattention and emotional problems on cognitive control in primary school children. The samples were 241 children from primary school. The cognitive control was measured by functions of set shifting and working memory was assessed by behavior rating inventory of executive function and performance based tests. Inattention and emotional problems were measured with parent and teacher reports on Swanson Nolan and Pelham questionnaire, strengths and difficulties questionnaire respectively. The result showed that clinical symptoms of inattention and emotional problems explained the child's performance on test measures, however symptoms of inattention made a significant contribution on all the selected measures of cognitive control. The result concluded that valid information on cognitive control function in primary school children should include information concerning problems of inattention and emotion.

Trautmann. M., et al., (2012) had conducted a study on attention performance, age and scholastic achievement in healthy children. An extensive testing battery was used to assess a wide range of attention dimension. A principal component analysis revealed three factors that are related to attention performance. The result revealed that age was negatively associated with distractibility, lapses of attention and cognitive speed, indicating that distractibility and lapses of attention decreased with age in healthy children and resulted in lower cognitive speed. The study concluded that attention processes in healthy children should be measured in relation to distractibility, lapses of attention and cognitive speed.

Ferguson. C. J., et al., (2011) conducted a study on the influence of television and video game use on attention and school problems. The samples included were

Hispanic population of 603 children aged 10 to 14 years. The tool used for attention behavior problems was child behavior checklist and poor school performance was measured by grade point average. The result found that internal factors such as male gender, antisocial traits, family environment and anxiety best predicted attention problems. Television and video game use whether total time spent using or exposure to violent content specifically, did not predict attention problems. The result concluded that television and video game use do not appear to be significant predictors of childhood attention problems.

Murray. D. W., et al., (2011) conducted a study on teacher management practices for first graders with attention problems. The sample included a total of 36 teachers who completed the teacher management questionnaire for 92 students in five predominantly low income minority schools. Additional teacher and student background data were collected on the inattentive sample, including behavior ratings and academic test. The result indicated that teachers reported variable implementation of different management strategies, with more frequent use of class wide structure and organizational interventions, and less frequent assignment modifications and individual behavior plans. The study concluded that teachers appear to differentiate some management strategies based on the presence of attention problem.

Swanson. H., et al., (2011) has conducted a study to examine the role of working memory in children's growth in mathematical problem solving. Totally 127 elementary school children were assessed by a battery of tests that included problem solving, achievement, working memory and cognitive processing in grade 1, 2 and 3. The results showed that grade 1 predictors contributed unique variance to grade 3 problem solving performance. The study concluded that growth in the executive system of working memory is an important predictor of growth in children's problem solving beyond the contribution of cognitive measures of inattention, inhibition and processing speed.

Lundervold. A. J., et al., (2007) conducted a study on the emotional symptoms in inattentive primary school children. The samples included teacher and parent reports of inattention and emotional symptoms in 6,229 primary school children. The tool used was the emotional symptoms subscale and impact scale from strengths and difficulties questionnaire, inattention items from Swanson, Nolan and

Pelham questionnaire. The result showed that children defined as inattentive showed a high risk of being defined as high scores on emotional symptom subscale, a high score on both inattention and emotional symptoms subscale was associated with a high impact score.

Tanya. E., et al., (2007) had conducted a cross sectional study to determine the United States national prevalence of attention deficit and whether prevalence, recognition and treatment vary by socio economic group. The samples included 3,082 eight to fifteen year old children from national health and nutrition examination survey. The children were assessed by diagnostic and statistical manual of mental disorders criteria. The results showed that 8.7% of children met the criteria for attention deficit. The results concluded that half of the children meeting the criteria reported receiving a diagnosis of attention deficit.

Kinsey. K., et al., (2004) conducted a study on magno cellular mediated visual spatial attention and reading ability. The study included reading ability in a group of primary school children compared to performance on a visual cued coherent motion detection task. The results showed that a brief spatial cue was more effective in drawing attention either away or towards a visual target in the group of readers ranked in the upper 25% of the sample compared to lower ranked readers. The result concluded a strong relationship between visual attention and non word reading compared to irregular word reading.

Literature related to Concentration

Courtney. H., et al., (2011) has conducted a study to evaluate the effect of cartoons on children's concentration and memory. The samples included 10 children. They were assessed by cognitive capability test that included counting backwards and solving puzzles. The results showed that watching cartoons had an immediate effect on kids.

Ong. L.C., et al., (2010) had conducted a cross sectional study on factors associated with poor academic achievement among urban primary school children in Malaysia. Socio demographic and medical data were obtained from questionnaires and interviews. All students underwent raven's standard progressive matrices test as a general measure of cognitive ability. The results showed that out of 1470 eligible

children, 206 had poor achievement. Out of 919 children who participated in the study, 111 had poor achievement compared with 95 of the 551 non participants and the factors were found to be independently associated with poor academic achievement ($p < 0.001$). The study concluded that cognitive ability, gender, prematurity and social factors contributed to poor academic achievement during the early school years.

Andrea. F., et al., (2009) has conducted a study to evaluate the concentration level of children after the effect of walk in the park. A total of seventeen children aged 7 to 10 years old experienced each of three events like a city park and two other well kept urban settings via individually guided 20 minute walks. The concentration level was measured using digit span backwards. The result showed that children concentrated better after walk in the park than after the downtown walk or the neighborhood walk, $p = 0.229$. The study concluded that twenty minutes in a park setting was sufficient to evaluate concentration performance relative to the same amount of time in other settings.

Roebbers. C. M., et al., (2009) conducted a study on metacognitive monitoring and control processes involved in primary school children's test performance. A total of 133 participants from third to fifth grade did a test about a previously learned science topic, gave confidence judgements for every answer, and were then allowed to cross out answers if they wished. Two different mock scoring schemes for test performance were compared with a control group. The results revealed well developed monitoring skills indicating that by the age of 9, children can reliably distinguish between correct and incorrect answers. As for control skills, 11 and 12 year olds proved to be better able to improve their test performance by selectively withdrawing answers that would have been incorrect than the 9 to 10 year olds. The study concluded that the impact of meta cognitive processes in student's learning outcomes documented strategic behavior during test taking.

Gajre. N. S., et al., (2008) conducted a study on breakfast eating habit and its influence on attention and concentration, immediate memory and school achievement. The samples were 379 urban 11 to 13 year old school children. Data was collected using letter cancellation test, immediate memory from PGI memory scale, school marks of the previous year and nutritional status. The result showed a significant

difference in the letter cancellation total score with the regular breakfast group achieving the highest mean scores compared to the no breakfast group, $p < 0.05$. The results concluded that regular habit of eating breakfast as opposed to irregular consumption or skipping breakfast altogether had beneficial influence on attention and concentration, memory and school achievement.

Literature related to Concentration Enhancement Activity

Steiner. N. J., et al., (2014) conducted a study on neuro feedback and cognitive attention training for children with attention deficit hyperactive disorder in schools. Children in second and fourth grade with diagnosis of attention deficit hyperactive disorder were randomly assigned to neuro feedback and cognitive training. A two point growth model assessed change from pre post intervention on parent reports, teacher reports and systematic classroom observations were evaluated. The results concluded that neuro feedback is a promising attention training treatment intervention for children.

Alice. W., et al., (2013) has conducted a study to evaluate the effects of mindfulness training and children's attention skills. Totally 24 children aged 9 to 12 years were selected for the study. The child was assessed on the attention network task interference and attention control task, executive function was rated by parents filled in questionnaires. The measurement was assessed before and immediately after five to six week training. The results showed that the performance on the attention network task interference and on the attention control task showed a significant main effect for training group. The results concluded that mindfulness training in children enhanced their attention control.

Anthony. D., et al., (2013) had conducted a comparative study which examined the effect of a single bout of exercise on measures of attention and impulsivity in children with attention deficit and children without attention deficit. A total of 21 children were selected and assessed by Connor's continuous performance test, immediately before and after 20 minutes of intermittent exercise. The data were analyzed with a three way multiple analysis of variance. The result indicated that the children without attention deficit had improved academic performance and behavior when compared to children with attention deficit.

Hovik. K. T., et al., (2013) conducted a study on working memory training in attention deficit children. Sixty seven children aged 10 to 12 years were randomly assigned to training or control group. The trainees participated in a 25 day training program at school, while the control group received treatment as usual. Participants were tested one week before intervention, immediately after and eight months later. The results showed that the training group had significant long term differential gains compared to the control group on all outcome measures.

Ramon. M., et al., (2013) has conducted a study on randomized clinical trial of cogmed working memory training in school age children with attention deficit hyperactive disorder. A total of eighty five seven to eight year school age children were randomized to memory training and evaluated before and after three weeks of treatment. The result showed that active participants demonstrated significantly greater improvements in verbal and non verbal working memory stage. The results concluded that cogmed memory training can be considered as a viable treatment for children with attention deficit.

Brian. J., et al., (2012) had conducted a study to examine the effect of a single bout of moderate intensity aerobic exercise on preadolescent children with attention deficit. The task performance and event related brain potentials were assessed while participants performed on attention control task following a bout of exercise or seated during two separate, counter balanced sessions. The results showed that children exhibited greater response accuracy and performance in the areas of reading and arithmetics. The study concluded that single bouts of moderately intense aerobic exercise may have positive implications for aspects of inhibitory control in children with attention deficit.

Saskia. O., et al., (2012) had conducted a study to evaluate the effectiveness of eight week mindfulness training for children with attention deficit and mindful parenting for their parents. Parents were assessed by questionnaires including their own attention deficit symptoms, parenting stress, parental overacting, permissiveness and mindful awareness before, immediately after the eight week training and at eight week follow up. The teachers reported attention deficit behavior of the child. The results showed the effectiveness of mindfulness for children with attention deficit and their parents.

Dion. E., et al., (2011) conducted a study on improving attention and preventing reading difficulties among low income first graders. In this study 58 first grade classrooms located in 30 schools were assigned to a control condition or to one of two intervention conditions. In the last two conditions, peer tutoring activities were conducted to improve classroom reading instruction. In one of the intervention condition, the good behavior game was also implemented to maximize student attention during reading lessons. The results indicated that interventions were effective, peer tutoring activities helped students improve their reading skills and attention was generally higher when the good behavior game was implemented.

Mahar. M. T., et al ., (2011) had conducted a study on impact of short bouts of physical activity on attention to task in elementary school children. Attentions to task in elementary school students following physical activity breaks were reviewed. The results revealed that direct measurement of attention to task is intensive and demanding on observers. Teachers can be trained in a relatively short time to effectively lead classroom based physical activities. Students who participated in classroom based physical activities that incorporate academic concepts demonstrated significantly better improvements in attention to task than control group participants.

Hill. L., et al., (2010) conducted a study on exercising attention within the classroom. A cross over design trial was conducted in six main stream primary schools of age 8 to 11 years. Children received a teacher directed, classroom based programme of physical exercise, delivered approximately 30 minutes after lunch for 15 minutes during one week and no exercise programme during the other. At the end of each school day, they completed one of five psychometric tests so that each test was delivered once after exercise and once after no exercise. The results demonstrated a significant interaction between intervention and counter balance group ($p < 0.001$), showing that exercise benefited cognitive performance.

Pfeiffer. B., et al., (2008) conducted a study on effectiveness of disc 'o' sit cushions on attention to task in second grade students with attention difficulties. 63 second grade students participated in the study with 31 in treatment group and 32 in control group. The treatment group used disc 'o' sit cushion throughout the school day for a two week period. The teachers completed the behavior rating inventory of executive functioning for each participant before and after intervention. The study

result showed a statistically significant difference in the attention to task before and after the intervention for the treatment group. The study provided preliminary evidence for the use of this intervention to improve attention in school setting.

Alvarez. L., et al., (2007) conducted a study on multimodal intervention program to improve attention deficits. Two groups of age 5 to 19 years participated in the study, one with difficulties in selective attention made up of 102 students with 59 in experimental and 43 in control group and other with sustained attention with 58 in experimental group and 48 in control group. The results indicated that this kind of intervention combined with visual therapy, cortical activation, and training with activity banks is effective to improve attention deficits, both at the level of selective attention and sustained attention.

Edward. H., et al., (2006) had conducted a study on neuro feedback of two children with learning, attention, mood, social and developmental deficits. The samples were administered twenty minute session of neuro feedback training for approximately six months. The samples were assessed by a parent rating scale and symptom assessment questionnaire. The results showed that both the boys improved in all tracked symptoms without adverse effects and also in academic functioning, home behavior and peer relationships. The results concluded that neuro feedback was successful treatment for the multi symptomatic diagnosed boys.

Piek. J.P., et al., (2004) conducted a study on the relationship between motor co-ordination, executive functioning and attention in school aged children. The study included samples of 238 children, 121 girls and 117 boys, aged between 6 and 15 years. Motor ability was assessed using the McCarron assessment of neuromuscular development, level of inattention using the child behavior checklist, and verbal intelligent quotient was estimated using subtests of Wechsler intelligence scale for children. A reaction time task measuring response inhibition, working memory and the ability to plan and respond to goal directed tasks were administered. The results revealed that motor ability significantly accounted for variance in tasks measuring speed of performance, whereas inattention appeared to influence performance variability.

PART II

CONCEPTUAL FRAMEWORK

The conceptual framework for this study is based on Imogen King's goal attainment model (1971). Conceptual models deal with concepts that are used as building blocks and provide a conceptual perspective regarding interrelated phenomena which are closely structured.

The central focus of Imogen King's frame work is man as a dynamic human being whose perception of objects, persons and events influence his behavior, social interaction, and health. Imogene King's conceptual frame work includes three interacting systems which each system having its own distinct group of concepts and characteristics. These systems include personal systems, interpersonal systems, and social systems.

The personal system refers to the individual. The concepts within the personal system in understanding human beings are perception, self, body image, growth and development, time and space. Imogen King (1981) viewed perception as the most important variable because perception influences behavior. An individual's perception of self, body image, time and space influence the way he or she responds to persons, objects and events in his or her life. As individuals grow and develop through the life span, experience with changes in structure and function of their bodies over time influence their perception of self and interpersonal systems involve individuals interacting with one another. King refers to two individuals as small or large groups.

The theory is based on the concepts of the personal and interpersonal systems including interaction, perception, transaction and action. A basic theory for conceptual framework, which is aimed to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children in Madha Matriculation School at Chennai. This involves interaction between the researcher and the school children, the seven major concepts are described as follows.

Perception

Perception is the person's representation of the reality. It influences all other behavior of a person and it is more subjective and unique to each person. The

researcher perceives that the school children have lack of attention and concentration due to their age and playful mind, so they need to improve the level of attention and concentration.

Judgment

The judgment is a decision made by the researcher and the school children. Here the researcher judges that the school children have lack of attention and concentration. So, the investigator planned to provide concentration enhancement activity to improve the level of attention and concentration. The school children judge to utilize the enhancement activity to increase the level of attention and concentration.

Action

This refers to the changes that have to be achieved. The researcher's action is to implement concentration enhancement activity in order to improve attention and concentration and the children were ready to increase their level of attention and concentration.

Goal setting

Here the researcher plans to provide enhancement activity like letter cancellation, color cancellation, dots joining, missing numbers, puzzle solving, and tongue twisters to improve attention and concentration among school age children.

Reaction

Reaction means decision to act. In this study the researcher developed a tool such as modified attention profile and card game to assess the level of attention and concentration among school children.

Interaction

Interaction is a process of perception and communication between person and environment and between person and person, represented by verbal and nonverbal behaviors that are goal directed. Here the researcher gave concentration enhancement activity like letter cancellation, color cancellation, dots joining, missing numbers, puzzle solving, and tongue twisters to school children.

Transaction

The transaction is purposeful interaction that leads to goal attainment between the researcher and the school children. Here, the researcher assessed the effectiveness of concentration enhancement activity on attention and concentration among school age children by post test using modified attention profile and card game.

Positive outcome is rarely inattentive and good concentration which has to be reinforced further. Negative outcome is sometimes inattentive, often inattentive, fair and poor concentration which needs to be reassessed for further learning.

King's conceptual framework and theory of goal attainment provides a useful structure for the current researcher by using a concentration enhancement activity to improve the level of attention and concentration. King's theory provides direction for nursing practice by emphasizing the processes of communication, interaction, transaction and the use of critical thinking.

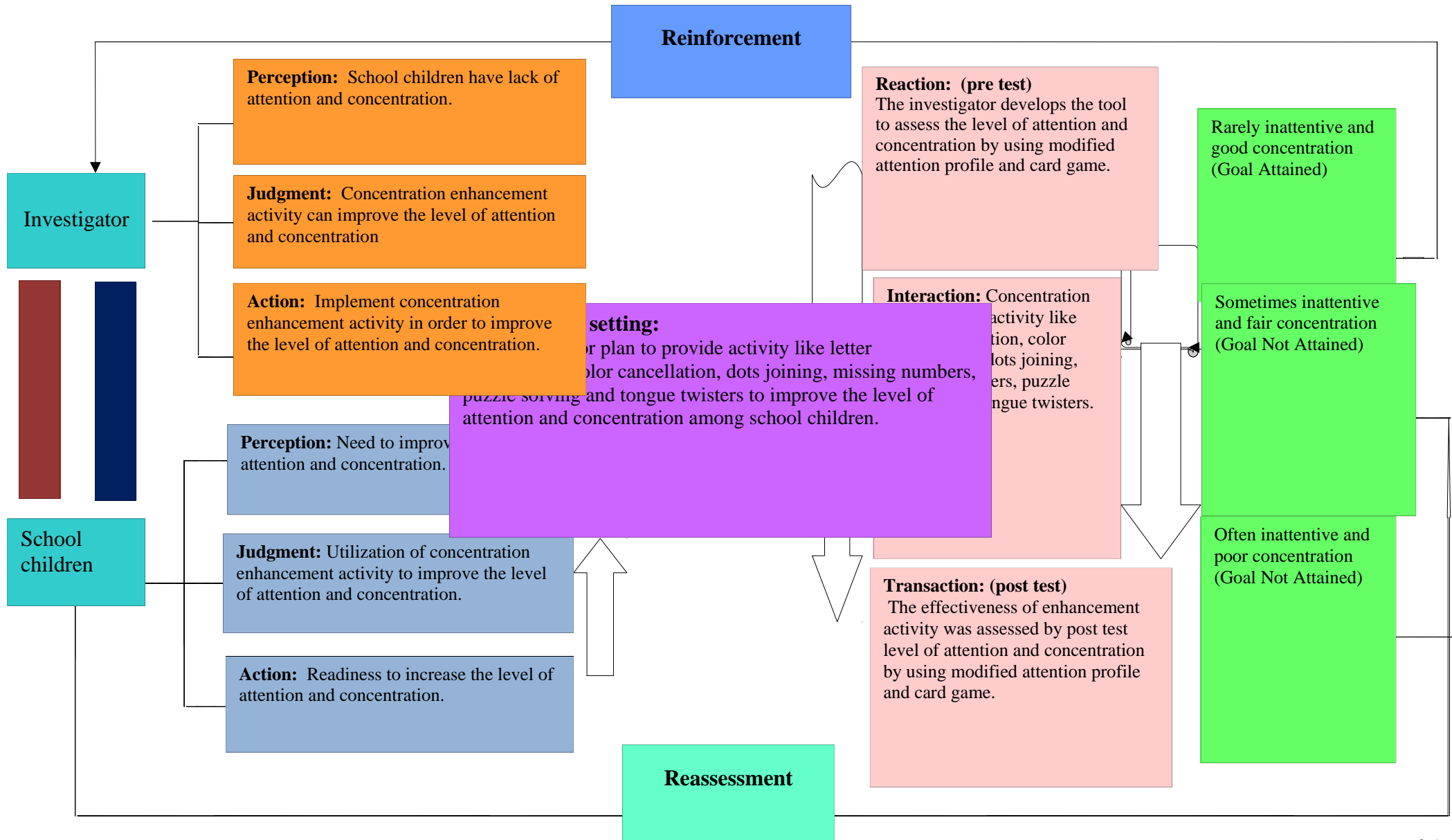


Fig 1: MODIFIED KING'S GOAL ATTAINMENT THEORY (1971).

CHAPTER III

METHODOLOGY

The methodology is the back bone for any investigation. It is a guideline system for solving a problem with specific components such as phases, tasks, methods, techniques and tools. The successes of any research depend largely upon the suitability of the tools and the technique that the investigator follows to gather adequate data. This design was used to assess the effectiveness of concentration enhancement activity on attention and concentration among school children in Madha Matriculation School at Chennai.

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This chapter deals with a research design, setting of the study, population, sample, sample size, sampling techniques, criteria for sample selection, description of tools and data collection procedure.

RESEARCH APPROACH

Quantitative research approach was used to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children in Madha Matriculation School.

RESEARCH DESIGN

The design selected for study was pre experimental one group pre test post test design.

RESEARCH VARIABLES

Independent variables: It refers to concentration enhancement activity on attention and concentration.

Dependent variables: It refers to attention and concentration among school age children.

SETTING OF THE STUDY

The study was conducted in Madha Matriculation School in Kundrathur at Chennai. The school is well developed with excellent infrastructure facilities in permanent building. The main building is a three storeyed framed structure with practical labs, play ground and library. The school has spacious number of class room that accommodates 50 students per class. The class rooms are well furnished, ventilated and have conclusive atmosphere which stimulate good academic learning. The school is equipped with sufficient number of equipments and accessories for the students. The total strength of school is 590 students. I have selected students from IV to V standard for study.

POPULATION

The population consists of school age children in the age group of 10 years in Madha Matriculation School.

SAMPLE

The sample consists of school age children who fulfilled the inclusion criteria.

SAMPLE SIZE

The sample size comprises of 30 school age children in Madha Matriculation School at Chennai.

SAMPLING TECHNIQUE

Purposive sampling technique was used to select the samples.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

- Children who belong to the age group of 10 years.
- Children include both boys and girls.
- Children who can understand and speak English.

- Children who scored 50% or below during their previous academic performance.

Exclusion Criteria

- Children who have chronic illness.
- Children who were not available during study period.
- Children who were absent in school for a long duration.
- Children who practice meditation and other concentration enhancement activity.

DESCRIPTION OF THE INSTRUMENT

Extensive review of literature, discussion and guidance from experts enhance the development of tools. The tool consists of four parts:

Part I

It consists of demographic variables like sex of the child, type of family, religion, family income, family structure, educational status of mother, educational status of father, type of diet, type of hobby and previous exposure to meditation.

Part II

ASSESSMENT OF ATTENTION

MODIFIED JAMES.B.SNYDER'S ATTENTION PROFILE was used to assess the level of attention among school age children. The scale consists of 20 items with three options, score 0 for rarely true, score 1 for sometimes true, score 2 for very or often true.

The scoring was interpreted as follows

0-20 : rarely inattentive

21-30 : sometimes inattentive

31-40 : often inattentive

ASSESSMENT OF CONCENTRATION

A game developed by **ERIC HARSH BARGER** was used to assess the level of concentration among school age children.

The scoring was interpreted as follows

9-14 attempts : Good concentration

15-20 attempts : Fair concentration

21-26 attempts : Poor concentration

Part – III

It consists of concentration enhancement activity which included letter cancellation, color cancellation, dots joining, missing numbers, puzzle solving, and tongue twisters in improving attention and concentration among school age children.

VALIDITY

Validity of the tool was assessed using content validity. Content validity was determined by experts from nursing and medical field. They suggested certain modifications in the tool. After the modifications they agreed this tool for assessing effectiveness of concentration enhancement activity on attention and concentration among school age children.

RELIABILITY

The reliability of the tool was assessed by using inter rater method, its correlation coefficients r values was 0.83 and 0.88. The correlation coefficient was high, so the tool was appropriate and used to assess the effectiveness of concentration enhancement activity on attention and concentration among school children.

ETHICAL CONSIDERATION

The study was conducted after the approval of dissertation committee. Formal written permission was obtained from the Chairman of Madha group of Academic Institution and the Principal of Madha Matriculation School. The school children were

clearly explained about the study purpose and procedures. The formal oral consent was obtained from the subjects. The usual assurance of anonymity and confidentiality was obtained.

PILOT STUDY

The refined tool was used for pilot study to test the feasibility, appropriateness and practicability. The pilot study was conducted in Madha Matriculation School at Chennai from the duration of 01.11.2013 to 09.11.2013. A formal permission from higher authorities and oral consent from the students was obtained. The pilot study was carried out with 3 children who fulfilled the inclusion criteria. The samples were selected by purposive sampling technique.

The brief self introduction was given by the investigator and explained the purpose of the study to the children to gain their co-operation. The tool was explained in detail to the participants. On the first day modified attention tool and card game was used to assess the pre test level of attention and concentration. On next day concentration enhancement activity was given to the children for duration of 30 minutes for six days. The post test was conducted by using the same tool on the seventh day.

DATA COLLECTION PROCEDURE

A formal written permission was obtained from the Chairman of Madha group of Academic Institutions and the Principal of Madha Matriculation School, Chennai. The data was collected over a period of 4 weeks duration from 15.11.2013 to 15.12.2013. The study was carried out among 30 school children who fulfilled the inclusion criteria. An oral informed consent was obtained from each participant. Self introduction was followed by adequate explanation about the purpose of the study to ensure better cooperation.

Every week the investigator selected 10 school children by using purposive sampling technique. A modified attention profile and card game was used to the samples to assess their pre test level of attention and concentration. After conducting pre test, concentration enhancement activity was given to the children for duration of 30 minutes

for six days. Then the investigator conducted the post test on seventh day by using same tool.

DATA ANALYSIS

The data was analyzed in term of the objectives of the study by using both descriptive and inferential statistics. Demographic variables of school children were analyzed in terms of frequency and percentage. Mean and standard deviation was used to determine the level of attention and concentration among school age children. Paired‘t’ test was used to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children. Karl Pearson correlation coefficient was used to correlate between the post test level of attention and concentration among school age children. Chi square test was used to associate the post level of attention and concentration among school age children with their selected demographic variables.

**A STUDY TO ASSESS THE EFFECTIVENESS OF CONCENTRATION
ENHANCEMENT ACTIVITY ON ATTENTION AND
CONCENTRATION AMONG SCHOOL AGE
CHILDREN IN MADHA MATRICULATION
SCHOOL AT CHENNAI**

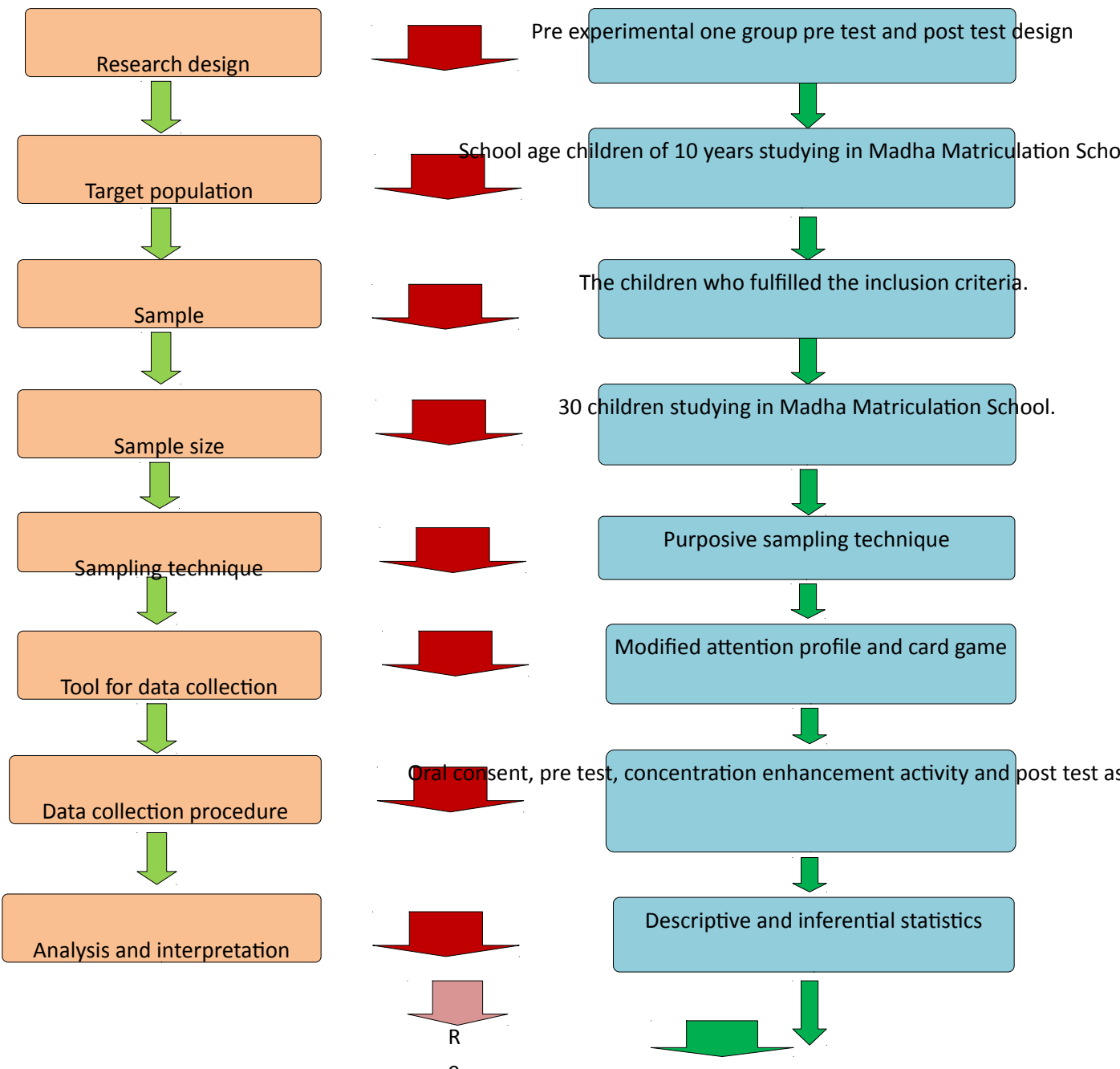


Fig. 2: Schematic representation of research methodology

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CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Data analysis is the categorizing, ordering, manipulating and summarizing of data to reduce the intelligible and interpretable so that the research problem can be studied and tested including the relationship between variables. (Kerlinger 1976).

The findings are based on the descriptive and inferential statistics analyzed and presented under the following sections.

- Section A :** Frequency and percentage distribution of demographic variables of school age children.
- Section B :** Frequency and percentage distribution of pre test level of attention and concentration among school age children.
- Section C :** Frequency and percentage distribution of post test level of attention and concentration among school age children.
- Section D :** Comparison of frequency and percentage distribution of pre test and post level of attention and concentration among school age children.
- Section E :** Comparison of mean and standard deviation of pre test and post test level of attention and concentration among school age children.
- Section F :** Correlation between post test level of attention and concentration among school age children.
- Section G:** Association of post test level of attention and concentration among school age children with their demographic variables.

SECTION – A

Table 1: Frequency and percentage distribution of demographic variables of

S. No	Demographic Variables	Frequency	Percentage
1	Sex of the child		
	Boy	18	60.0
	Girl	12	40.0
2	Type of family		
	Nuclear family	29	96.7
	Joint family	1	3.3
3	Religion		
	Hindu	26	86.7
	Christian	3	10.0
	Muslim	1	3.3
4	Family income per month		
	Below Rs.5,000	10	33.3
	Rs.5,000-10,000	20	66.7
5	Family structure		
	Parents living together	30	100.0
6	Educational status of mother		
	Non-formal education	1	3.3
	Primary school	2	6.7
	Higher secondary	25	83.3
	Graduate	2	6.7
7	Educational status of father		
	Primary school	1	3.3
	Higher secondary	24	80.0
	Graduate	5	16.7
8	Type of diet		
	Vegetarian	4	13.3
	Non-vegetarian	26	86.7
9	Type of hobby		
	Listening to music	3	10.0
	Sports	10	33.3
	Watching TV	7	23.3
	Playing video games	10	33.3
10	Previous exposure to meditation		
	Yes	5	16.3
	No	25	83.7

school age children.

N=30

Table 1 depicts the distribution of demographic variables of school age children. With respect to sex, the majority of children 18 (60.0%) were boys and 12 (40.0%) were girls. With respect to type of family, 29 (96.7%) were in nuclear family and 1 (3.3%) were in joint family. Regarding religion majority of the children 26 (86.7%) were Hindus, 3 (10.0%) were Christians, 1 (3.3%) was Muslim. Considering the monthly income, 10 (33.3%) were within family income of less than Rs.5, 000 and 20 (66.7%) were within family income of Rs. 5, 000- 10,000.

With regard to their family structure all 30 (100%) children were living with their parents. With regard to educational status of mother, 1 (3.3%) had non formal education, 2 (6.7%) went to primary school, 25 (83.3%) has completed school and 2 (6.7%) were graduates. With regard to educational status of father, 1 (3.3%) went to primary school, 24 (80.0%) has completed school and 5 (16.7%) were graduates. In relation to the type of diet, 4 (13.3%) were vegetarian and 26 (86.7%) were non vegetarian.

With regard to type of hobby 3 (10.0%) children listens to music, 10 (33.3%) plays sports, 7 (23.3%) watches TV and 10 (33.3%) plays video games. In relation to previous exposure to meditation 5 (16.3%) had no exposure to meditation and 25 (83.7%) had exposure to meditation.

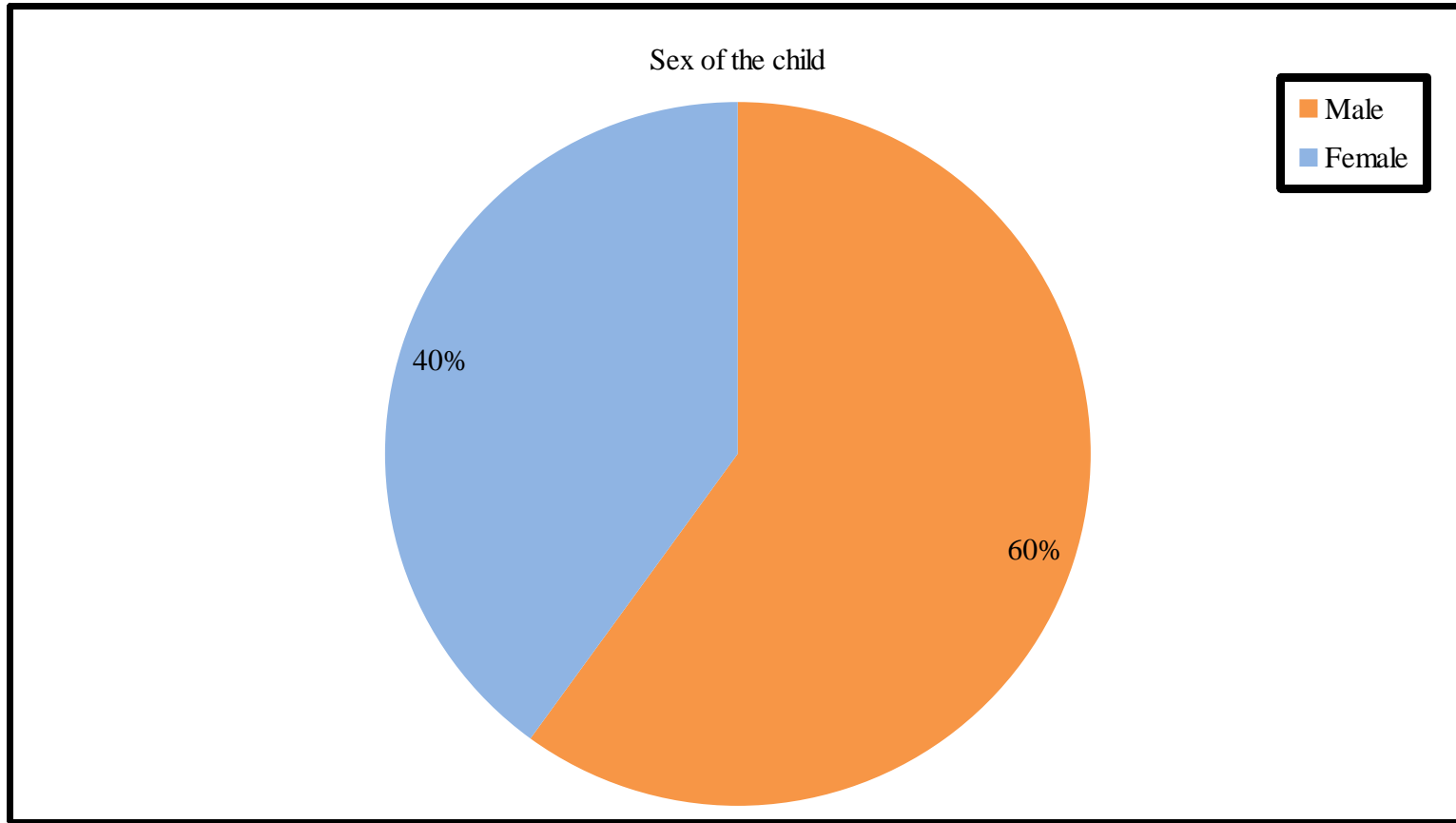


Fig 3: Percentage distribution of sex of the child among school children

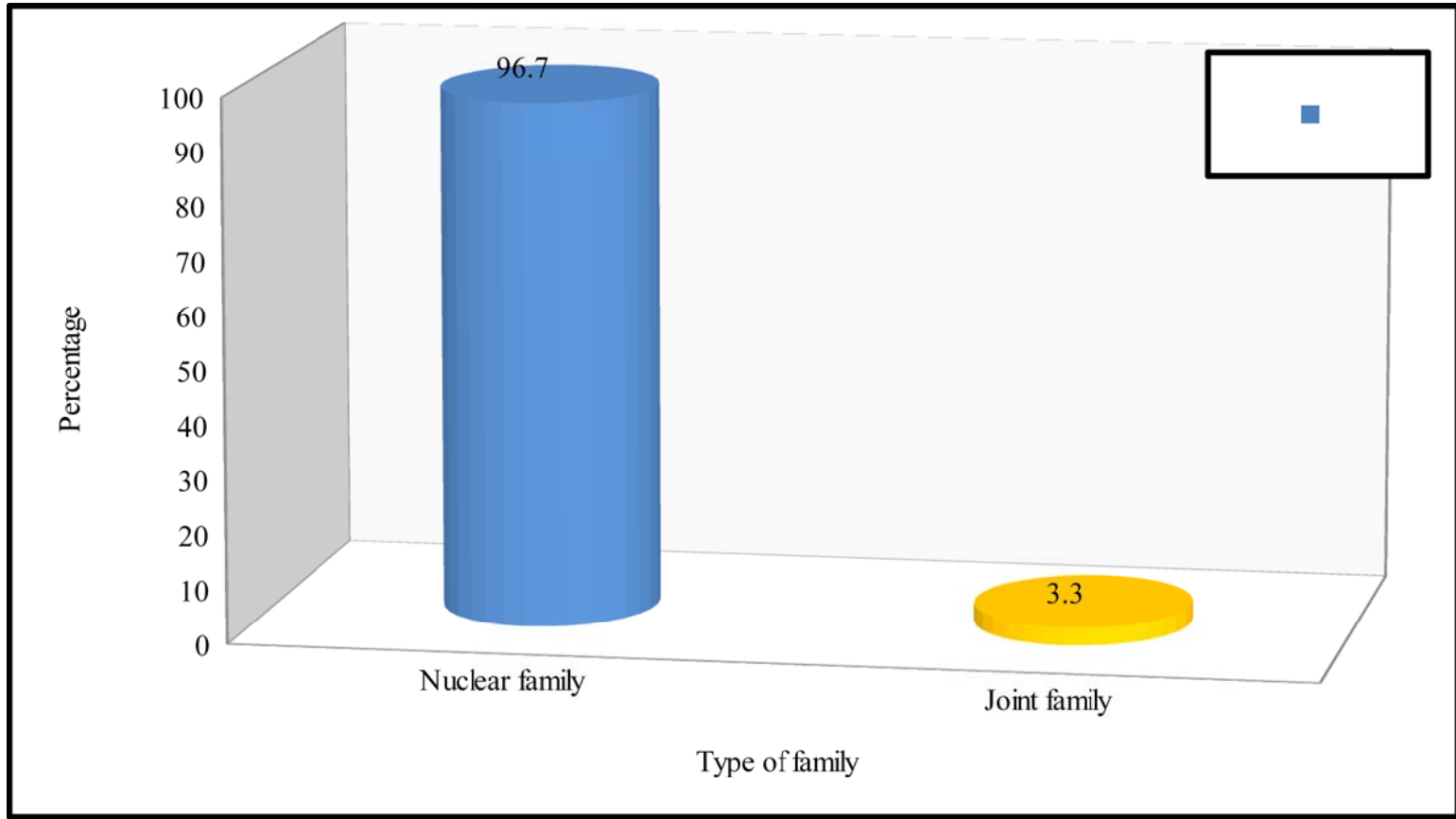


Fig 4: Percentage distribution of type of family among school children

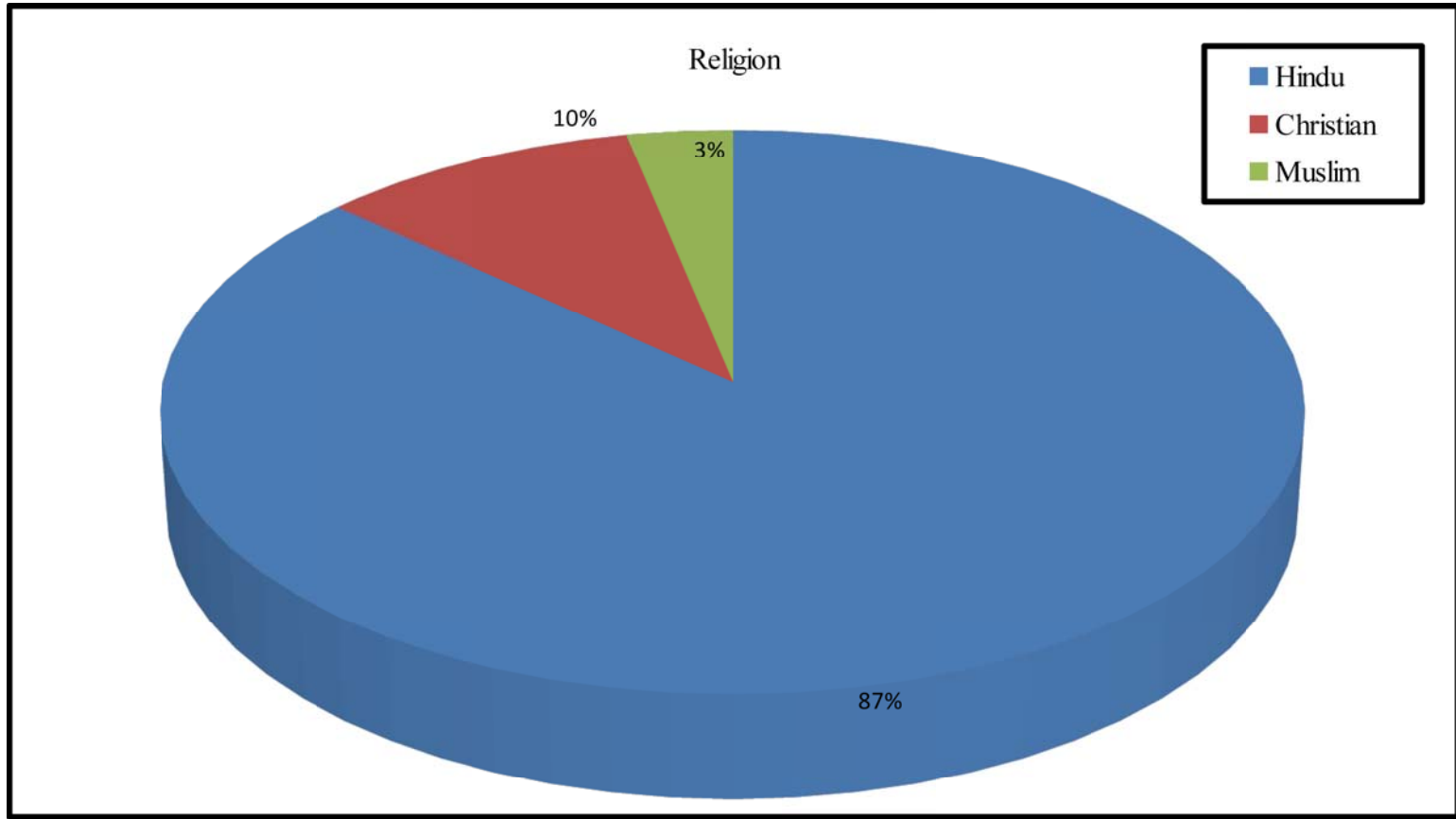


Fig 5: Percentage distribution of religion among school children

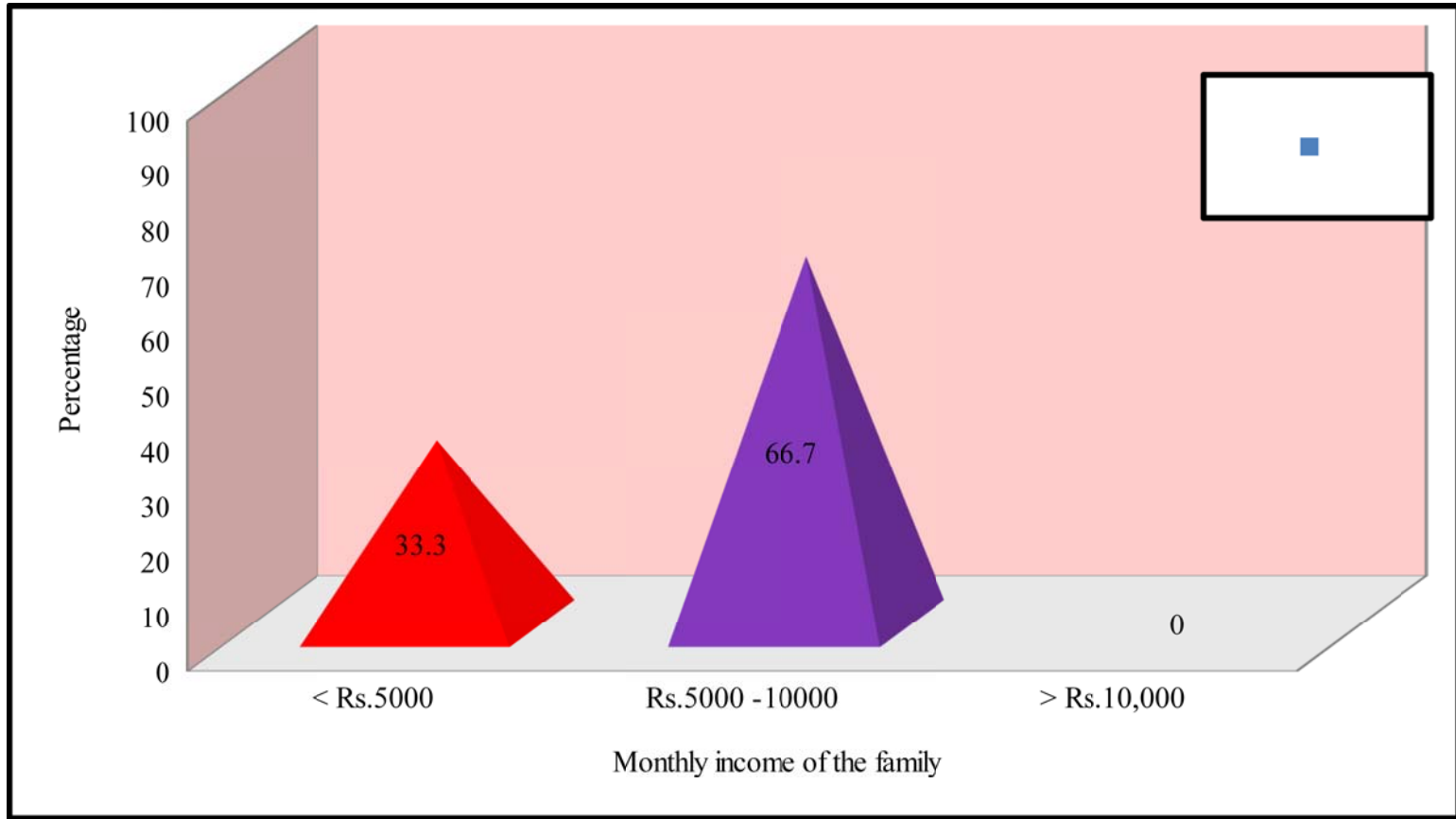


Fig 6: Percentage distribution of monthly income of family

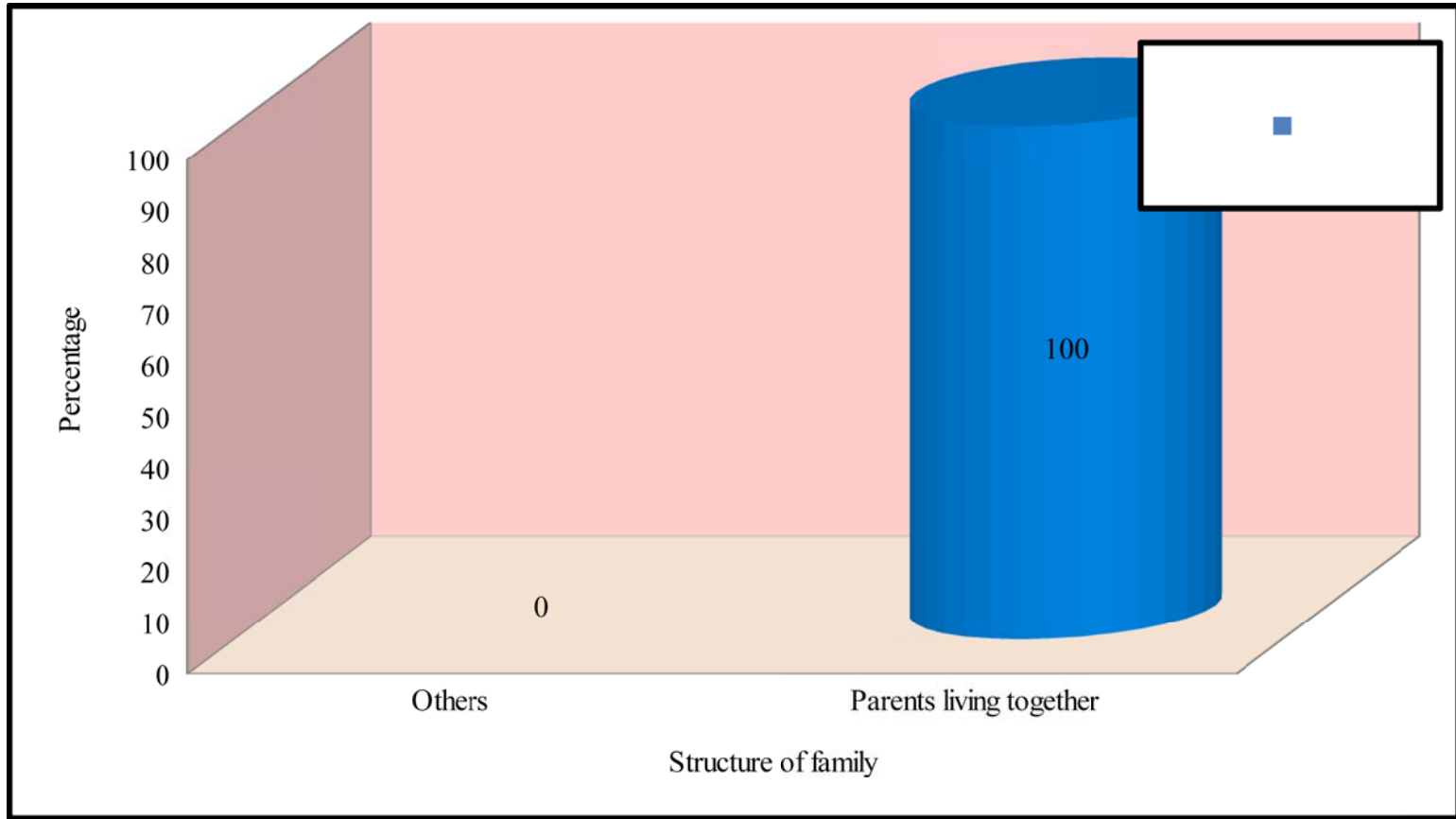


Fig 7: Percentage distribution of structure of family among school children

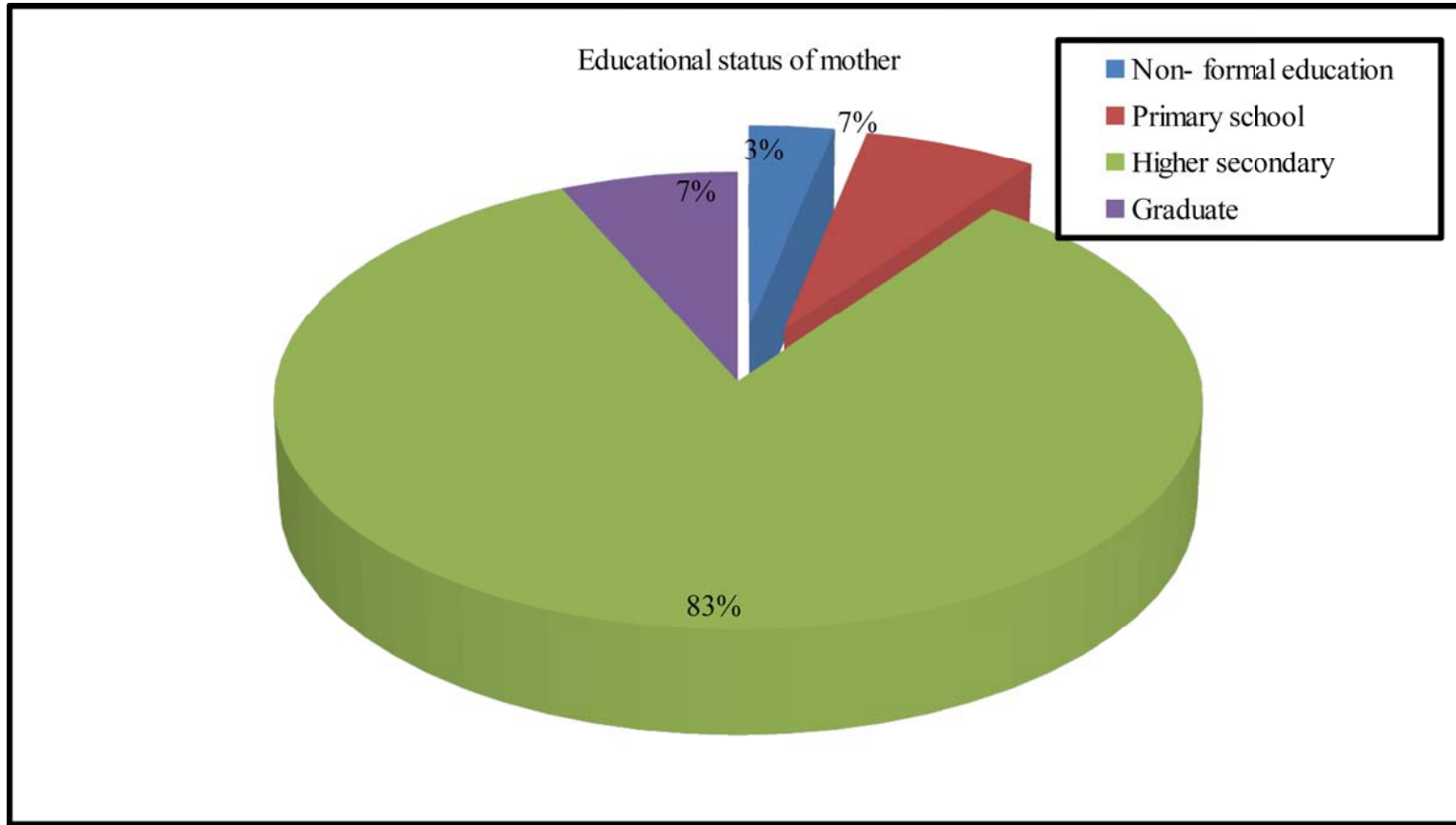


Fig 8: Percentage distribution of educational status of mother.

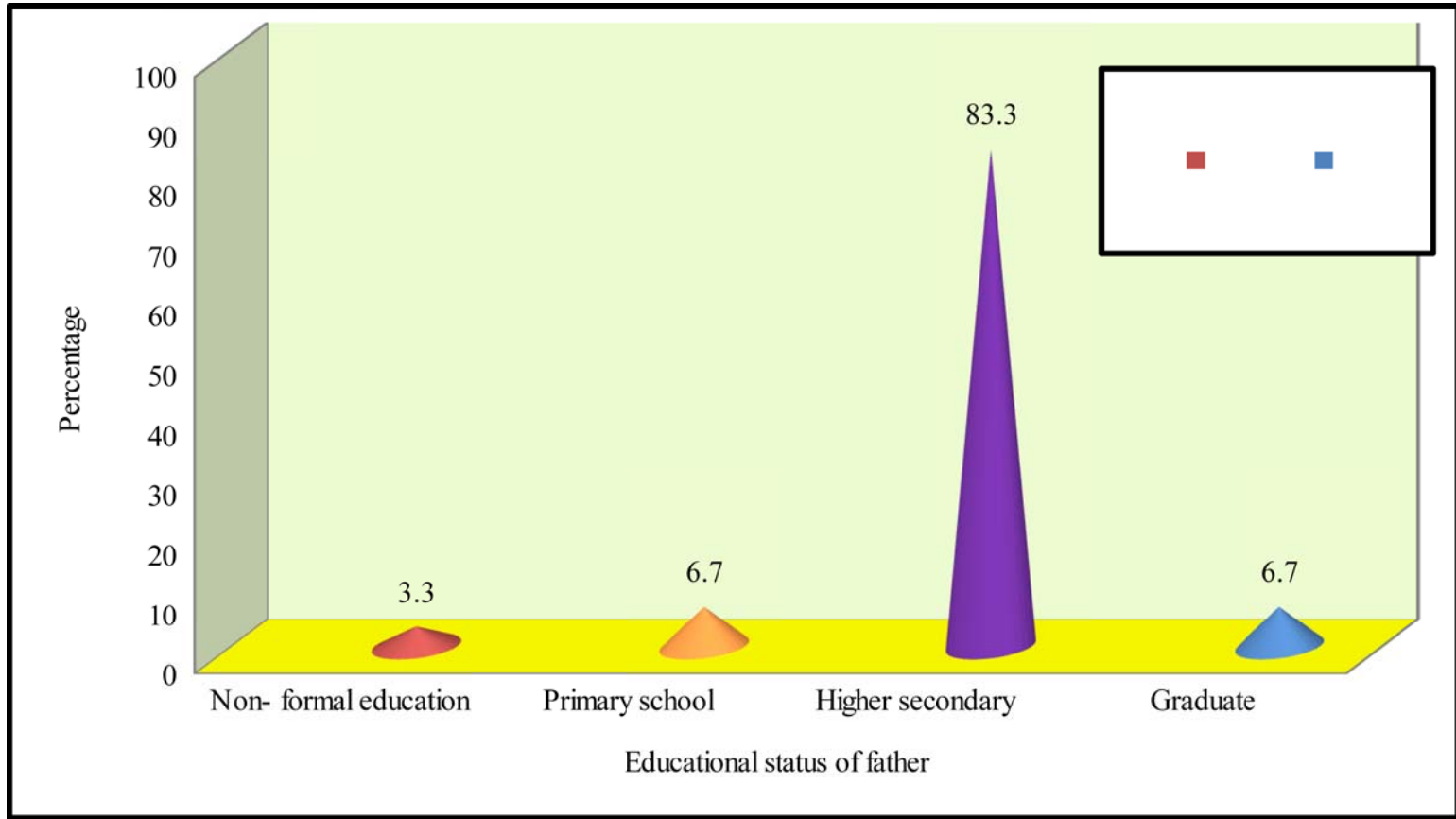


Fig 9: Percentage distribution of educational status of father

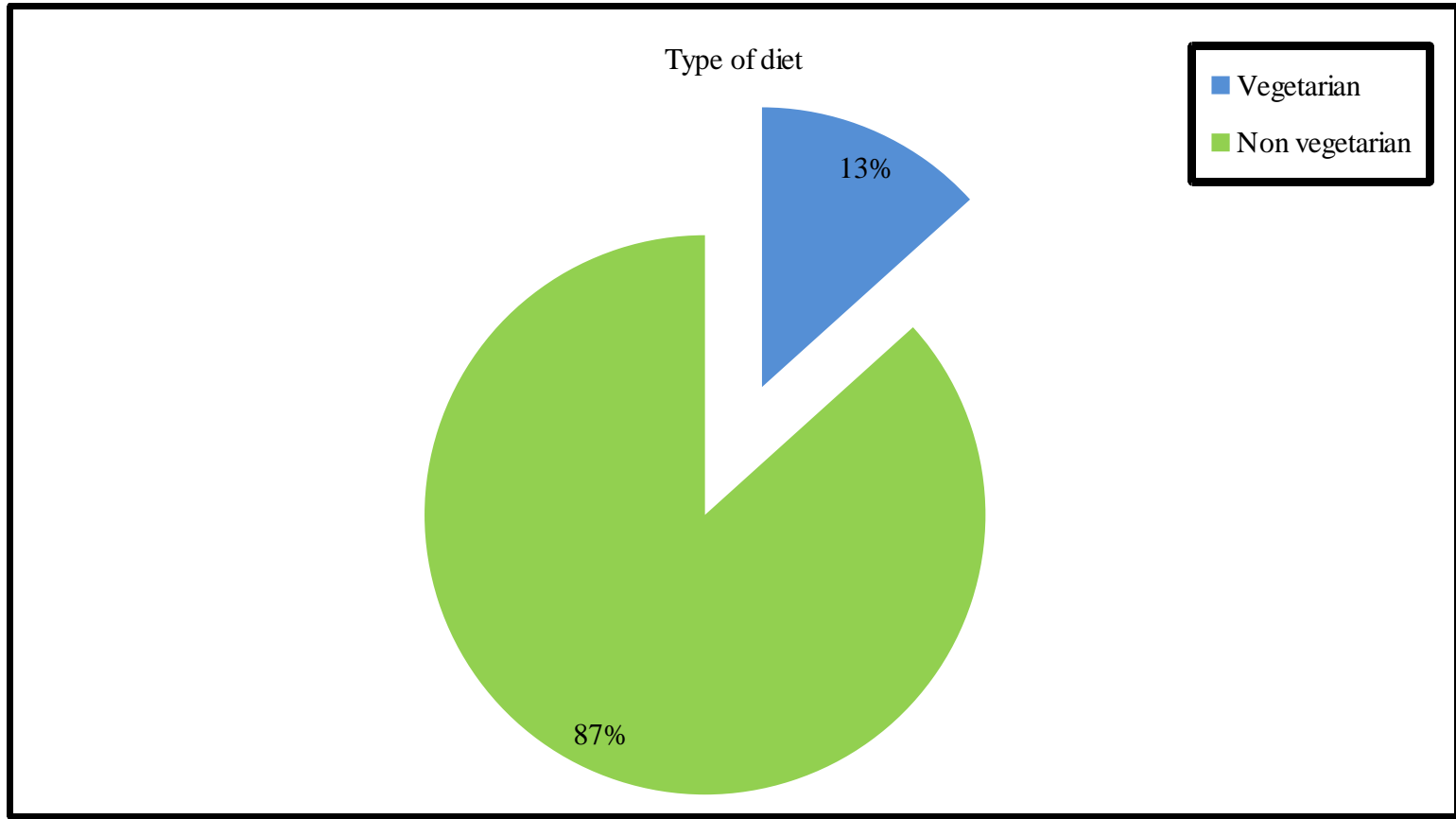


Fig 10: Percentage distribution of type of diet among school children

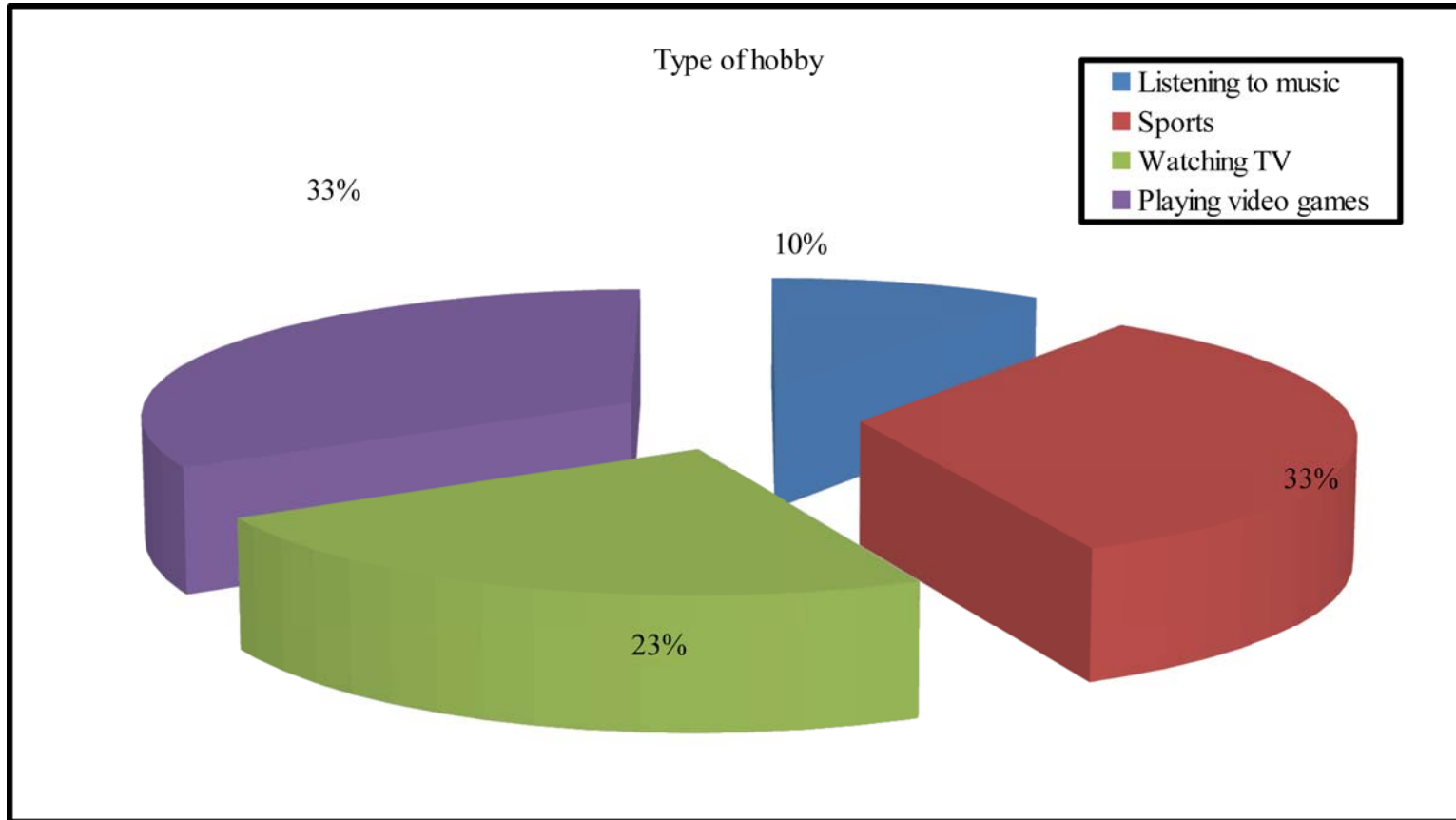


Fig 11: Percentage distribution of type of hobby among school children

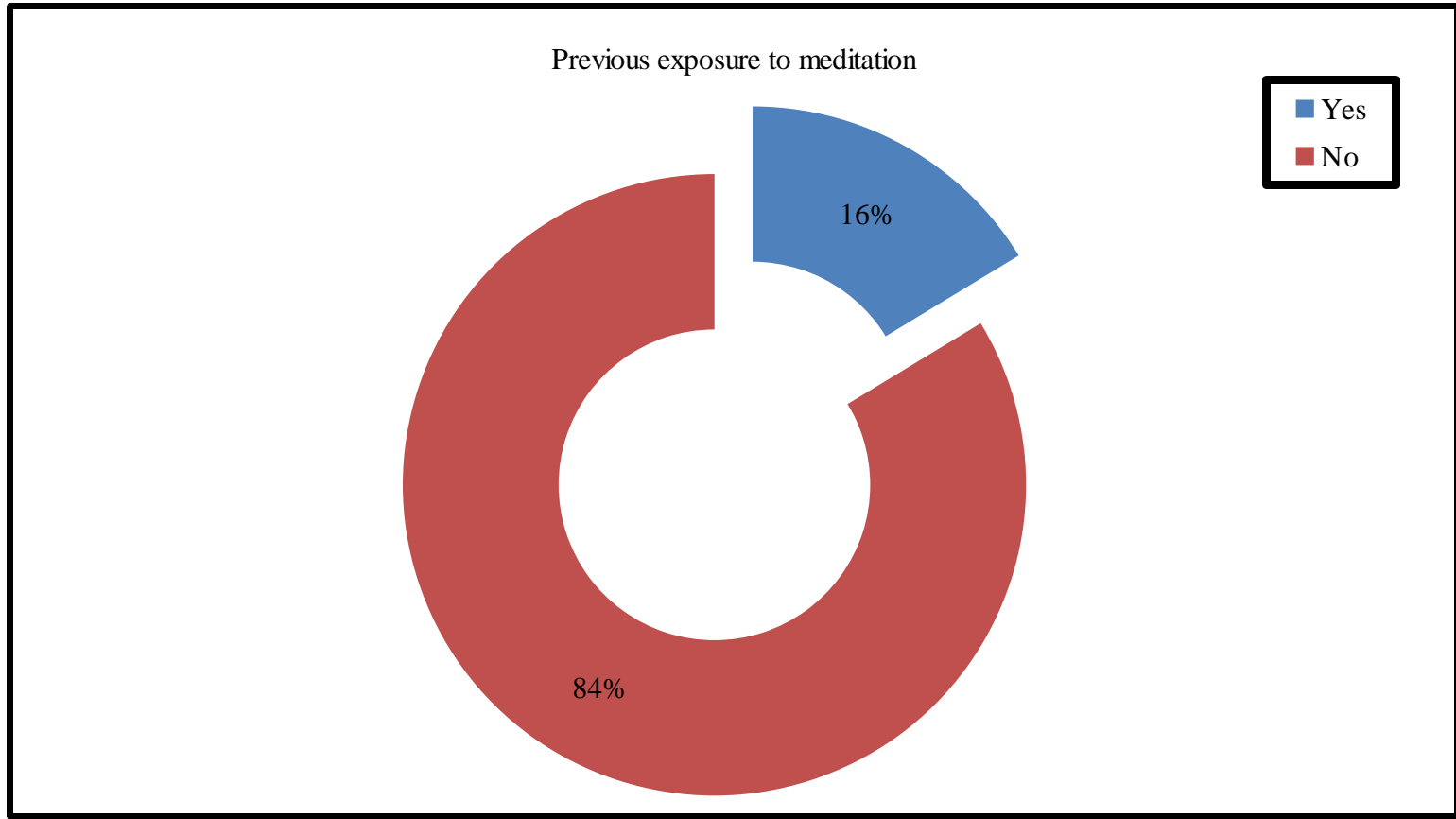


Fig 12: Percentage distribution of previous exposure to meditation among school children

SECTION - B

Table 2: Frequency and percentage distribution of pre test level of attention among school age children

N=30

Level of attention	Pre test	
	Frequency	Percentage
Rarely inattentive	3	10
Sometimes inattentive	6	20
Often inattentive	21	70

Table 2 depicts the frequency and percentage distribution of pre test level of attention among school age children. It reveals that 3 (10%) children were rarely inattentive, 6 (20%) children were sometimes inattentive and 21 (70%) children were often inattentive.

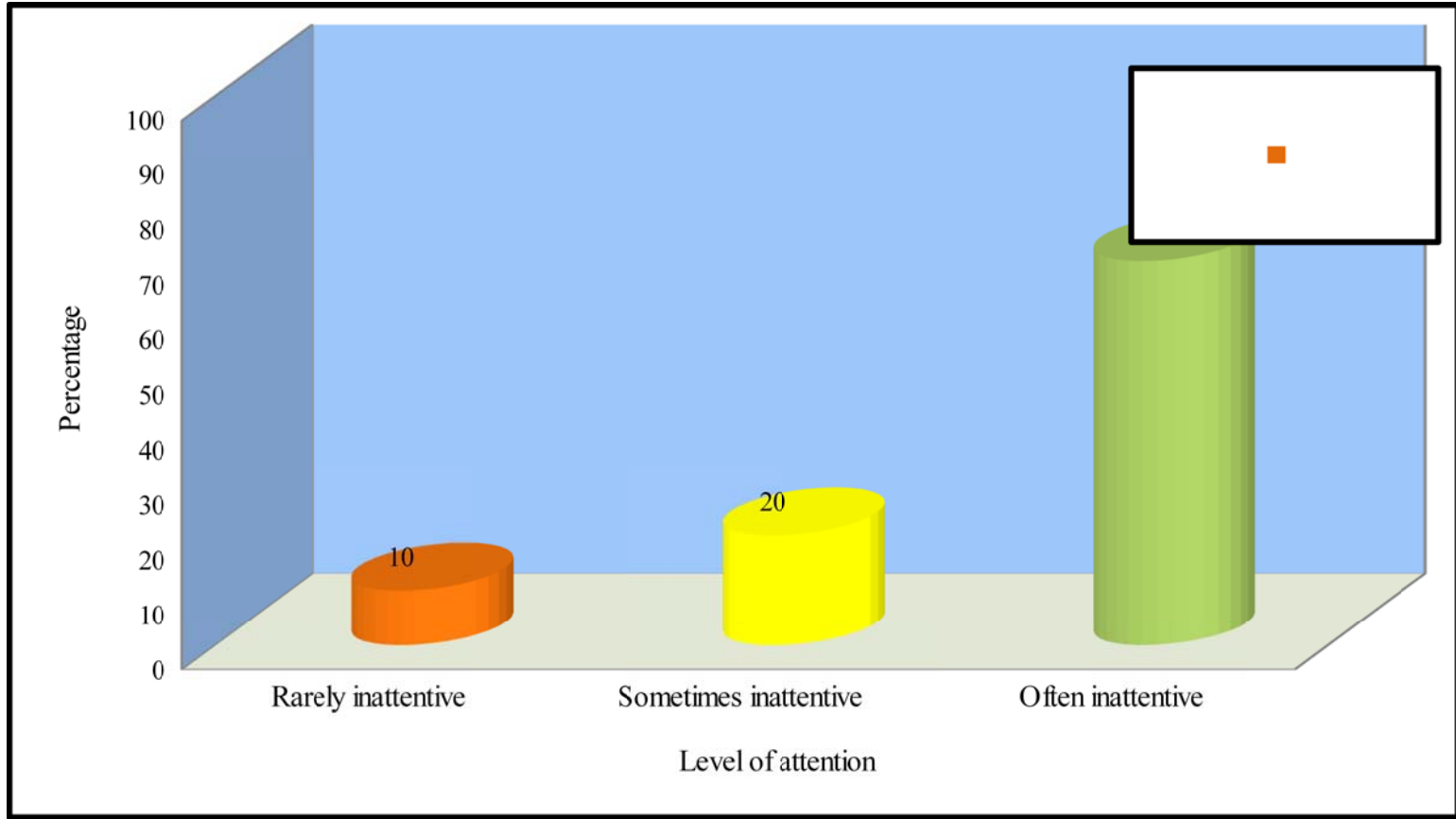


Fig. 13: Percentage distribution of pre test level of attention among school age children

Table 3: Frequency and percentage distribution of post test level of attention among school age children.

N=30

Level of attention	Post test	
	Frequency	Percentage
Rarely inattentive	18	60
Sometimes inattentive	12	40
Often inattentive	0	0

Table 3 depicts the frequency and percentage distribution of post test level of attention among school age children. It reveals that 18 (60%) children were rarely inattentive, 12 (40%) children were sometimes inattentive and none of the children were often inattentive.

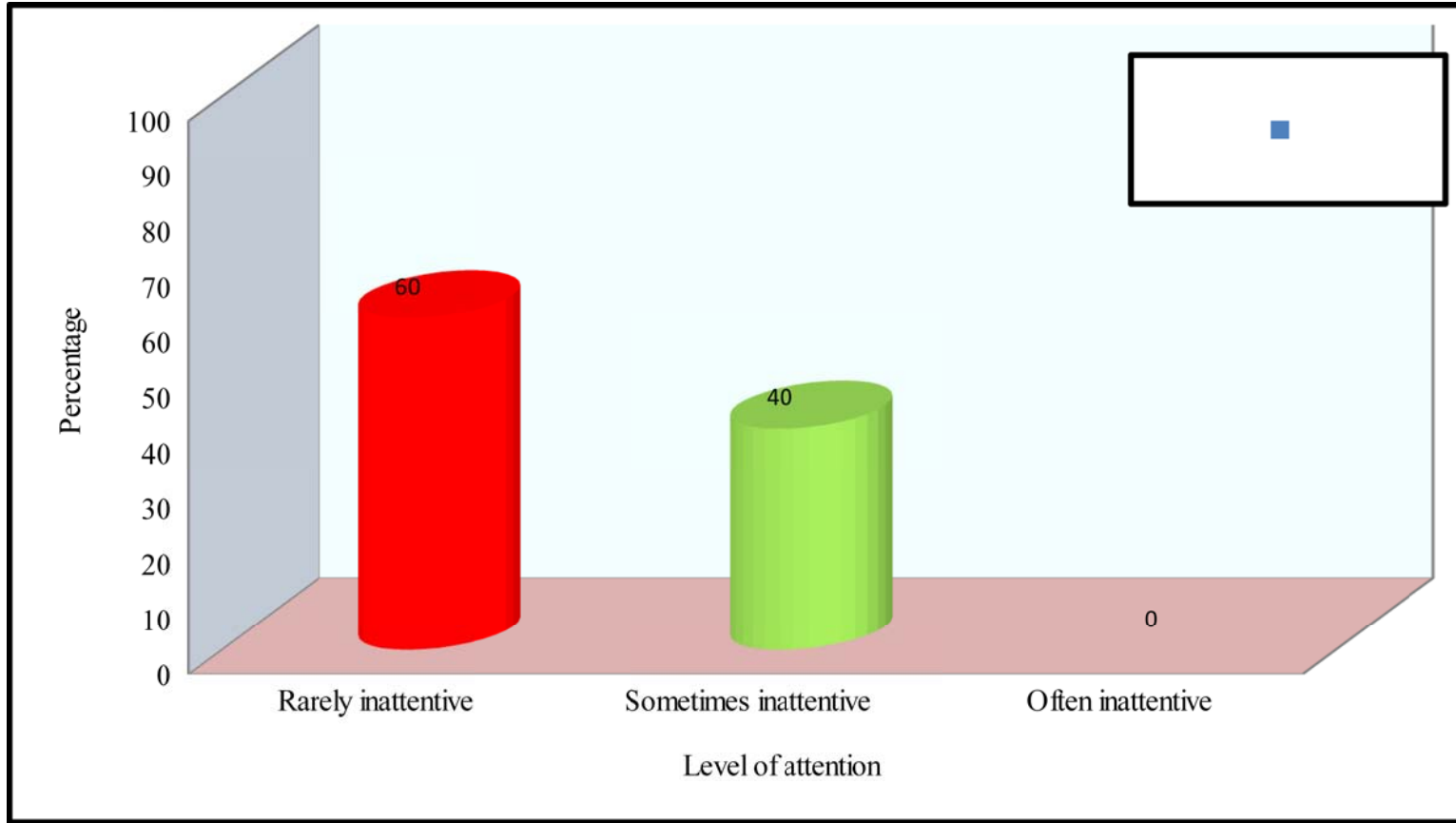


Fig. 14: Percentage distribution of post test level of attention among school age children

SECTION - C

Table 4: Frequency and percentage distribution of pre test level of concentration among school age children.

N=30

Level of concentration	Pre test	
	Frequency	Percentage
Good	4	13.3
Fair	7	23.3
Poor	19	63.4

Table 4 depicts the frequency and percentage distribution of pre test level of concentration among school age children. It reveals that 4 (13.3%) children had good concentration, 7 (23.3%) children had fair concentration and 19 (63.4%) children had poor concentration.

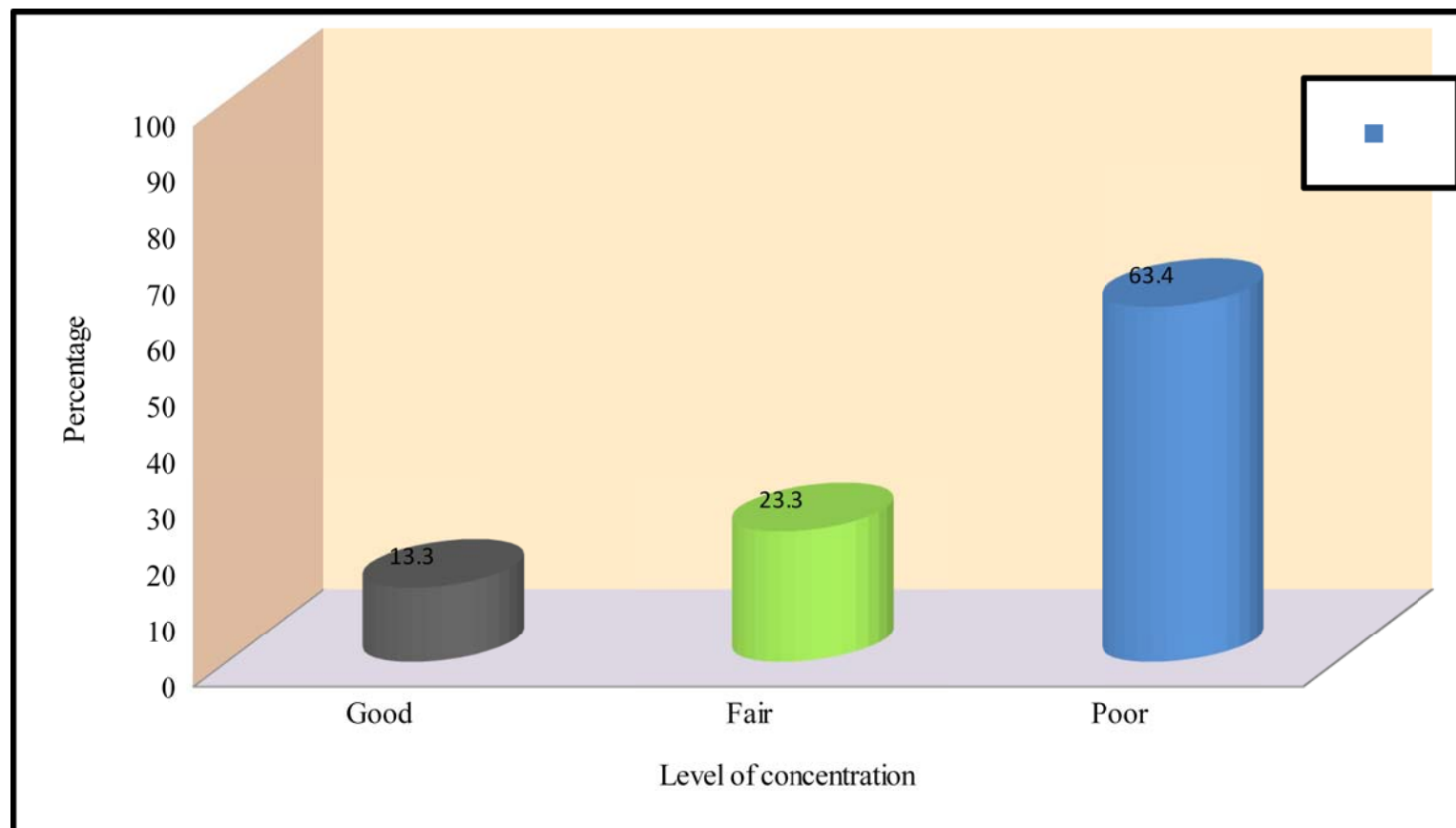


Fig. 15: Percentage distribution of pre test level of concentration among school age children

Table 5: Frequency and percentage distribution of post test level of concentration among school age children.

N=30

Level of concentration	Post test	
	Frequency	Percentage
Good	19	63.3
Fair	11	36.7
Poor	0	0.0

Table 5 depicts the frequency and percentage distribution of post test level of concentration among school age children. It reveals that 19 (63.3%) children had good concentration, 11 (36.7%) children had fair concentration and none of them had poor concentration.

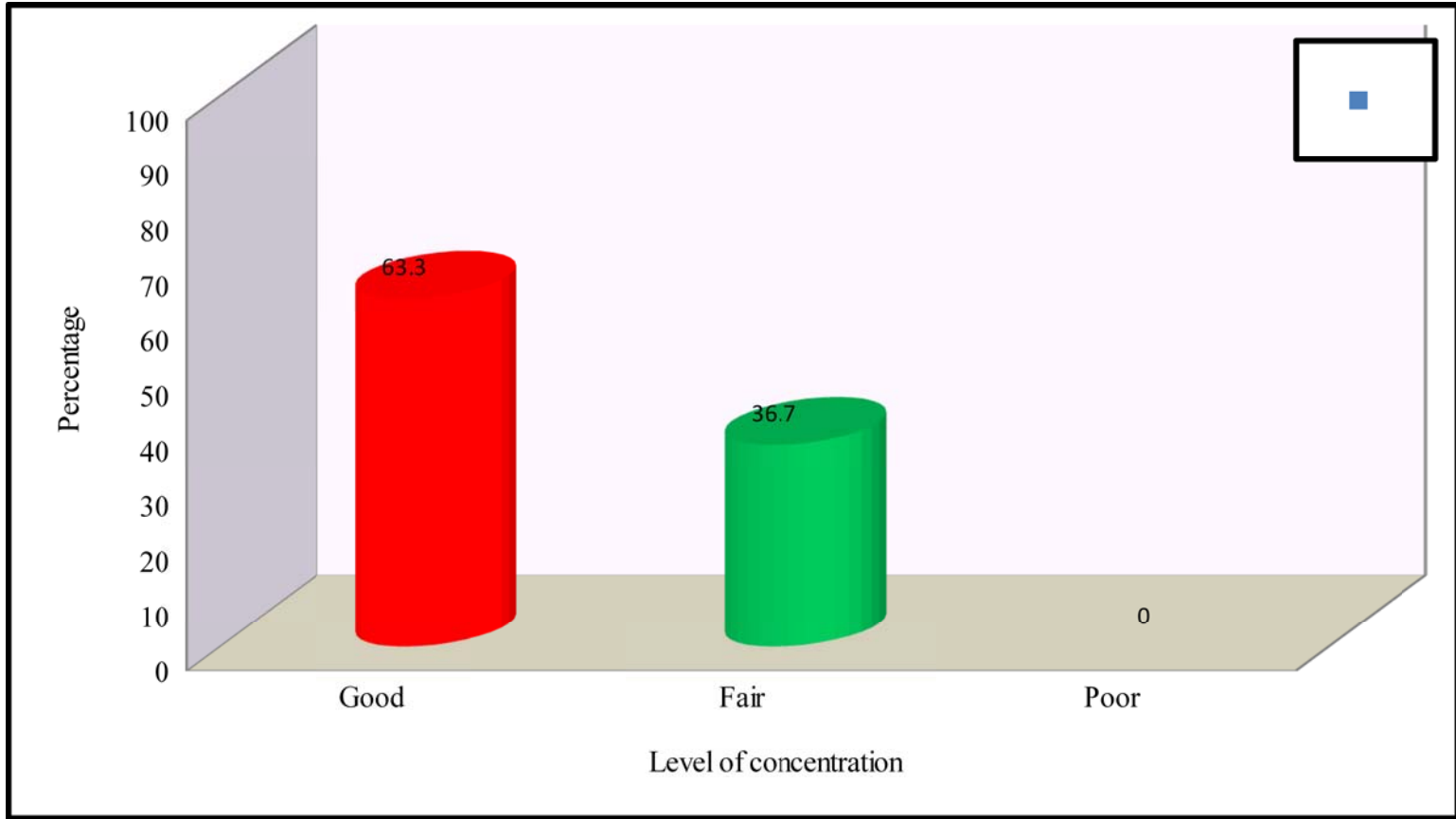


Fig. 16: Percentage distribution of post test level of concentration among school age children

SECTION - D

Table 6: Comparison of frequency and percentage of pre test and post test level of attention among school age children.

N=30

Level of attention	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Rarely inattentive	3	10	18	60
Sometimes inattentive	6	20	12	40
Often inattentive	21	70	0	0

Table 6 shows the comparison of frequency and percentage distribution of pre test and post test level of attention among school age children. In pre test level of attention 3 (10%) children were rarely inattentive, 6 (20%) children were sometimes inattentive and 21 (70%) children were often inattentive. In post test level of attention 18 (60%) children were rarely inattentive, 12 (40%) children were sometimes inattentive and none of the children were often inattentive.

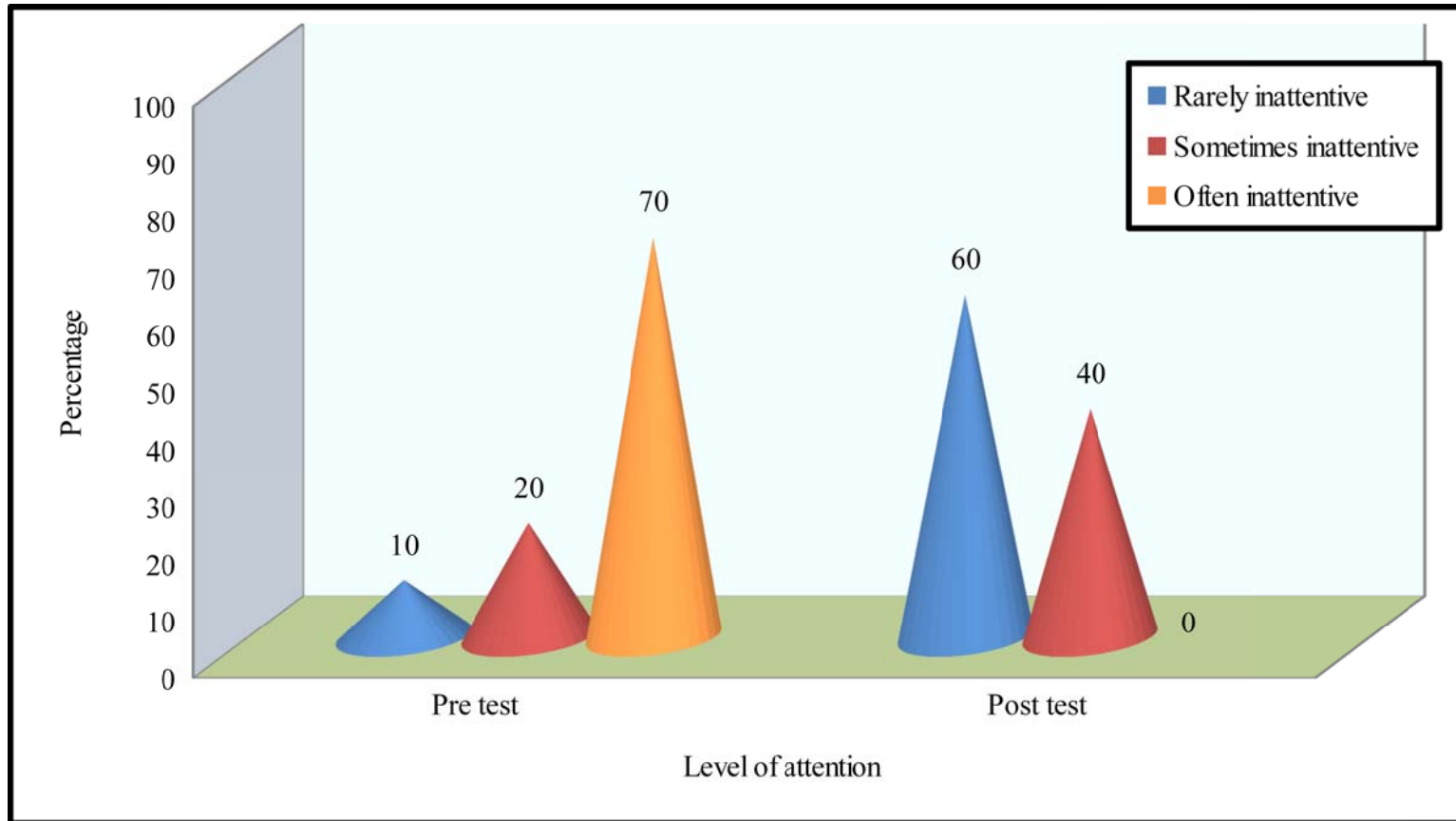


Fig 17: Percentage distribution of pre test and post test level of attention among school children

Table 7: Comparison of frequency and percentage of pre test and post test level of concentration among school age children.

N=30

Level of concentration	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Good	4	13.3	19	63.3
Fair	7	23.3	11	36.7
Poor	19	63.4	0	0.0

Table 7 shows the comparison of frequency and percentage distribution of pre test and post test level of concentration among school children. In pre test level of concentration 4 (13.3%) children had good concentration, 7 (23.3%) children had fair concentration and 19 (63.4%) children had poor concentration. In post test level of concentration 19 (63.3%) children had good concentration, 11 (36.7%) children had fair concentration and none of them had poor concentration

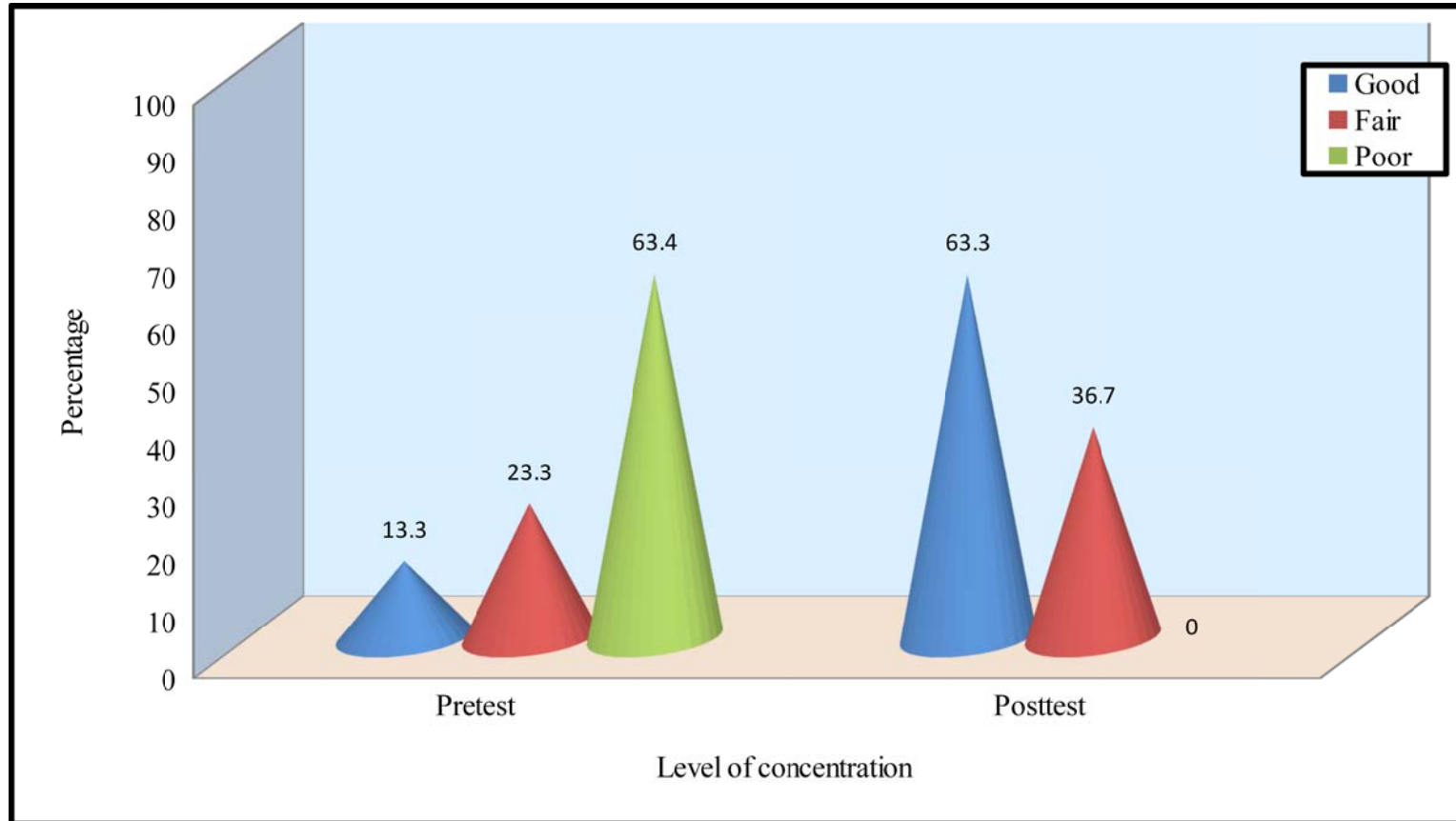


Fig 18: Percentage distribution of pre test and post test level of concentration among school children

SECTION – E

Table 8: Comparison of mean and standard deviation of pre test and post test level of attention among school age children.

N=30

Assessment of attention	Mean	Standard Deviation	Paired 't' test
Pre test	29.83	6.73	9.72***
Post test	18.53	5.14	

*** p<0.001

Table 8 shows the comparison of mean and standard deviation between pre test and post test level of attention. Analysis reveals that the pre test level of attention mean score was 29.83 with the standard deviation of 6.73 and the post test level of attention mean score was 18.53 with the standard deviation of 5.14. The paired' test value of 9.72 was very high significant at the level of p<0.001. The difference between pre test and post test level of attention score is high and it is statistically very high significant. Thus, it indicates the effectiveness of concentration enhancement activity.

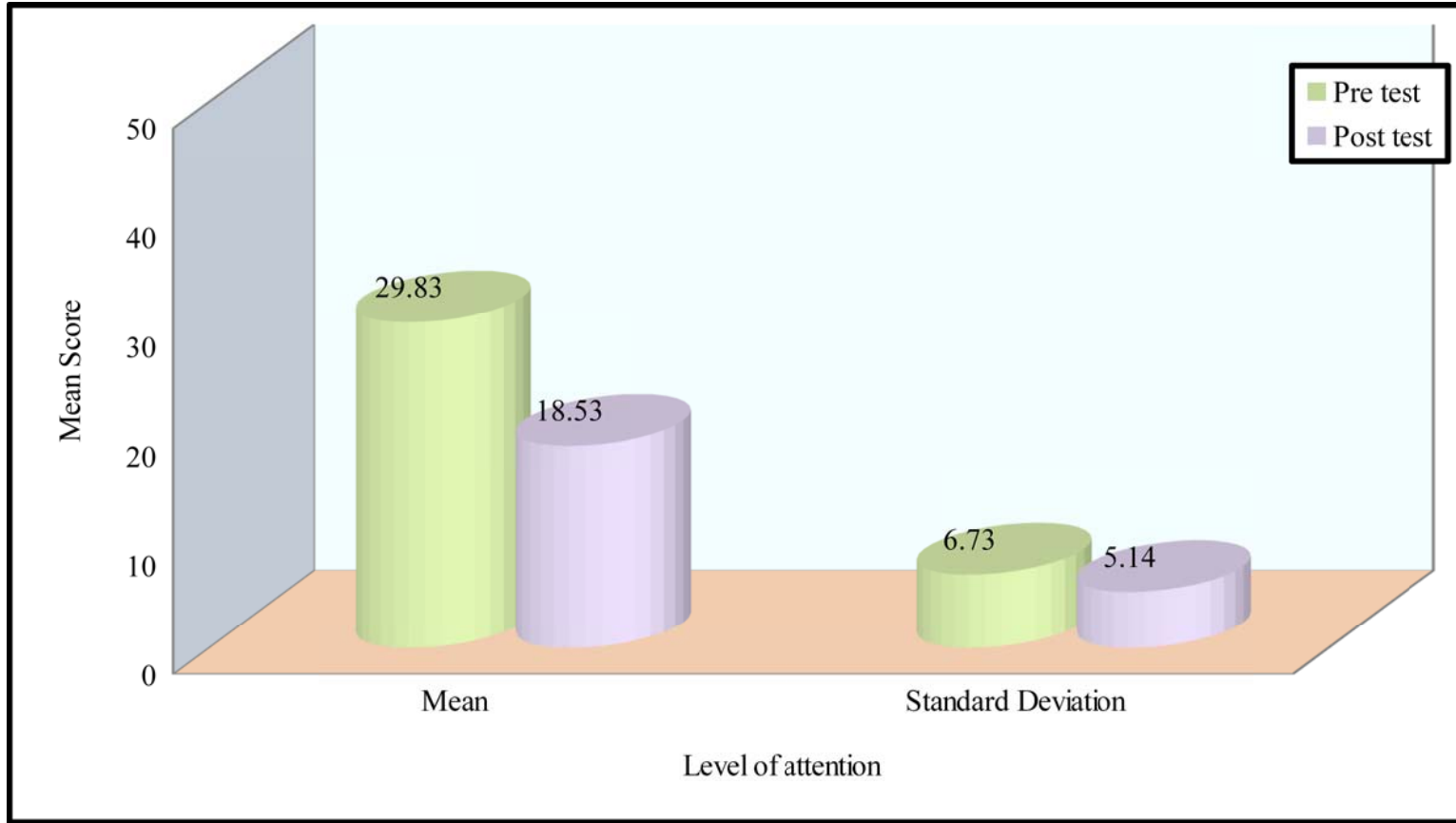


Fig 19: Mean and Standard deviation of pre test and post test level of attention among school age children.

Table 9: Comparison of mean and standard deviation of pre test and post test level of concentration among school age children.

N=30

Assessment of concentration	Mean	Standard Deviation	Paired 't' test
Pre test	21.57	4.78	6.71***
Post test	13.83	3.60	

*** p<0.001

Table 9 shows the comparison of mean and standard deviation between pre test and post test level of concentration regarding among school age children. Analysis reveals that the pre test level of concentration mean score was 21.57 with the standard deviation of 4.78 and the post test level of concentration mean score was 13.83 with the standard deviation of 3.60. The paired' test value of 6.71 was very high significant at the level of $p<0.001$. The difference between pre test and post test level of concentration score is high and it is statistically very high significant. Thus, it indicates the effectiveness of concentration enhancement activity.

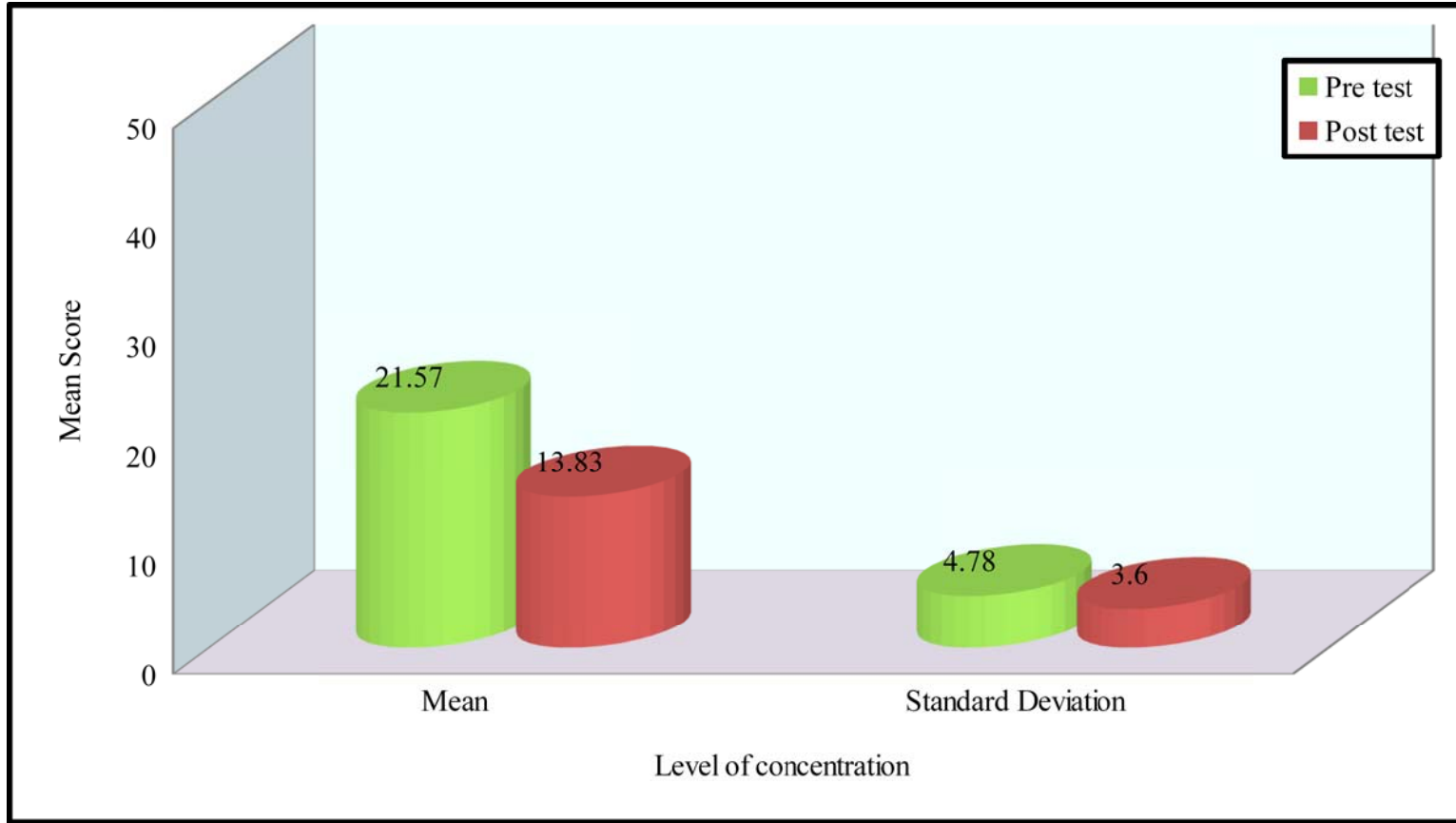


Fig 20: Mean and Standard deviation of pre test and post test level of concentration among school age children.

SECTION – F

Table 10: Correlation between post test level of attention and concentration among school age children.

N=30

Assessment	Mean score	Standard deviation	Karl Pearson Correlation Coefficient r
Attention	18.53	5.14	r =0.56 S**
Concentration	13.83	3.60	

** p<0.01

Table 10 depicts the correlation between post test level attention and concentration among school age children. The analysis reveals that the correlation between post test level of attention and concentration were moderately correlated at the level of p<0.01.

SECTION – G

Table 11: Association of post test level of attention among school age children with their demographic variables.

N=30

S.No	Demographic variables	Post test level of attention				Chi square χ^2
		Rarely		Sometimes		
		n	%	n	%	
1	Sex					$\chi^2 = 4.54$ df= 1 S*
	Boy	8	44.4	10	55.6	
	Girl	10	83.3	2	16.7	
2	Type of family					$\chi^2 = 0.69$ df= 1 NS
	Nuclear family	17	58.6	12	41.4	
	Joint family	1	100.0	0	0.0	
3	Religion					$\chi^2 = 5.48$ df= 2 NS
	Hindu	17	65.4	9	34.6	
	Christian	0	0.0	3	100.0	
	Muslim	1	100.0	0	0.0	
4	Monthly income					$\chi^2 = 0.62$ df= 1 NS
	<Rs.5,000	7	70.0	3	30.0	
	Rs.5,000-10,000	11	55.0	9	45.0	
5	Family structure					$\chi^2 = 0.0$ df= 0 NS
	Parents living together	18	60.0	12	40.0	
6	Educational status of mother					$\chi^2 = 0.83$ df= 3 NS
	Non formal	1	100.0	0	0.0	
	Primary school	1	50.0	1	50.0	
	Higher secondary	15	60.0	10	40.0	
	Graduate	1	50.0	1	50.0	
7	Educational status of father					$\chi^2 = 1.56$ df= 2 NS
	Primary school	0	0	1	100.0	
	Higher secondary	15	62.5	9	37.5	
	Graduate	3	60.0	2	40.0	
8	Type of diet					$\chi^2 = 0.43$ df= 1 NS
	Vegetarian	3	75	1	25	
No	Non vegetarian	15	57.7	11	42.3	
9	Type of hobby					$\chi^2 = 3.69$ df= 1 NS
	Listening to music	3	100.0	0	0.0	
	Sports	5	50.0	5	50.0	
	Watching TV	3	42.9	4	57.1	
	Playing video games	7	50.0	3	30.0	
10	Previous exposure to meditation					$\chi^2 = 5.00$ df= 1 S*
	Yes	6	100.0	0	0.0	
	No	12	50.0	12	50.0	

NS- Non significant, S- statistically significant, *p<0.05

Table 11 shows the association of post test level of attention regarding concentration enhancement activity among school children with their selected demographic variables.

The chi square value of 4.54 showed that there was a significant association between the sex of school children and post test level of attention after concentration enhancement activity at the level of $p < 0.05$. The chi square value of 5.00 showed that there was a significant association between previous exposure to meditation and post test level of attention after concentration enhancement activity at the level of $p < 0.05$.

Table 12: Association of post test level of concentration among school age children with their demographic variables.

N=30

S.No	Demographic variables	Post test level of concentration				Chi square χ^2
		Good		Fair		
		n	%	n	%	
1	Sex					$\chi^2 = 6.91$ df= 1 S*
	Boy	8	44.4	10	55.6	
	Girl	11	91.7	1	8.3	
2	Type of family					$\chi^2 = 0.59$ df= 1 NS
	Nuclear family	18	62.1	11	37.9	
	Joint family	1	100.0	0	0.0	
3	Religion					$\chi^2 = 1.78$ df= 2 NS
	Hindu	17	65.4	9	34.6	
	Christian	2	66.7	1	33.3	
	Muslim	0	0.0	1	100.0	
4	Monthly income					$\chi^2 = 1.12$ df= 1 NS
	<Rs.5,000	5	50.0	5	50.0	
	Rs.5,000-10,000	14	70.0	6	30.0	
5	Family structure					$\chi^2 = 0.0$ df= 0 NS
	Parents living together	19	63.3	11	36.7	
6	Educational status of mother					$\chi^2 = 0.89$ df= 3 NS
	Non formal	1	100.0	0	0.0	
	Primary school	1	50.0	1	50.0	
	Higher secondary	16	64.0	9	36.0	
	Graduate	1	50.0	1	50.0	
7	Educational status of father					$\chi^2 = 1.43$ df= 2 NS
	Primary school	1	100.0	0	0.0	
	Higher secondary	14	58.3	10	41.7	
	Graduate	4	80.0	1	20.0	
8	Type of diet					$\chi^2 = 2.67$ df= 1 NS
	Vegetarian	4	100.0	0	0.0	
No	Non vegetarian	15	57.7	11	42.3	
9	Type of hobby					$\chi^2 = 2.33$ df= 1 NS
	Listening to music	2	66.7	1	33.3	
	Sports	6	60.0	4	40.0	
	Watching TV	6	85.7	1	14.3	
	Playing video games	5	50.0	5	50.0	
10	Previous exposure to meditation					$\chi^2 = 4.34$ df= 1 S*
	Yes	6	100.0	0	0.0	
	No	13	54.2	11	45.8	

NS- Non significant, S- statistically significant, *p<0.05

Table 12 shows the association of post test level of concentration among school children with their selected demographic variables.

The chi square value of 6.91 showed that there was a significant association between the sex of school children and post test level of concentration after concentration enhancement activity at the level of $p < 0.05$. The chi square value of 4.34 showed that there was a significant association between previous exposure to meditation and post test level of concentration after concentration enhancement activity at the level of $p < 0.05$.

CHAPTER V

DISCUSSION

This chapter deals with discussion of the result obtained from the statistical analysis. This study aimed to assess the effectiveness of concentration enhancement activity on attention and concentration among school age children in Madha Matriculation School at Chennai.

The hypothesis formulated was that there was a significant association between concentration enhancement activity on attention and concentration among school age children. The review of literature included related studies which provided a strong foundation for the study including the basis for conceptual frame work and formation of tool.

The conceptual framework for this study was developed based on Imogen King's goal attainment theory. The research design used in the study was pre experimental one group pre test and post test design. It was carried out with 30 participants who fulfilled the inclusion criteria. Purposive sampling technique was used to select the sample.

A modified attention profile and concentration test was used to assess the pre test level of attention and concentration among school age children. Concentration enhancement activity was conducted to the participants for the duration of 30 minutes for six days. The post test was conducted on seventh day by using the same tool.

The collected data was analyzed using descriptive and inferential statistics. The distribution of demographic variables of study showed that the majority of children 18 (60.0%) were boys and 12 (40.0%) were girls. With respect to type of family, 29 (96.7%) were in nuclear family and 1(3.3%) were in joint family. Regarding religion the majority of the children, 26 (86.7%) were Hindus, 3 (10.0%) were Christians, 1(3.3%) was Muslim. Considering the monthly income, 10 (33.3%) were within the family income of less than Rs.5, 000 and 20 (66.7%) were within the family income of Rs. 5, 000- 10,000.

With regard to their family structure all 30 (100%) children were living with their parents. With regard to educational status of mother, 1 (3.3%) had non formal

education, 2 (6.7%) went to primary school, 25 (83.3%) has completed school and 2 (6.7%) were graduates. With regard to educational status of father, 1 (3.3%) went to primary school, 24 (80.0%) has completed school and 5 (16.7%) were graduates. In relation to the type of diet, 4 (13.3%) were vegetarian and 26 (86.7%) were non vegetarian.

With regard to the type of hobby, 3 (10.0%) children listens to music, 10 (33.3%) plays sports, 7 (23.3%) watches TV and 10 (33.3%) plays video games. In relation to previous exposure to meditation 5 (16.3%) had no exposure to meditation and 25 (83.7%) had exposure to meditation.

The first objective was to assess the pre test level of attention and concentration among school age children.

In pre test, 3 (10%) children were rarely inattentive, 6 (20%) children were sometimes inattentive and 21 (70%) children were often inattentive, with regard to concentration, it reveals that 4 (13.3%) children had good concentration, 7 (23.3%) children had fair concentration and 19 (63.4%) children had poor concentration.

The study correlates with Ong. L. C., et al., (2010) who conducted a study on factors associated with poor academic achievement among urban primary school children in Malaysia. Socio demographic and medical data were obtained from questionnaires and interviews. All students underwent raven's standard progressive matrices test as a general measure of cognitive ability. The results showed that out of 1470 eligible children, 206 had poor achievement. Out of 919 children who participated in the study, 111 had poor achievement compared with 95 of the 551 non participants and the factors were found to be independently associated with poor academic achievement ($p < 0.001$). The study concluded that cognitive ability, gender, prematurity and social factors contributed to poor academic achievement during the early school years.

The study correlates with Silveria. A., et al., (2014) who conducted a study on relationship between learning problems and attention deficit in childhood. The samples included in the study were 774 children from selected elementary schools. The child was assessed by his teacher using a standardized scale. The attention deficit hyperactivity disorder scale of teacher's version was used to evaluate attention deficit

hyperactive disorder symptoms and learning problems. The result indicated that a very strong association was found between attention deficit and learning problems.

The second objective was to assess the post test level of attention and concentration among school age children.

In post test level of attention 18 (60%) children were rarely inattentive, 12 (40%) children were sometimes inattentive and none of the children were often inattentive. In the post test level of concentration 19 (63.3%) children had good concentration, 11 (36.7%) children had fair concentration and none of them had poor concentration.

The study correlates with Shrensen. L., et al., (2012) who conducted a study on the impact of inattention and emotional problems on cognitive control in primary school children. The samples were 241 children from primary school. The cognitive control was measured by functions of set shifting and working memory as assessed by behavior rating inventory of executive function and performance based tests. Inattention and emotional problems were measured with parent and teacher reports on Swanson Nolan and Pelham questionnaire, strengths and difficulties questionnaire respectively. The result showed that clinical symptoms of inattention and emotional problems explained the child's performance on test measures, however symptoms of inattention made a significant contribution on all the selected measures of cognitive control, whereas reports concerning emotional problems uniquely explained the variance on the shift scale.

The study correlates with Murray. D. W., et al., (2011) who reviewed a study on teacher management practices for first graders with attention problems. The sample included a total of 36 teachers who completed the teacher management questionnaire for 92 students in five predominantly low income, minority schools. Additional teacher and student background data were collected on the inattentive sample, including behavior ratings and academic test. The result indicated that teachers reported variable implementation of different management strategies, with more frequent use of class wide structure and organizational interventions, and less frequent assignment modifications and individual behavior plans.

The third objective was to assess the effectiveness of concentration enhancement activity regarding attention and concentration among school age children.

In comparison of mean and standard deviation between pre test and post test level of attention among school age children. Analysis reveals that the pre test level of attention mean score was 29.83 with the standard deviation of 6.73 and the post test level of attention mean score was 18.53 with the standard deviation of 5.14. The paired 't' test value of 9.72 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of attention score is high and it is statistically very high significant.

In comparison of mean and standard deviation between pre test and post test level of concentration among school age children. Analysis reveals that the pre test level of concentration mean score was 21.57 with the standard deviation of 4.78 and the post test level of concentration mean score was 13.83 with the standard deviation of 3.60. The paired 't' test value of 6.71 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of concentration score is high and it is statistically very high significant. Thus, it indicates the effectiveness of concentration enhancement activity among school age children.

The study correlates with Saskia. O., et al., (2012) who had conducted a study to evaluate the effectiveness of eight week mindfulness training for children with attention deficit and mindful parenting for their parents. Parents were assessed by questionnaires including their own attention deficit symptoms, parenting stress, parental overacting, permissiveness and mindful awareness before, immediately after the eight week training and at eight week follow up. The teachers reported attention deficit behavior of the child. The results showed the effectiveness of mindfulness for children with attention deficit and their parents.

The fourth objective was to correlate the post test level of attention and concentration among school age children

The Karl Pearson correlation coefficient value of $r = 0.56$ at the level of $p < 0.01$ showed moderate correlation between post test level of attention and concentration among school age children.

The study correlates with Gajre. N. S., et al., (2008) who has conducted a study on breakfast eating habit and its influence on attention and concentration, immediate memory and school achievement. The samples were 379 urban 11 to 13 year old school children. Data was collected using letter cancellation test, immediate memory from PGI memory scale, school marks of the previous year and nutritional status. The result showed a significant difference in the letter cancellation total score with the regular breakfast group achieving the highest mean scores compared to the no breakfast group, $p < 0.05$. The results concluded that regular habit of eating breakfast as opposed to irregular consumption or skipping breakfast altogether had beneficial influence on attention and concentration, memory and school achievement.

The fifth objective was to associate the post test level of attention and concentration among school age children with their selected demographic variables.

In association with the post test level of attention, there was a significant association found with their demographic variables. The chi square value of 4.54 showed that there was a significant association between the sex of child and post test level of attention after the conduction of concentration enhancement activity at the level of $p < 0.05$. The chi square value of 5.00 showed that there was a significant association between previous exposure to meditation and post test level of attention after the conduction of concentration enhancement activity at the level of $p < 0.05$.

In association with the post level of concentration, there was a significant association found with their demographic variables. The chi square value of 6.91 showed that there was a significant association between the sex of child and post test level of concentration after the conduction of concentration enhancement activity at the level of $p < 0.05$. The chi square value of 4.34 showed that there was a significant association between previous exposure to meditation and post test level of concentration after the conduction of the concentration enhancement activity at the level of $p < 0.05$.

CHAPTER VI

SUMMARY, CONCLUSION, NURSING IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS.

The heart of the research lies in reporting the finding of the study. This is most creative and demanding part of study. This chapter gives a brief account of the present study including the conclusion drawn from the finding, recommendations, limitation of the study, suggestions for the study and nursing implications. The present study was to assess the effectiveness of concentration enhancement activity on attention and concentration among school children in Madha Matriculation School at Chennai.

SUMMARY

Attention and concentration is needed in all spheres of life. Concentration levels can be improved from the childhood if the problem is identified earlier. If the child is involved in different kinds of activities that enhances concentration, then he will grow up to be sharp and quick. Thus concentration enhancement activity helps to improve the skills and to perform better in academics and extracurricular activities and helps to face the competitive world in a challenged manner.

The objectives of the study were as follows

1. To assess the pretest level of attention and concentration among school age children.
2. To assess the post test level of attention and concentration among school age children.
3. To determine the effectiveness of concentration enhancement activity regarding attention and concentration among school age children.
4. To correlate the post test level of attention and concentration among school age children
5. To associate the post test level of attention and concentration among school age children with their selected demographic variables.

The hypothesis formulated was that there is a significant association between concentration enhancement activity on attention and concentration among school age children. The review of literature included the related studies which provided a strong

foundation for the study including the basis for conceptual frame work and formation of tool.

The conceptual framework for this study was developed based on Imogen King's goal attainment theory. The research design used in the study was pre experimental one group pre test and post test design. It was carried out with 30 participants who fulfilled the inclusive criteria. Purposive sampling technique was used to select the subjects.

A modified attention profile and card game was used to assess the pre test level of attention and concentration among school age children. Concentration enhancement activity was conducted to the participants for the duration of 30 minutes for six days. The post test was conducted on seventh day by using the same tool.

The collected data was analyzed using descriptive and inferential statistics. The distribution of demographic variables of study showed that the majority of children 18 (60.0%) were boys and 12 (40.0%) were girls. With respect to type of family, 29 (96.7%) were in nuclear family and 1(3.3%) were in joint family. Regarding religion the majority of the children, 26 (86.7%) were Hindus, 3 (10.0%) were Christians, 1(3.3%) was Muslim. Considering the monthly income, 10 (33.3%) were within family income of less than Rs.5, 000 and 20 (66.7%) were within family income of Rs. 5, 000- 10,000.

With regard to their family structure all 30 (100%) children were living with their parents. With regard to educational status of mother, 1 (3.3%) had non formal education, 2 (6.7%) went to primary school, 25 (83.3%) has completed school and 2 (6.7%) were graduates. With regard to educational status of father, 1 (3.3%) went to primary school, 24 (80.0%) has completed school and 5 (16.7%) were graduates. In relation to the type of diet, 4 (13.3%) were vegetarian and 26 (86.7%) were non vegetarian.

With regard to the type of hobby, 3 (10.0%) children listens to music, 10 (33.3%) plays sports, 7 (23.3%) watches TV and 10 (33.3%) plays video games. In relation to previous exposure to meditation 5 (16.3%) had no exposure to meditation and 25 (83.7%) had exposure to meditation.

In comparison of mean and standard deviation between pre test and post test level of attention and concentration among school age children, the pre test level of attention mean score was 29.83 with the standard deviation of 6.73 and the post test level of attention mean score was 18.53 with the standard deviation of 5.14. The paired 't' test value of 9.72 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level of attention score is high and it is statistically very high significant. In comparison of mean and standard deviation between pre test and post test level of concentration among school age children, the pre test level of concentration mean score was 21.57 with the standard deviation of 4.78 and the post test level of concentration mean score was 13.83 with the standard deviation of 3.60. The paired 't' test value of 6.71 was very high significant at the level of $p < 0.001$. The difference between pre test and post test level is high and it is statistically very high significant. Thus, it indicates the effectiveness of concentration enhancement activity among school age children.

The correlation between post test level of student's attention and concentration were moderately correlated at the level of $p < 0.01$. Hence it indicates the effectiveness of concentration enhancement activity among school age children.

CONCLUSION

Attention and concentration is very essential for all students in order to control the disturbing and intruding thoughts. Most children suffer with poor memory and attention difficulty almost every day. This affects many areas of their life. Through this enhancement activity students can learn and focus better in their academics and prevent the problems from maths test to social relationships to motivation for learning. Hence the investigator found that there was a significant difference in the level of attention and concentration after giving concentration enhancement activity among school age children.

NURSING IMPLICATIONS

The findings of the study have implications in various areas of nursing service, nursing education, nursing administration and nursing research.

Nursing Practice

An education can be provided to the children in orphanages and also in special schools about concentration enhancement activity and its effectiveness which will benefit them to develop their skills in future career. The nurse can conduct this activity not only to school students but also to the children in both urban and rural areas. She can conduct home visit and provide various practical techniques and methods to enhance attention and concentration in the community.

Nursing Education

Nurse educators have a role to educate the children and parents regarding various methods to improve attention and concentration. The educational institution should include various concentration enhancement activity in the curriculum to educate the nurses and identify the needs of the children regarding lack of attention and concentration. Various continuing nursing education and in service education regarding methods to improve attention and concentration should be explained to nurses to help them to become aware of attention and concentration problems in children.

Nursing Administration

Nurse administrator should encourage and monitor the nurses while performing their role in an efficient manner. The nurse administrator can formulate a standard protocol regarding concentration enhancement activity. The administrator should motivate the parents to observe and monitor the level of attention and concentration in children. She should plan and implement collaborative training involving parents and their children.

Nursing Research

Nursing research helps to broaden the boundaries of our knowledge regarding attention and concentration. Nursing students and nursing practitioners should be encouraged to conduct nursing research related to attention and concentration. Nurse researcher should be motivated to conduct more studies to identify the strategies of improving attention and concentration. She should focus on identifying the needs of lack of attention and concentration among school students.

She should publish the study findings and communicate the findings regarding the concentration enhancement activity to enhance evidence based practice. She should encourage and conduct further researches to create awareness of concentration enhancement activity.

RECOMMENDATIONS

- The same study can be conducted in large samples to generalize the finding.
- The similar study can be conducted with control group.
- A comparative study can be done between rural and urban school children.
- A similar study can be conducted among adolescent children.
- A descriptive study on assessing the level of attention and concentration among school children can be done.

LIMITATIONS

During the period of study the investigator faced the difficulties of lack of attention from the students while conducting activity and the study sample was small and sample were selected by purposive sampling method limiting the generalize ability.

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APPENDIX – A

PART I

DEMOGRAPHIC VARIABLES

1. Sex of the child
 - a) Boy
 - b) Girl

2. Type of family
 - a) Nuclear family
 - b) Joint family

3. Religion
 - a) Hindu
 - b) Christian
 - c) Muslim
 - d) Others

4. Family income per month
 - a) Below Rs.5000
 - b) Rs.5000-10000
 - c) Above Rs. 10000

5. Family structure
 - a) Single parent
 - b) Parents living together
 - c) Divorced parents
 - d) No parents
 - e) Step mother/step father

6. Educational status of mother
 - a) Non- formal education
 - b) Primary school
 - c) Higher secondary
 - d) Graduate

7. Educational status of father
 - a) Non- formal education
 - b) Primary school
 - c) Higher secondary
 - d) Graduate

8. Type of diet
 - a) Vegetarian
 - b) Non-vegetarian

9. Type of hobby
 - a) Listening to music
 - b) Sports
 - c) Watching TV
 - d) Browsing

10. Previous exposure to meditation
 - a) Yes
 - b) No

PART II

MODIFIED JAMES.B. SNYDER ATTENTION PROFILE

√ (Tick) the response that best describes how you feel

S. No	Questions	Rarely true (0)	Somet -imes true (1)	Very/ often true (2)
1.	Trouble completing assignments			
2.	Too active, often out of seat, driven by a motor			
3.	Fidgets with hands, squirms in seat			
4.	Day dreams excessively			
5.	Impulsive, acts without thinking			
6.	Difficulty listening or following directions			
7.	Argumentative or stubborn			
8.	Messy work, poor handwriting			
9.	Inattentive, easily distracted			
10.	Talks excessively			
11.	Avoids or refuses to do work			
12.	Blurts out answers, has trouble waiting turn			
13.	Acts silly 'class clown', disrupts class			
14.	Easily frustrated or annoyed			
15.	Annoys or alienates peers			
16.	Forgetful, loses things			
17.	Rushes through, careless mistakes			
18.	Disorganized			
19.	Requires excessive prompting and redirection to start or complete work			
20.	Easily depressed for little things			

SCORING INTERPRETATION

0-20 : rarely inattentive

21-30 : sometimes inattentive

31-40 : often inattentive

PART II

CONCENTRATION TEST

A game developed by Eric Harsh Barger to improve concentration is used for children with English as second language. It will help to increase concentration and language skills of the students.

There are 9 pairs of cards given for children. In each pair, name of any occupation is given. These cards are shuffled and spread on the table as upside down. The child has to take two cards at a time and check whether the occupation is same for both cards. If not, keep both cards upside down and take any other two cards. The cards can be taken out if both are same. The number of attempts to finish the game is considered as the score. The child who completes the game with less attempts is considered as having more concentration.

SCORING KEY:

- 9-14 attempts : Good concentration
- 15-20 attempts : Fair concentration
- 21-26 attempts : Poor concentration

HUNTER

FISHERMAN

DOCTOR

ENGINEER

BARBER

HUNTER

PILOT

TEACHER

FISHERMAN

NURSE

MERCHANT

ENGINEER

BARBER

TEACHER

PILOT

NURSE

DOCTOR

MERCHANT

APPENDIX - C**LIST OF EXPERTS FOR CONTENT VALIDITY****DR. SHRINIVAS V.C**

MD, DCH (Senior Consultant Pediatrician),

Miot International,

Mount Poonamallee road,

Chennai – 600 089.

DR. ANITHA RAJENDRAN,

R.N., R.M., M.Sc.(N). Phd,

Principal,

Rajalakshmi College of Nursing,

Thandalam, Chennai- 602105

Mrs. EDNA SWEENIE.J,

R.N., R.M., M.Sc.(N).,

Professor & HOD,

Department of child health nursing

Miot College Of Nursing,

Chennai-600089

APPENDIX-F

**ACTIVITY MODULE
ON
CONCENTRATION
ENHANCEMENT ACTIVITY**



Task 1

Cancel small letter 'a' within 2 minutes

EVERY child is BLESSED With A special Gift. There is SOMETHING He is GOOD at. CHILDREN Have particular interests. IT may Be singing, playing a musical instrument, drawing, math or SPORTS. They have an inner Drive to explore and learn.

AS Parents It is Your duty to recognize their interests and encourage them. It is a good practice to expose your child to a wide range of interests. allow him TO take Part In Different Activities. I Have always been Fascinated BY Mathematics. IN My spare time, I like to do Mathematical calculations. I love reading books very MUCH.

Task II

Cancel all capital letters from the paragraph within 2 minutes

EVERY child is blessed With A special gift. There is something he is good at. Children have Particular Interests. It may be singing, Playing a Musical instrument, drawing, math or Sports. They have an inner drive to explore and Learn.

As Parents it is your Duty To Recognize their interests and Encourage them. It is a Good practice to expose your Child to a wide Range Of interests. Allow Him to take PART in Different activities. I have always been fascinated by Mathematics. In my spare time, I like to do Mathematical calculations. I love reading books. I Find it quite enjoyable To read Books.

Task III

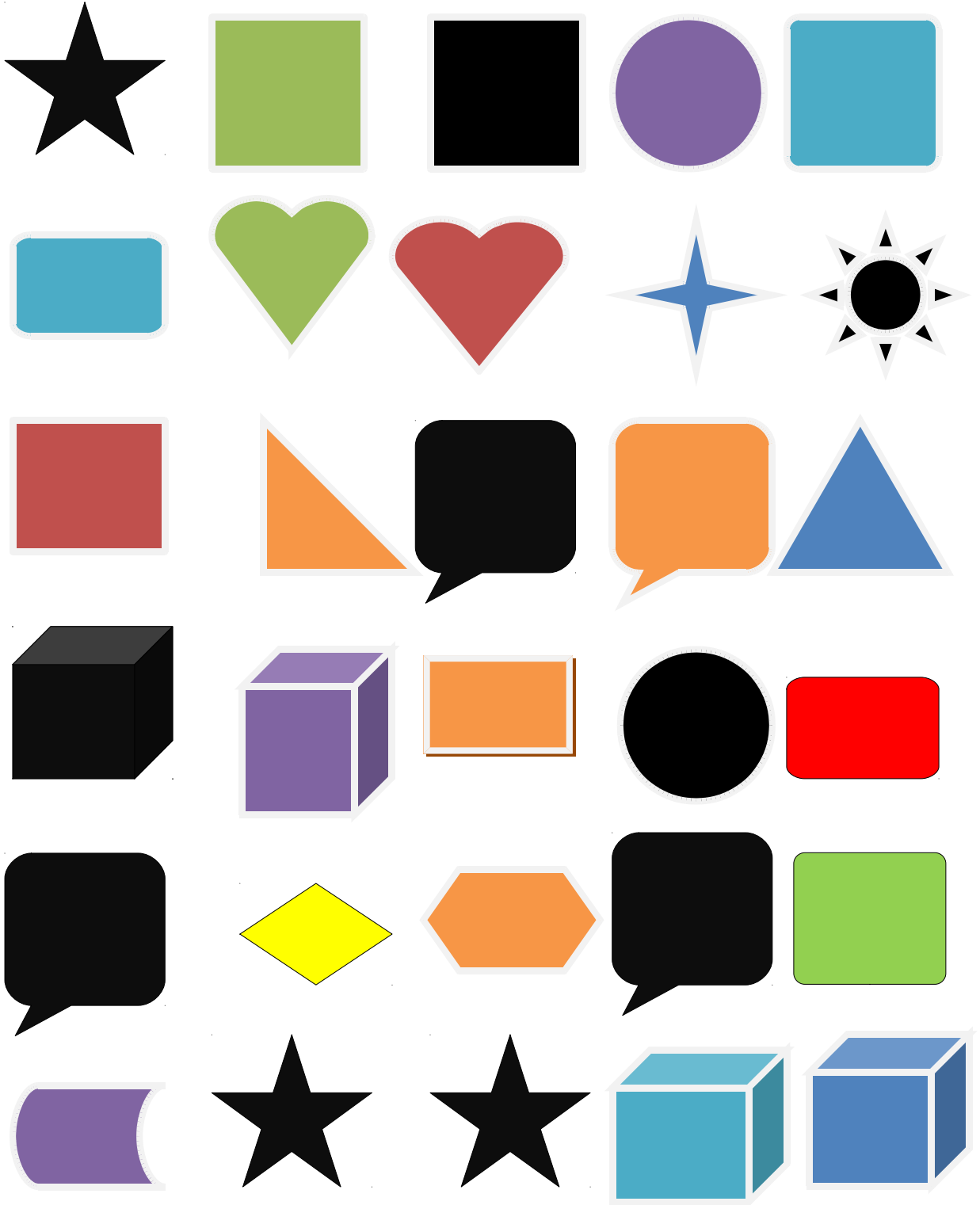
Cancel both capital and small letter 'a' from the paragraph within 2 minutes

Every child iS blessed With a special gift. There is soMEthing He IS good at. ChildreN havE parTicular intereSts. It May be sinGing, playIng a muSical instrument, drawing, Math or SPorts. THEY hAVE an inNer drive to exploRE and learN.

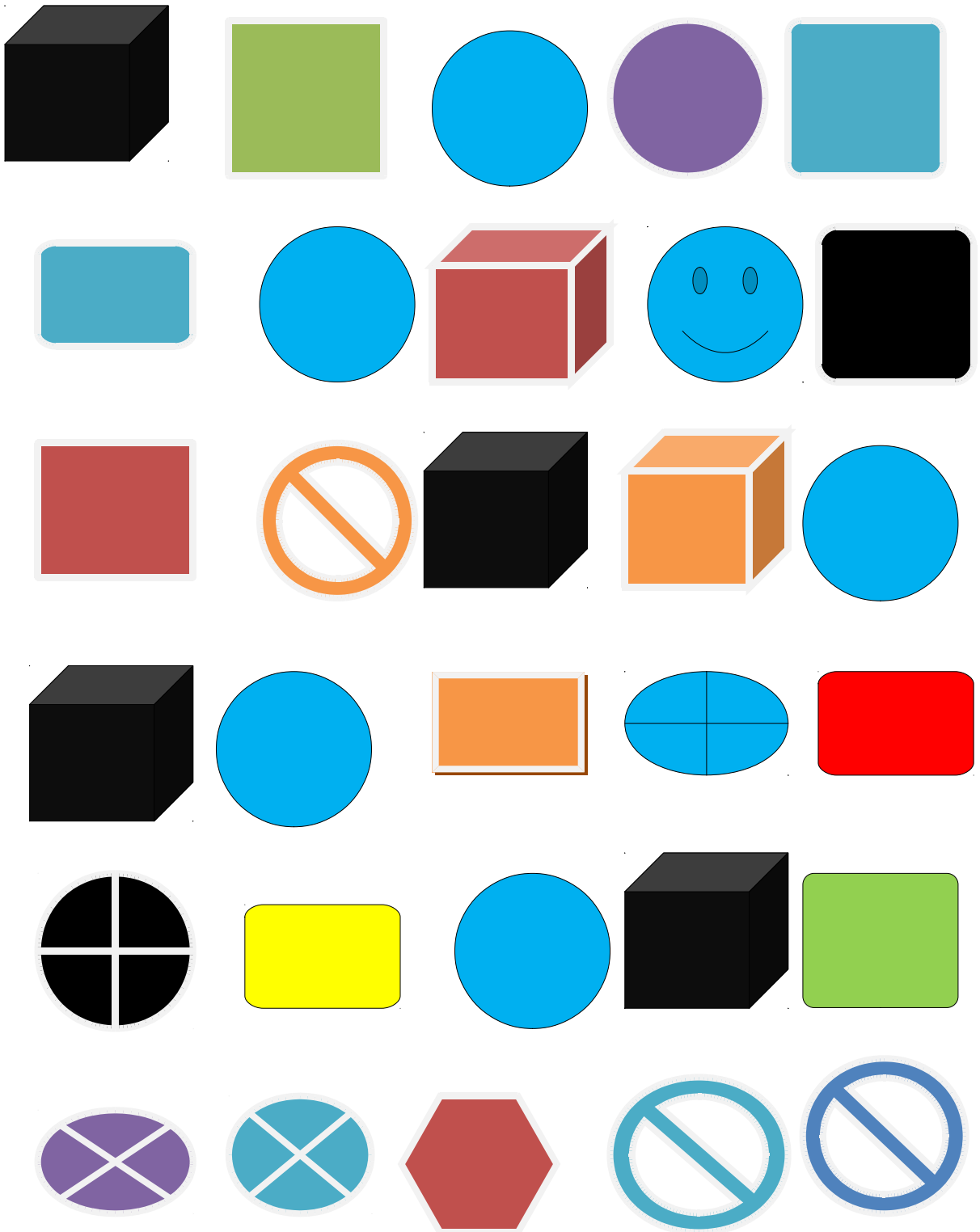
As PARents It is Your DutY TO RECOgnize THEir interests anD eNcourage them. it is a Good Practice to ExpoSE Your chiLD to a wiDe RANGE of InteRests. Allow him TO take pArt in DIfferent aCtiVities. I hAVE always BEen faScinated by MatHeMatics. In mY sPare time, I like TO Do mAthematical caLculations. I loVe reaDing Books vERY mUCh.

COLOUR CANCELLATION

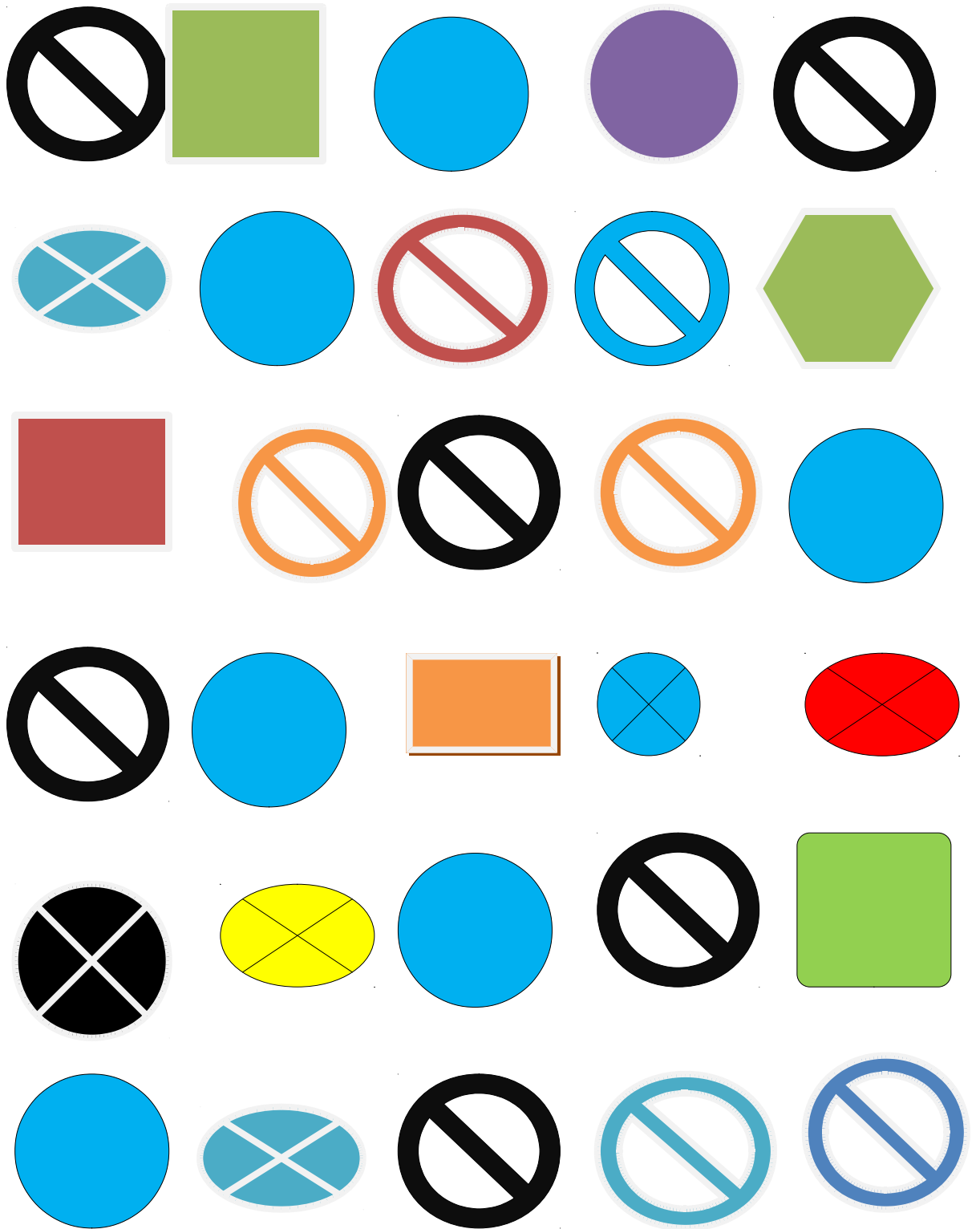
A. Cancel all black stars within 1 minute



B. Cancel all blue circles within 1 minute



C. Cancel all black star and blue circles within 1 minute



PUZZLE SOLVING

Solve the puzzle within 3 minutes

Look down and across to find and circle these **common nouns** in the puzzle:

apple city fish grass store father sun
nurse bike sock girl pen boy home

t	g	s	t	o	r	e	h
b	o	y	p	e	n	a	e
f	g	e	h	o	m	e	e
a	r	z	c	i	t	y	b
t	a	p	p	l	e	f	i
h	s	o	c	k	v	i	k
e	s	u	n	u	r	s	e
r	h	g	i	r	l	h	v

MISSING NUMBERS

Solve this within 2 minutes

TONGUE TWISTERS

200		202			205				209
210	211			214			217		
220						226			229
		232			235			238	
	241		243						249
250				254			257		
	261		263					268	
		272		274					279
280				284		286		288	
		292					297		299

- i. Choppers chop
Droppers chop
- ii. Blue lorry
Red lorry

APPENDIX-D

iv



MADHA MATRICULATION HIGHER SECONDARY SCHOOL

(A Christian Minority Institution)

(Recognised by the Government of Tamil Nadu)

Madha Nagar, Kavanoor, Kundrathur, Chennai - 600 069. Phone : 044 - 2478 0720

Admn. Office : 1-A, Chari Street, North Usman Road, T.Nagar, Chennai - 600 017.
Phone : 2814 0213 Telefax : 044 - 2814 0212.

PERMISSION LETTER

7 /11 /2013

From
The Principal,
Madha Matriculation Higher Secondary School,
Somangalam road,
Kundrathur,
Chennai-600069.

Respected Sir / Madam,

Ms. Shiney Varghese, M.Sc.,(N) II year, Madha College of Nursing, Kundrathur, Chennai-600069 is permitted to do project work (A study to assess the effectiveness of concentration enhancement activity in improving attention and concentration among school aged children in Madha Matriculation Higher Secondary School at Chennai) from 15.11 13 to 14.12.13.

Thanking you

Yours faithfully,


K.S.P. Sundar
7/11/13
PRINCIPAL

K.S.P. SUNDAR, M.Sc. M.Phil., M.Ed.
Principal
MADHA MATRIC. HR. SEC. SCHOOL
Madha Nagar, Kavanoor, Kundrathur,
CHENNAI - 600 069.

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem “ **A study to assess the effectiveness of concentration enhancement activity in improving attention and concentration among school age children in Madha Matriculation School at Chennai**” prepared by **Ms. Shiney Varghese, M.Sc (N) I year** student currently pursuing her M.Sc (N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai - 69** is found to be valid to the best of my knowledge.




Dr ANITHA RAJENDRABABU, M.Sc (N) Ph.D
PRINCIPAL
RAJALAKSHMI COLLEGE OF NURSING
THANDALAM, CHENNAI-602 105.

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem “ **A study to assess the effectiveness of concentration enhancement activity in improving attention and concentration among school age children in Madha Matriculation School at Chennai**” prepared by **Ms. Shiney Varghese, M.Sc (N) I year** student currently pursuing her M.Sc (N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai - 69** is found to be valid to the best of my knowledge.



PROF. EDNA SWEENIE . J

PROFESSOR & HOD,

DEPT. OF CHILD HEALTH NURSING,


MIOT COLLEGE OF NURSING,

CHENNAI - 600 089

CERTIFICATION FOR CONTENT VALIDITY

This is to certify that the content and the tool to the statement of the problem “ **A study to assess the effectiveness of concentration enhancement activity in improving attention and concentration among school age children in Madha Matriculation School at Chennai**” prepared by **Ms. Shiney Varghese, M.Sc (N) I year** student currently pursuing her M.Sc (N) degree programme for the partial fulfillment of her dissertation at **Madha College of Nursing, Kunrathur, Chennai - 69** is found to be valid to the best of my knowledge.


MIDT HOSPITALS
DEPARTMENT OF PAEDIATRICS
Dr. SHRINIVAS V C
Reg. No. 70892

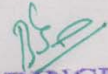


CERTIFICATE OF ETHICAL CLEARANCE

MADHA COLLEGE OF NURSING
ETHICAL COMMITTEE

College Campus :
Madha nagar,
Somangalam road,
Kunrathur,
Chennai -69

Date: 17.09.2013

<p><i>Chairman of Committee:</i></p> <p>Dr. S. Madan Kumar. M.D., Dip. A & E Director, Madha Medical College & Research Institute, Thandalam.</p> <p><i>Members:</i></p> <p>Dr. K. Gajendran. M.D., D.V., Principal, Madha Medical College & Research Institute, Thandalam.</p> <p>Dr. A. Dhanikachalam. M.S., Mch Medical Superintendent, Madha General Hospital, Madha Medical College & Research Institute, Thandalam</p> <p>Dr. V. Vijai Krishnan. M.P.T., Principal, Madha College of Physiotherapy, Kunrathur</p> <p>Dr. B. Tamilarasi, M.Sc (N), P.h.D., Principal, Madha College of Nursing, Kunrathur</p> <p>Mrs. Grace Samuel, M.Sc (N), Vice Principal, Madha College of Nursing, Kunrathur</p>	<p style="text-align: center;"><u>CERTIFICATE OF ETHICAL CLEARANCE</u></p> <p>This is to certify that the research proposal, "Effectiveness of concentration enhancement activity on attention and concentration among school age children in Madha matriculation school at Chennai", submitted by Ms. Shiney Varghese student of I year M.Sc Nursing (Paediatric Nursing) is hereby approved and granted ethical clearance by the Ethical Committee of the institute.</p> <p style="text-align: center;">This clearance is valid for the period of 2 years.</p> <div style="text-align: right; margin-top: 20px;">  PRINCIPAL MADHA COLLEGE OF NURSING MADHANAGAR, KUNDRATHUR CHENNAI - 600 069 PHONE: 24780736 </div>
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INTRODUCTION

METHODOLOGY

DATA ANALYSIS
AND
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CONCLUSION,
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RECOMMENDATIONS
AND LIMITATIONS*

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