EFFECT OF SELECTED THERAPEUTIC INTERVENTION ON SCHOOL GOING CHILDREN WITH BEHAVIOURAL PROBLEM

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Dedicated

To

My Teacher's

My Mother, Sisters

&

The Children of our Country

CERTIFICATE

Certified that the thesis entitled **"EFFECT OF SELECTED THERAPEUTIC INTERVENTION ON SCHOOL GOING CHILDREN WITH BEHAVIOURAL PROBLEM".** Submitted by me for the award of the Degree of Doctor of Philosophy in Faculty of Arts at Jadavpur University is based upon my work carried out under the supervision of **Dr. ASHOKE KUMAR BISWAS, Professor, Department of Physical Education, Jadavpur University and Prof. MALLIKA BANERJEE, Dean, Department of Psychology, Techno-India University.** And that neither this thesis nor any part of it has been submitted before for any degree or diploma anywhere/ elsewhere.

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Place: **PUNAM SHAW**

Date: **Research Scholar**

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LIST OF ABBREVIATION

Sl. No	Short Form	Full Form
1	C.G/**x1**	Control Group
2	PAG/**x2**	Physical Activity Group
3	BTG/**x3**	Behaviour Therapy Group
4	PABTG/**x4**	Physical Activity Group & Behaviour Therapy Group
5	P. A	Physical Activity
6	B. T	Behaviour Therapy
7	P.A.B. T	Physical Activity Group & Behaviour Therapy
8	Exp.	Experiment
9	Gr.	Group
10	SD	Standard Deviation
11	DF	Degree Of Freedom
12	ANOVA	Analysis of Variance
13	S-Anxiety	State Anxiety
14	T-Anxiety	Trait Anxiety
15	M.S	Memory Span
16	L.P	Linear Perception
17	A.P	Academic Performance
18	E.P	Emotional Problem
19	C.P	Conduct Problem
20	H.P	Hyperactivity Problem
21	P.P	Peer Problem
22	P.S	Pro-social Behaviour
23	P0/x1	Pre-Test
24	PT1/x2	Post-Test 1
25	PT2/x3	Post-Test 2
26	PT3/x4	Post-Test 3

CHAPTER- I

INTRODUCTION

1.1 General Introduction

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CHAPTER- I

INTRODUCTION

"Every child is gifted"

"They just unwrap their packages at different times"

An indorsed introduction to the field of study is given in this chapter. It includes a general introduction that describes the study's nature, the purpose for the study, and a brief historical backdrop. It also contains the problem statement, the study's relevance, its goal, its limitations, its delimitations, implications, its hypotheses, and definitions of key terminology.

1.1 GENERAL INTRODUCTION:

The formative years of adolescence are transformative and critical for the expansion of social and emotional assistances are essential in mental health. It is the transitional phase between infantile and adulthood, marked by high rates of emotional, biological, and mature development. India is home to 243 million teenagers, making it the country with the biggest population worldwide.

There may have some problem behaviour during adolescence which leads to the adjustment difficulty. Some common symptoms are: temper tantrums, fight with peers, cheating, lying, physical cruelty, disobedience etc. Though sometimes these features reduced with maturation, but sometimes parental ignorance may lead these children in dark directions which ranges from adult adjustment problems, academic failure to delinquent behaviour and criminal activity. Young children's parents frequently overlook the warning indications of a major analysis, such behavioural issues, believing that the child's behaviour is normal and that they are unable of recognizing wrongdoing. This ignorance frequently sends these kids down dark paths, such as those that lead to delinquent behaviour, scholastic failure and criminal involvement.

The young people in India between the ages of 10 and 24 make up a valuable resource that is marked by development and growth. However, this is also a vulnerable time that is frequently impacted by a number of internal and external variables that have an impact on their health

and safety. Policymakers and public health experts must take immediate action to address the health-impacting behaviours and conditions that affect roughly 10–30% of young people. An estimated 2.6 million youths between the ages of 10 and 24 pass away each year, and a significantly higher percentage of youths have illnesses and "behaviours" that prevent them from reaching their full potential **(Singh et al., 2014)**.

According to a survey published in **The Economic Times in 2018**, 13% of Indian students between the ages of 4 and 16 have psychiatric diseases, 20% have mental health symptoms, and 2-5% have severe conditions including autism or bipolar disorder. A sixth of the population between the ages of 10 and 19 suffers from depression, and over half of all mental health concerns start before the age of 15. Additionally, 16% of all diseases and injuries worldwide are related to mental health issues.

A child's cognitive, emotional, and psychomotor domains, as well as other psychosocial variables that are frequently linked to these categories, must all be understood in order to recognize the different early adverse events that children encounter. Understanding executive dysfunction, cognitive emotional dysregulation, and animosity in youngsters can result from this. Child's mental health is fundamental to their ability to live in harmony in a world that is always changing. The health of children is the foundation of national development. A community's ability to advance is hindered when its children are neglected. UNICEF has placed a strong emphasis on the idea of the whole child, which suggests that as children are the most vulnerable members of society, it is imperative to support their health. It is possible for young individuals to experience genuine, difficult, and expensive mental, emotional, and behavioural issues, and if left unchecked, these issues frequently result in the development of disorders that cause stress for kids, their families, communities, and schools. The scant available epidemiological statistics suggest that 12-51% of children worldwide have mental health disorders, with an average of 29%. Despite this, it is extremely difficult to obtain precise assessments of mental health status in children.

Every teen needs mental health care because they have emotional and other mental health issues. 6–9% of the youngsters in this group are severely emotionally disturbed and require inpatient psychiatric care. The number of at-risk kids who require care and secondary preventative services is also growing. Recent data suggests that behavioural and emotional issues frequently result in low academic performance and school dropout. This severely hinders the economic and social potential of these kids while wasting educational resources.

School children generally exhibit behavioural issues like fighting, using foul language, and engaging in delinquent behaviour. A youngster may experience multiple issues, varying in severity from minor to severe. Over 40% of the population in India is under the age of sixteen. According to **Nabanita et al., (2018)** community-based research in India, that emotional and behavioural issues affect children and teenagers has produced varying estimates of point prevalence, ranging from 2.6% to 35.6%.

Behavioural issues are harmful or undesirable behaviours. A significant portion of adolescents require care for issues, according to the parents of teenagers. 6.5% of community samples and 23.3% of school samples exhibited a substantial occurrence of emotional and behavioural disorders, according to meta-analyses of adolescent research **(Harikrishnan, et al., 2021)**. Students in schools frequently struggle with behavioural issues, they attend a significant amount of their life at school. Thus, developing students' physical and mental health is just as important as increasing their academic capacity and knowledge; this is the school's main responsibility.

"A successful teacher emphasizes the role of guide, facilitator, leader, manager, and evaluator," stated by Dr. Radhakrishnan. Among the essential and vital roles in school health amenities is responsibility of the teacher. There is no replacement for the teacher's invaluable involvement in child care. Instructors can assist students in gaining health information and comprehension, cultivating positive attitudes, and creating healthy practices that will enhance both their individual and community health **(Seema, 2022)**.

It is not uncommon for parents or other caregivers to fail to see or comprehend the consequences of internal or external stimuli that cause behavioural issues in their children. Extreme retreat and fierce hostility are on opposite ends of the spectrum. Students display a variety of behaviours when in a classroom. Thus, educators must deal with a wide range of behavioural issues that arise in the students.

This study aims to shed more light on the challenges that students face, which frequently lead to a variety of behavioural issues. The development of empathy for the circumstances that influence bad behaviour is crucial for educators and parents. The nature of behavioural issues, their origins, and potential solutions are all covered in this chapter. Remedial tactics and techniques are also covered. By studying this chapter, educators will be able to recognize

behavioural issues in their pupils and assist them in resolving issues and changing their conduct.

Behaviour problems manifested by children in everyday life is determined and directed by so many socio-cultural factors prevailing in the ultimate environment of child at macro and micro level. At micro level the nature and dynamics of family affective structure and Psycho-Socio-Somatic health status of the mother has a direct bearing on incidences of aberration of behaviour in children; The word ‘behaviour’ has been comprehensively given the meaning, “Any occurrence of life is activity”, (**Woodworth, 1948),** and behaviour is an amalgamated tag for actions. As a result, any motor or conative activities, such as dancing or swimming, as well as cognitive and affective activities, such as thinking, reasoning, and envisioning, are included under the umbrella word "behaviour."

What is “Behaviour Problem”?

A child's behaviour problems are those behaviours that cause or are expected to cause problems in their socialization process, academic achievement, and cognitive (learning) activities, among other areas of their life. The curriculum and discipline in the classroom are so impacted and hindered. Every child exhibits some sort of behavioural issue at one point in time, or at multiple points throughout their development. However, some children experience behavioural issues more regularly. While some of these behavioural issues last for a long time, most of them get in the way of their regular daily activities and the classroom activities.

Impact of Behaviour Problems:

Every analysis from biological factors, psychological or to various behavioural problems with links between demographic profile to various environmental factor and other aspects of circumstances. Likewise, a number of social or environmental factors- maltreatment, socioeconomic status, education, and other factors like genetics, hormonal factors are believed to contribute to behavioural problems, this influences the cognitive, emotional, and psychomotor areas of learning. Therefore, proper education and intervention make-up are needed pertaining to lead a disease-free and healthy life.

Nature of Behaviour Problem:

External factors that others may not always detect or comprehend are the root cause of behaviour issues. When emotional and psychological issues arise in youngsters who appear

normal, they are frequently misdiagnosed as sadness, animosity, retreat, or stress-relieving daydreaming. They could suffer from physical, psychological, or sexual abuse. The majority of these kids frequently attempt to manage their difficulties (by themselves) in conventional classes without feeling understood. Moreover, children's behavioural issues can be challenging for both paternities and educators, because the issues frequently impede learning and are incompatible with their educational plan.

It's critical that educators comprehend the potential causes of the behavioural issues that their children exhibit. If the instructor doesn't understand why the pupils are acting the way they are, they could react in a way that worsens the issue. Teachers face difficulties while dealing with misbehaving students in the classroom with extreme disengagement and severe aggressive anger are two examples of behaviour issues. Students' problems might prevent them from assimilating into society and get worse over time if they weren't recognized and assisted while they were still in school. Pupils require a variety of resources in order to grow and develop, including physical, psychological, and educational support. Through their interactions, they leave their mark on the developing youngster. According to **(Maslow, 1970)** theory, self-actualization is the highest need and physiological requirements are the most fundamental in the hierarchy of needs that determine human motivation. We can only focus on fulfilling greater requirements if our basic needs have been met.

Complications of Adolescents:

Adolescence is frequently characterized via strong attempts to rebel against adult authority figures and to become independent. That teenagers with these issues are typically described as rebellious, defiant, suspicious of adults and resistant to treatment attempts is therefore not unexpected. Adolescents who are unwilling may attribute their issues to others and lack the drive to modify their own actions. When working with teenagers, different strategies and techniques are frequently employed to try to garner peer support for behaviour change while also fostering a more welcoming and less intimidating environment.

Problems at Different Stages:

i. Infancy- crying, jealousy, stranger anxiety, etc.
ii. Early Childhood- excessive shyness, tantrums, cheating, bullying, teasing, etc.
iii. Late Childhood- tempers, truancy, bullying, stealing, defiance, unhappiness, etc.
iv. Adolescence- defiance, disobedience, telling lie, rebellious, truancy, etc.

Probable Grounds of Behaviour Complications:

There is a purpose for every action. A child's behavioural issue may potentially stem from one or more factors. The child's behaviour makes it rather evident that he is experiencing difficulties. The child's usual behaviour, which is an outward sign of their difficulty, might not be the true cause or causes of their issue. For instance, a youngster in Class V pilfers money from classmates' backpacks. Why does he steal money, though? His money theft may stem from a variety of factors. Theft of money is a sign of a deeper issue. His behaviour problem's causes cannot be determined by looking only at its symptoms.

Only a psychological study will reveal the root causes of his behaviour problem. If a child's behaviour is not socially acceptable, it is deemed to be a behaviour problem. Children behave in certain method to satisfy their fundamental requirements and stay away from frustrating situations or the potential danger that may result from failing to meet those requirements. It is not inherited that behaviour issues arise. They result from the child's social and psychological surroundings. The child's needs or surroundings could be the setting that leads to behavioural issues.

1. Individual and Collective Needs:

A child's demand for acknowledgment, attention, and a feeling of identity is equally strong and genuine. Any activity that captures the interest of a distracted child may be used by them. A youngster or adolescent frequently lacks the knowledge necessary to appropriately obtain social fulfilment. Social requirements are likely being met by people who engage in behaviours such as bullying, lying, showboating, or habitual interrupting. When social and personal needs are not satisfied, children who frequently depart as of standards.

2. Domestic Setting:

Some children receive regular reprimands, scoldings, insults, accusations, and punishments from their parents, who view them as worthless. These kids occasionally experience parental rejection and neglect. These children eventually exhibit behavioural issues. Children learn moral and social ideals from their parents. Peers teach morals to children as well. The ideals of parents frequently clash with those of their peers.

Parents in certain households discourage their kids from engaging in certain activities. These kids don't cooperate in a variety of school activities. A child who has experienced discouragement at home is unlikely to recognize the value of cooperative behaviour in the classroom. Instead, he/she uses an "attention-getting mechanism" to get people to notice him.

3. The Educational Setting:

Educational setting plays a significant role in shaping a child. Certain children observe dissimilarities between the conduct that is deemed appropriate at school and that which is promoted in the family.

Parents should dissuade their child from mimicking middle-class behaviour at home if they see it in other children. However, the youngster faces consequences from the school if their behaviour aligns with low-class standards. The child becomes confused as a result of this. Such ambiguity gives rise to behavioural issues. Youngsters who display perplexity develop coping strategies. Disobedience is a behavioural issue. For certain kids, the school's curriculum becomes too much to handle therefore, develop anxiety and frustration.

4. The Instructor and the Classroom Setting:

The teacher could be blame for some behavioural issues. Though many unintentionally, teachers are unlikely to intentionally encourage wrongdoing. Students feel enraged with teachers who are sarcastic, degrade their students, or are simply unfair to them, and they become determined to find a way to exact retribution.

Behaviour issues can be caused by a variety of student behavioural issues, teaching styles, and individual personalities. There would be no opportunity for kids to do anything if the classroom was uninteresting and the teachings were poorly prepared and structured.

5. Conditions of Society and Culture:

The misbehaviour of children and teens has been linked to a number of socio-cultural variables, including specific entertainment shows, movies, comic books, and publications that depict violence, terror, sadism, or disdain.

Teenagers' unfavourable living circumstances are frequently cited as the reason behind their behavioural issues. Inequality of chances, and discrimination based on country, race, caste, or religion can also lead to bad behaviour among young people.

6. Innate Personality pattern

You are born with an innate personality, which is defined as features and qualities that are primarily influenced by your genetic composition. It doesn't really alter much during the course of your life. You might be able to change some things about it, but doing so would require you to go against your nature, which could be difficult. According to psychologytoday.com, natural personality is more solid, constant, and resistant to outside influences than emotions, feelings, and moods.

It is the result of a combination of experiences and environmental influences, as well as natural tendencies and inclinations. Even though a person's personality can alter during their lifetime, their fundamental characteristics usually don't change much as they become older. Our personality is the particular arrangement of the ways we view the world, analyse events, and behave consistently in many contexts. Every child has a unique pattern of persistent, lifelong traits, as well as a way of relating to other people and the environment. Their personalities are regarded as long-lasting, steady, and difficult to alter.

Probable types of Behaviour Problems

Nearly observed behaviour problems were:

1) Unrest in the Classroom: The volume of noise produced, disrupts other people's work, taunts, torments classmates, make or create hissing environment.
2) Impatience: The degree to which the youngster begins work too soon, completes tasks carelessly, refuses to go over their work, and works fast through assignments, become agitated.
3) Desolation – Rebellion: The way a child behaves toward teachers with contempt, refuses to comply with instructions, minimizes the work that is completed, and disobeys classroom regulations.
(4) Anxiety: The degree to which one becomes agitated and exhibits sensitivity to feedback.
5) External Reliance: How much a youngster relies on others for guidance, needs specific instructions, and finds it difficult to make decisions for themselves.

6) Inattentive-Withdrawn: The degree to which the youngster becomes distracted, ceases to pay attention, or appears unaware of what is going on in the classroom.

7) Irrelevant-Response: The degree to which a individual embellishes stories, provides unrelated responses, cuts the teacher off while she's speaking, and adds unrelated remarks during.

8) Anxiety-Depression: The youngster appears tense, with a hard, drawn face. They cry easily at the slightest excuse, avoid eye contact, and show no interest in anything. The child becomes agitated over exams and test results and is easily offended or corrected.

9) Quiet and Withdrawn: The youngster is largely alone, lacks friends, and exhibits quiet withdrawal in the classroom. has a propensity to be extremely self-centred, consumed with one's own issues and thoughts, and uninterested in or passionate about other things.

10) Violence: Aggressive or irrational behaviour intended to cause hurt or property damage.

Eleven) Inattention: The youngster finds it difficult to focus on assignments and directions for extended periods of time. fidgets a lot, gets easily distracted, and finds it hard to sit still (Solh Admin, 2024).

12) Absenteeism: The student who often misses school due to vague absences or mild illnesses.

13) Carnal Damage: It has been noted that there are repeated and multiple injuries, medicine delays, bite marks, burns, and strap marks for which there is no good explanation.

1.2 Historical Perspective:

Deviant teen has garnered notice throughout history and it has been enumerated by various extents.

Emotional Disturbance: **Bower (1982)** coined the phrase "emotional disturbance" in the 1980s and characterized it in terms of how children learn, interact with others, behave, and develop diseases and phobias.

Most teachers have a fairly well-defined idea of what constitutes disruptive behaviour, they can identify the disruptive pupils in their classes without much difficulty'. That claim could support According to Galloway et al. (1982), dysfunctional behaviour can be observed 'as any behaviour which appears problematic, inappropriate and disturbing to teachers. **Mortimore et al., (1989)**, however, take a more positive view to define disruptive behaviour in schools as 'any act which interferes with the learning, development or joy of child or

his/her peers, or with the educator's attempts to adoptive to those processes. This definition highlights teachers' understanding of the goals of education for children as another dimension that seem to influence the definition of behaviour problems.

According to, **Lawrence et al., (1984)**, behaviour problems in educational settings are 'behaviours out of place', behaviour is not disruptive by itself, but it becomes disruptive due to many factors. Problem behaviour then, defined in terms of the interactionism/labelling theories, is the result of systematic ordering which, consequently, involves rejection of inappropriate behaviour. According to **American Academy of Paediatrics (2018)** the difference between the normal and abnormal behaviour is only a matter of degree or expectation. The distinction between normal and pathological behaviour is frequently hazy, in part because developmental stages can differ significantly even within individuals of the same age. In addition, normal or good behaviour is usually determined by whether it's socially, culturally and developmentally appropriate as well as by the child's own particular family values and expectations. The term 'behaviour' refers to the way an individual acts in response to certain condition or experience. The behaviour is affected by temperament, which is made up of an individual's innate and unique expectations, emotions and beliefs and can also be influenced by a range of social and environmental factors including parenting practices, gender, exposure to new situations, general life events and relationships with peers and siblings. There were indications that prevalence rates of behavioural problems continue over the period of preschool age **(Bayer et al., 2010)** into teenage years **(Weeks et al., 2016)** and projected mental health settings in adulthood without treated.

According to a review by **Egger and Angold (2006)**, the prevalence rates of behavioural problems in children aged 2 to 5 years ranged from 14 to 26.4%. Facts on behavioural problems during early childhood period reveal inconsistent prevalence rates, perhaps due to deviating assessment methods and age ranges. Within the theoretical framework of developmental psychopathology, children with behavioural problems were grouped into two broad categories; externalizing and internalizing problems **(Achenbach et al., 2000)**. The children with externalizing behavioural problems had an effect of low control over emotions expressed by aggressive, impulsive, antisocial and challenging behaviours while the children with internalizing behavioural problems had the excessive control and express their emotions in forms of social withdrawal, inhibition, depression or various forms of anxiety and thus

creating obstacles for the social and psychological adjustment during childhood **(Aunola and Nurmi, 2005)**.

Preschool children exhibit some common behavioural problems like whining, throwing tantrums, bed wetting, nail biting, thumb sucking, stubbornness, kicking, biting, avoiding preschool, shyness, withdrawal behaviour etc. If they are not identified and treated in the early years they develop into disorders and affect the child's development. Due to the negative significance individual mental health cost for the families and society, it correlates and analysts of internalizing and externalizing behaviours, in childhood have been in focus of great attention for investigator in different cultures.

Investigators have also noted that those children's language deficits are wrongly perceived as inattention, low intelligence, noncompliance, or disrespect, thoughtful dishonesty, and defiance **(Donahue et al., 1994; Cohen et al., 1993)**. Perception may cause added hindrance, stress, and blame that may pay to negative interactions **(Sutherland & Morgan, 2003)**. Some studies carried those difficulties in social, theoretical, behavioural, and emotional working strongly contributed to the damaging outcomes experienced by children with behavioural conditions; however, it was highlighted, that problems in each of these areas are associated in the ways that are not well unstated yet **(Tomblin, Zhang, Buckwalter, & Carts, 2000)**.

Parents play a significant role in helping children build and refine their acquaintance, skills, learning expectations, beliefs, goals, and coping approaches. Children who are strongly attached to their parents are provided a hard root for healthy growth, including establishment of strong peer relationships and the ability to identify with others **(Chen et al., 2012; Murphy and Laible, 2013)** on the other hand, young children who do not become securely friendly with a primary caregiver may develop insecure behaviours in childhood and possibly behavioural problems and disruption in other societal and emotional spheres **(Bowlby, 2008)**. Certain parenting techniques, like as physical punishment, can have an adverse effect on a child's development and lead to behavioural issues in them **(Alizadeh et al., 2010)**.

Parents and caregivers are vital resources for children in managing their arousal, coping and handling behaviour. The role by providing positive confirmations, conveying love and respect and creating a sense of safety. The parenting practices and self-efficacy tend to develop socialization skills among children and also mediate the risk of child temperament. Some parents use authoritative parenting where they are warm and accepting, they try to see

things from the child's perspective. This behaviour of parents greatly improves the attachment and these motions of parents greatly strengthen the parent-child association. By contrast, if parents are controlling, demanding and use harsh punitive control, their children develop various kinds of maladjustment, such as lower self-esteem, aggressiveness, withdrawn behaviour, hostility and impatience.

Lack of positive attention from parents paired with inconsistent and inappropriate discipline has been found to be predictive of anti-social behaviour, conduct problem and criminality in later life **(Farrington, 2005)**. In addition, psychopathology in parents especially the temperament and mother's emotional distress influence the risk of children's problem behaviours **(Lee, 2012)** during their early years. Personality modulates the relation between parent mental health, children behaviour problems and their practices **(Gallitto, 2015)**. Variations across families and cultures in perceptions of what constitutes appropriate and inappropriate behaviour are also important considerations in defining problematic behaviour **(Division for Early Childhood, 1999)**. Kinds being the essential worth of a family. Family relationships in general have a pervasive influence on the psychological, physical and social wellbeing of children.

According to epidemiological studies, family risk factors like divorce, dysfunctional families, and ineffective parenting have a significant impact on a child's development.

Specifically lack of warm positive relationship with parents, low parental monitoring **(Malete, 2007)**, inflexible and rigid disciplinary practices, inadequate supervision and involvement with children increases the risk that children develop major behavioural and emotional problems **(Sanders, 1999)**. The acquisition of specific parenting competencies results in improved family communication and reduced conflict that in turn reduces the risk of behavioural and emotional problems **(Sanders and Turner, 2002)** among children. In need of early detection to settle children back on the healthy developing paths necessary for school accomplishment, a number of strategies and programs have been established to prevent and upgrade behaviour challenges in young children **(Powel et al., 2006)**. Amid such a multitude of probable challenges that arise while caring for a child with behavioural problems, it is imperative that parents must be provided with counselling and education on the condition of their child has and the services available to help both the child and the family.

Disruptive behaviour problems are the most highly related to emotional and behavioural. Disorders, symptoms correlate highly with academic failure **(NCSER, 2006**) and in addition, the DSM-IV classification distinguishes that behaviour problems according to the age of their occurrence, that is, the childhood CD (occurs before 10 years old) and the CD in teens (occurs after 10 years of age) **(APA, 1994)**.

The cognitive aspects include social deficits in cognitive content and processing of information. Children and adolescents with behavioural problems struggle with some common problems that make them a vulnerable population, few aspects are less popular among peers and have fewer friends with a positive attitude and socially desirable behaviour

Social information processing model by Dodge consists of the phases and sub-phases of cognitive processing information relating social problems. The model consists of five following stages:

1. Encoding the relevant social guidance,
2. Interpretation of the guidance,
3. Generation of potential solutions,
4. Their evaluation, and
5. Implementation of the selected response.

The investigator established that aggressive tendencies in children could occur at any stages. Mainly the cognitive and behavioural discrepancies. In addition, Dodge's study has shown that children with aggressive behaviour are more likely to remember less important information related to events **(Lochman & Dodge, 1994)**; they selectively pay attention to aggressive rather than neutral information or the most recent information related to events or guidance, ignoring guidance, as previously mentioned **(Milich & Dodge, 1984)**. Their interpretations are based on a smaller portion of those tips **(Dodge & Nemwan, 1981)**. According to research, aggressive kids typically exhibit a hostile attribution style distortion at the interpretation stage **(Dodge, Petit, McClaskey & Brown, 1986)**. So, reminding possible solutions to the problem of children with conduct disorder exhibit deficits in terms of quality and quantity of produced solutions: These kids take more direct action, compromise less, offer fewer spoken solutions, and respond more violently **(Lochman, Magee & Pardini, 2013)**.

The next stage comprises of identifying and assessing the consequences of each behaviour. Children diagnosed with aggressive behaviour perceive aggressiveness as more positive because they have cognitive beliefs about the usefulness and effectiveness of aggression in achieving its goals. In the concluding stage, children with conduct disorder have more difficulties appealing in a pro-social behaviour. In summary, according to the model it is possible to utilize therapeutic intervention along with cognitive content, and thus with the behavioural content.

Effects of activities on Health and Behaviour of Children

The effects of participation in activities for children and young people are directly linked to good health and engagement serves togetherness, with long term secondary effects; an active lifestyle at adolescence raises more active lifestyle as a grown-up. As many diseases that are positively affected by physical activity/exercise appear later in life, continued participation in recreational and sports activities as an adult will reduce morbidity and mortality. It is emphasized that good physical and mental health condition constitute to participating in sport and other activities involves knowledge and association based on everyone's participation.

Facts from reviews states that there is an association between daily physical activity in children to a low risk for obesity, improved development of motor and cognitive skills, with strong skeleton. Positive effects on accomplishing vital wellbeing and if factors are combined in a multidimensional analysis, the factors important for future good health are shown through training in sports, broad acquaintance to different sports, high school level, cultural capital, guidance and that one takes part throughout childhood develop self-esteem, group cohesion, and better overall psychosocial health. Programs for students who have difficulties at school developed based on the assumptions and strategies of behavioural therapy were effective, based on categories: structured sports and physical activities; behavioural consultation; behavioural monitoring and increasing the presence, academic performance and school behaviour; and deliberate education students who quit or are incapable of schooling.

Participation in Sport act as a vague weapon with respect to impact on health. With constructive involvement positive growth are attained in physical activity especially in most sports. Moreover, Sports and physical activity play an important role everyone's life, and bring knowledge for healthy life. Initially, brief definitions of various concepts related to physical activity and health are given by World Health Organization (WHO) and the US

Department of Human Services. Games and Sports promote physical drive for health, performance and psychosocial development. Through Participation there always a chance to be part of the community, develop socialization, and create social norms and aptitude. An individual through sport participation brings with a sense of meaning, identity, and belonging. Therefore, sports can be a means for virtuous physical and intellectual health.

1.3 Therapeutical Intervention

It is an attempt to enhance the wellbeing of someone who is either in need of aid but refusing it or is unable to ask for or accept assistance. This can be done by individuals, educators, parents, or organizations. Depending on the situation, educators may lead or steer the interventions, which may be psychological, physical, or even pharmaceutical.

In some cases, an intervention takes the form of a confrontation or meeting between a person who is engaged in self- destructive behaviour and is resistant to help concerned friends or family members. Interventions can help to modify behaviours that interfere with a person's well-being and the well-being of family and friends. Here, in the study the intervention that has been used in practice were Physical Activity which include yoga, recreational activities and sports like gymnastics and Behaviour Therapy Techniques like social skill training, counselling, group activity etc and combination of both activities.

1.3.1 Physical activity:

Physical activity is defined purely physiologically, as all body movement that increases energy use beyond resting levels and any voluntary bodily movement produced by skeletal muscles that require energy expenditure. It involves all activities at any intensity performed integrated into daily routine. Lack of physical activity and movement turn into negative health outcomes, whereas improved activity aid to improve physical and mental healthiness, as well as cognitive and cardiovascular health. Physical Activity can occur naturally and be alienated according to purpose and aimed primarily at cultivating health and physical capacity. No movement is described as the absence of body drive, when energy consumption moves toward resting levels. People who do not driven for physical activity are considered physically inactive and called "sedentary". Physical activity has been identified as a policy that improves social and emotional well-being in vulnerable youth (Collingwood, 1997; MacMahon, 1990).

The importance of recreation in adolescence development is not a new concept but right training and access was not up to the mark. Joseph Lee, the creator of the playground movement, and Jane Addams, the founder of Hull House and a prominent figure in the settlement movement, both understood the need of amusement in a child's growth.

Physical activity is widely recognized as an important behavioural means of risk prevention and behaviour management, or alternatively, recovery and the realization of well-being important component of holistic care and increase self-esteem and decrease problems in children if performed in an outdoor can improve cognitive performance, self-esteem and lessen anxiety and symptoms related to various problems. There is a need of clear pathways of safeguarding vulnerable adolescents suffering from behavioural issues when participating in physical activity and sport.

1.3.1 (A) Sports:

Sport can also be spontaneous and defined as a subset of exercises undertaken individually or as a part of a team, where participants have a defined goal. In our lives, energy expenditure is very important in normal daily life than in sport, or physical training, with the omissions of children and the elderly, where planned physical activity is more vital.

The key component of social life, directly engaging communities and brings people together for fun and participatory system. Sports participation has significant physical benefits, to lead long and healthy lives, cultivating well-being, and extending lifespan. It also provides psychosocial benefits, such as fostering social integration and coping mechanisms, as well as psychological benefits, such as reducing depression and improving concentration. Further, Physical movement builds human competences by increasing acquaintance and contributing to education. Integrating physical education into the school curriculum and providing opportunities for recreation improves a child’s ability to cognitive learning, increases attendance and overall performance. Sports help to rehabilitate offenders and reduce recidivism. Such programmes often use outdoor adventure activities, or ‘demanding physical activity programmes’, aimed at developing personal and social skills, and improving self-confidence and self-efficacy.

1.3.1 (B) Yoga:

Yoga is an ancient practice, originated in India many years ago, known for systematic body of knowledge concerned with the physiological and mental healing that modifies the

physiology of the body through respiratory handling (breathing techniques), postures and cognitive regulator. “Yoga increases concentration ability, focus, and improves memory” **(Galantino et al., 2008)** and “provides control to handle stress” **(White, 2009)**. “Yoga is classified as a brain–body immersion” **(National Centre for Complementary and Alternative Medicine 2011)**. Yoga has been shown to have “beneficial effects on mood, anxiety, stress, psychological and physical health–related quality of life and pain **(Sharma, 2013)**.

One such substitute that exhibits potential as a treatment for a range of behavioural, social, emotional, and intellectual challenges is yoga **(**Nardo and Reynolds, 2002**)**. Yoga has an important role to play in the treatment of emotional and behavioural problems. Yoga techniques like Pawanmuktasan, Surya namaskar or Sun Salutation, Pranayama and Shavasana affects body, internal organs, endocrine glands, brain, mind and other factors concerning Body - Mind complex. With a regular Yoga practice, adolescents with emotional and behavioural problems can manage and develop a greater body awareness, emotional balance and concentration - increasing their capacity for schoolwork and creative play. This can also, in turn, aid their self-esteem.

1.3.1 (C) Recreational Activity:

Recreational activity refers to ease, relaxation, and fun. The "need to do something for recreation" is an essential component of human ecology and psychology. The term recreation occurs first in late 14th century, which means refreshment or curing’ and derived from Latin word which means re: "again". Engaging in organized or disorganized indoor or outdoor activities for the sake of fitness, rest, distraction, education, or enjoyment, including training or instruction, is referred to as recreational activities. It also includes drawing, painting, dance, performing arts, games, etc.

Children engage in inherent play and have a critical effect on their experience of confinement and play and recreation were those adequate opportunity provided. Moreover, participating in activities of recreation naturally possess and foster therapeutic aspects in students.

1.3.1 (D) Gymnastics:

Gymnastics is a mental-enriching activity that offers a wealth of chances for improving social skills, cognitive stimulation, and gross and fine motor skills development. All of the skills

used in the gymnastics sport demand concentration or attention. A child can learn at his or her own pace in a highly controlled planned setting with positive mental attributes should be fostered and reinforced in addition to brain-developmental abilities.

Perhaps the most evident advantages of gymnastics are its physical benefits. In every lesson, gymnasts work on their muscular endurance, strength, and flexibility. These abilities strengthen bones and postpone the onset of hypertension. A healthy lifestyle prepares kids for a bright future. Children who participate in gymnastics activities might benefit from an increase in self-esteem as they gain confidence and abilities. Gymnastics' physical health benefits are equally important since consistent exercise strengthens the body, forms better bones, and is one of the best ways to battle childhood obesity.

Children who participate in gymnastics can benefit greatly from enhanced cognitive development. Gymnastics stimulates children's minds, which allows their imaginations to grow as well, by creating an environment that encourages focus, challenge, and creativity, among other things.

1.3.2 Behavioural Therapy:

Behaviour therapy originated from the learning theories developed by Pavlov, Watson, Thorndike, Skinner, Wolpe, and Eysenck. Later, it was inspired by the findings of experiments conducted by Bandura and other psychologists who were curious about how observation affected an individual's learning process. The behavioural approach, which was popular in the 1950s, placed a strong emphasis on the significance of overt behaviour and its surrounding circumstances. The focus has been successfully shifted from the very introspective approach to clients to behaviour therapy. The Freudian approach placed a strong emphasis on the unconscious energies and hidden impulses that underlie most human issues.

The term "behavioural therapy" states wide range of methods used to modify maladaptive behaviour. It teaches kids and their families how to minimize or get rid of undesirable or problematic behaviour while enhancing favourable child behaviours. Eliminating undesirable behaviours and promoting desired ones are the objectives.

There are different types of behavioural therapy and behaviour modification techniques that are used. Example Cognitive Behaviour Therapy, and Behaviour Therapy which includes the

techniques such as, Social Skill Training, Reinforcement, Task Analysis, Shaping, Positive and Negative Appraisal, Counselling, Role Play, Collage making, etc.

1.3.2 (A) Social Skills Training:

Teachers, therapists, and trainers utilize social skill training as a kind of behaviour therapy to assist people who struggle to connect with others. Many of the emotional and behavioural issues that arise in childhood and adolescence are largely caused and maintained by deficiencies in social skills and social competence. The goal of social skill training is to improve one's capacity for critical social behaviours that are necessary for success in social settings because everyday adolescents are required to handle a wide range of challenging social circumstances.

Social skills training uses many different techniques including behaviour rehearsal and assertiveness training. These are the techniques used to teach the effective social interaction in set situations. **According to Gresham and associates (2006)**, social skills are a collection of abilities that help people: (1) establish and sustain healthy social relationships; (2) support the growth of friendships and peer acceptance; (3) lead to a satisfactory adjustment to school; and (4) enable people to deal with and adjust to the demands of the social environment **(**Ras NK, University of Calicut).

1.3.2 (B) Shaping:

The reward of increasingly nearer approximations to the intended behaviour is known as shaping. For instance, the process of assisting a mother in helping her too dependent child become more independent must begin with modest beginning efforts and be recognized for each one.

1.3.2 (C) Reinforcement:

The action or the process of establishing a belief, pattern of behaviour. It is the responsibility of educators, guardians and caregiver to strategies the techniques of reinforcement for the growth of the child.

1.3.2 (D) Role playing:

Role playing is a concept that calls for practice, action, and doing. It comes with different names, alike "role reversal," "socio-drama," etc. In psychology, role-playing is frequently

utilized in conjunction with the psychotherapy process, research, assessment and provide the most of their possibilities, provides the foundation for the idea that role-playing can help build spontaneity, a crucial component of psychological well-being by reducing cognitive dissonance and increasing daily flexibility.

Role playing provides an opportunity for children to practice the skills observed during modelling before they attempt to use them in real-life situations. The aim of role play is to act out the situations as it would occur in real life. For role playing, hypothetical future situations, rather than enactment of the past events were selected. These were selected on the basis of feedback from the subjects. For the role play, any two subjects are selected one played the main actor who described briefly the real skill problem situation, and the person involved, with whom he/she could try the behavioural steps in real life, was played by the co-actor. The aim is to provide a realistic, but relatively unthreatening situation in which children can practice the skills they are learning.

1.3.2 (E) Counselling:

Counselling is the way in which the person needs some kind of help, support and assistance regarding the problems they are experiencing. Guidance and counselling provide a societal role by assisting youngsters in developing positive growth and behaviour that will not be detrimental to them or society as a whole.

As children are younger during their preschool years, parents or the caregivers are ones who seek counsellors or professional help to get solutions to their child's problematic behaviour and other challenges they are facing. The goal of parent counselling or therapy is to give parents information, direction, and passing verdict or harbouring any biases.

Parent counsellors use a variety of behaviour modification techniques during counselling sessions depending upon the type of problematic situations viz., behavioural therapy, parent child interaction therapy, parent management training, task analysis and also family-based interventions.

1.3.2 (F) Setting Home Tasks:

Home tasks are also important in teaching other aspects of social competence such as social perception skills. One of the best ways of making sure that children do learn to use their skills

in real-life situations is to have them practice at home or school between sessions. For this the researcher provided activity as home tasks. Each session during the intervention was begun with a review of the precious session home tasks. All children were given the chance to discuss the outcome of their home tasks and to outline any problems that they experienced.

1.4 RESEARCH GAP:

Now a days there are increasing emotional and behavioural problems in adolescents due to various reasons. There is a need for behaviour change for managing problems. Few studies focused on the prevalence of behavioural problems among children and very few studies were done in respect to behavioural problems with other variables, moreover I have come across very few studies that have incorporated with therapeutic aspects to prevent deterioration. This discrepancy from the literature and to rectify behaviour at earlier stage projected the need of therapeutic intervention on issues needed for students and inspired the researcher to adopt the extant study. The aim was to evaluate the outcome of therapeutic intervention in children and to establish various aspect of behaviour change with activities.

1.5 STATEMENT OF THE PROBLEM

The present study is to see the impact through the process of intervention modules in children and how it has been effective to behaviour change. Accordingly, the problem has been stated as **"EFFECT OF SELECTED THERAPEUTIC INTERVENTION ON SCHOOL GOING CHILDREN WITH BEHAVIOURAL PROBLEM"**

1.6 OBJECTIVES:

1. To translate and adapt the questionnaire of Strength and Difficulties of children (SDQ) and State-Trait Anxiety of children by State Trait Anxiety Inventory of Children (STAIC) in Hindi.
2. To see the effect of Physical Activity as the therapeutical intervention on
    a) Cognition (as measured by Memory Span and Linear Perception)
    b) Affection (as measured by STAIC)
    c) Academic Performance (as measured by School Records)
    d) Behavioural Problems (Total Difficulty) (as measured by SDQ- self reported measures) of the school going children.
    e) Different components of Behaviour Problem viz., emotional problem, conduct problem, hyperactivity problem, peer problem, pro-social behaviour.

3. To see the effect of Behavioural Therapy as the therapeutical intervention on

   a) Cognition (as measured by Memory Span and Linear Perception)

   b) Affection (as measured by STAIC)

   c) Academic Performance (as measured by School Result)

   d) Behavioural Problems (Total Difficulty) (as measured by SDQ- self reported measures) of the school going children.

   e) Different components of Behaviour Problem viz., emotional problem, conduct problem, hyperactivity problem, peer problem, pro-social behaviour.

4. To see the joint effect of Physical Activity and Behavioural Therapy as the therapeutical intervention on

   a) Cognition (as measured by Memory Span and Linear Perception)

   b) Affection (as measured by STAIC)

   c) Academic Performance (as measured by School Result)

   d) Behavioural Problems (as measured by SDQ- self reported measures) of the school going children.

   e) Different components of Behaviour Problem viz., emotional problem, conduct problem, hyperactivity problem, peer-problem, pro-social behaviour.

5. To see the difference if any of the intervention among four groups (Physical activity group, Behavioural Therapy group, Physical Activity and Behavioural Therapy Group and Control Group Group) on

   a) Cognition (as measured by Memory Span and Linear Perception)

   b) Affection (as measured by STAIC)

   c) Academic Performance (as measured by School Result)

   d) Behavioural Problems (as measured by SDQ- self reported measures) of the school going children.

   e) Different components of Behaviour Problem viz., emotional problem, conduct problem, hyperactivity problem, peer problem, pro-social behaviour.

1.7 DELIMITATIONS OF THE STUDY:

i. The age range of the research subjects have been delimited between 11^{+} to 13^{+} years. The number of subjects for this study was sixty (60) only.

ii. The study was conducted on school students (boys) from Liluah, Howrah District of West Bengal.

i. The study was only with the following parameter: memory span, linear perception, state-trait anxiety, academic performance, different components of behavior problem and pro-social behavior.

1.8 LIMITATIONS OF THE STUDY:

The constraints that were considered to finish the current investigation. If they could be addressed adequately, perhaps higher degree of generalizability could be attained. The observed limitations are briefly elaborated as follows:

i. Purposive sampling was used for the study. With more time and resources, truly random or stratified random sampling with larger number could have been done.
ii. The sample was primarily composed of individuals living in and around Howrah and nearby towns.
iii. Participants from different strata of West Bengal and different socio-economic status (all participants self-reported to belong to Middle or Upper Middle Class), social and cultural environment could not be studied, which limits the scope of generalizability.
iv. The selected activities were partly based on the facilities which can be afforded.

1.9 HYPOTHESES:

H_0-1: There will be no effect of Physical Activity on:

a) Memory, b) Linear Perception, c) Anxiety i) Trait Anxiety, ii) State Anxiety,

d) Academic Performance, e) Behavioural Problem (Total Difficulty), i) Emotional Problem, ii) Conduct problem, iii) Hyperactivity problem, iv) Peer-problem, f) Pro-social Behaviour of school going children.

H_0-2: There will be no effect of Behaviour Therapy on: As stated in Hypotheses- $H_0$1 a) to f)

H_0-3: There will have no effect of joint intervention of Physical Activity and Behavioural Therapy on: As stated in Hypotheses- $H_0$1 a) to f)

H_0-4: There will have no difference between the therapeutic intervention among four groups (Physical activity group, Behavioural Therapy group, Physical Activity and Behavioural Therapy Group and Control Group Group) on:

As stated in Hypotheses- $H_0$1 a) to f)

1.10 IMPLICATION OF THE RESEARCH

1. The research was to analyse the learning domains (cognition & affection), with academic performance and behaviour analysis of children, which will provide strong base of planning for children future.
2. The study can be used to provide training to children and can be incorporated into their educational system.
3. The present study provides a guideline to teachers, parents and educators. It will help them to rectify behaviour problem at early stage.
4. The present study will safeguard the future of the children from involving in bad habits and moulds them into positive environment of academic field and channelize them properly.
5. With this study children can listen to respond and understand their peers and enhance their understanding in academic fields.
6. The improvement from the intervention lay strong bonding among children, their parents it may have a very significant impact on their socialization, communication and on overall development.

1.11 OPERATIONAL DEFINITIONS OF THE TERMS

Behaviour: A person's or a group's reaction to a stimuli, person, situation, or activity.

Academic Performance: A response such as success or failure of an individual or group that meets the standards set out by local government and educational institution itself **(J. Arthi, 2015)**.

Physical Activity: It is the intentional physical movement that necessitates energy expenditure.

Yogic Activities: Specifically, yogic activities include asana, pranayama, and dhyana practices with physical postures, breathing exercises, relaxation, and chanting.

Recreational Activities: It is a set of activities, which designed, keeping in mind the inherent capabilities and interest of children to enjoy, have fun, and pleasure.

Intervention: Interventions are actions performed to bring about change in people. There is a vast array of intervention options that target different kinds of problems. Most generally, it

means any activities or modules of program used to modify behaviour, emotional state, or feelings.

Behaviour Problem: Behaviour that can range from the absence of emotions to aggressive emotions.

Emotional Problem: Psychological issues resulting from an incapacity to cope with stressful events or any other issue in interpersonal relationships.

Hyperactivity Problem: Hyperactivity may mean extreme restlessness or talking too much.

Conduct Problem: A group of behavioural and emotional problems characterized by a disregard for others that that usually begins during childhood or adolescence.

Peer-problems: It arise when pupils struggle to form friendships and collaborate with others.

Pro-Social Behaviour: This type of behaviour is social in nature and is intended to benefit others. But when this behaviour lacks sharing, helping, and cooperating in social competence throughout childhood, it becomes a problem.

Memory Span: It refers to the amount of information that we can recall.

Linear Perception: This phrase, which describes the eye's ability to perceive depth and distance, is artistic or visual.

Disorder: Irregularity, disturbance, or interruption of normal function

CHAPTER- II

A REVIEW OF LITERATURE

2.1 Anxiety

2.2 Academic Performance

2.3 Behavioural Problems

2.4 Behavioural Therapy

2.5 Counselling

2.6 Physical Activity

2.7 Recreational Activities

2.8 Yoga

2.9 Concluding Discussion on the Basis of Critical Review

CHAPTER- II

LITERATURE REVIEW

The literature is equated as “foundation upon which all future will be built, if we fail to build the foundations of knowledge provided by the review of works, and articles. our effort will be shallow, innate and will often duplicate some experiments”. Several important publications have been examined through reading and forwarded in this chapter that facilitate contextual hypotheses, method and outcome of intervention and other aspects in selected therapeutic modules. The involvement of school going teens in sport, other activity and therapy go through many processes, continued to provide abundant opportunity, to excel in their respective field. This chapter helps the researcher to clarify certain concepts, set boundaries for the investigation, and develop hypotheses in addition to letting us know what we already know and what more is necessary. The literature evaluation is presented in a chronological fashion according to the variables.

2.1 Related to Anxiety:

Pedro F. S Rodrigues, et al., (2018) examined to adapt and moderate trait scale on 402 sample shown females had higher levels of anxiety than boys. The tool State-Trait Anxiety of Inventory for Children (STAIC) was used, supporting the scale's suitability for measuring trait anxiety is the results, which also showed strong internal uniformity and test-retest dependability.

Olivia Donti, et al., (2012) examined self-worth and trait apprehension on 161 girls of 10-12 years, practising competitive and recreational gymnastics sports. The findings showed that, with the exception of academic ability and social acceptance, which competitive girls rated lower, there was no discernible difference in self-esteem between competitive and leisure gymnasts. Furthermore, girls who participated in competitive gymnastics demonstrated significantly greater trait anxiety levels compared to those who performed gymnastics for leisure. Additional investigation is necessary to understand psychological parameters.

Soumya Starlet C.T, (2012) examined the psychological correlates of anxiety disorders, and the differences in groups. The sample consisted of clinical group (75) with anxiety disorders and normal healthy persons (75) aged ranged from 15-50 years. Clinical group was divided

into four groups. The results of variables showed only 84.30 % of the variance in state anxiety, whereas evaluation support cognitive perspectives on anxiety disorders, and the role behavioural and cognitive behaviour therapies could play in the handling anxiety disorders. Trait anxiety have high correlations with clinical anxiety and state anxiety point the need for assessing the personality traits.

Stefan Nilsson, et al., (2012) studied to do a pilot study which had a quantitative approached towards State-Trait Anxiety Inventory (STAI) on 42 kids aged 3-9 years. By proxying STAI, the parents evaluated their children's anxiety. According to the findings, the modified short STAI in the 7-9 years old age group had excellent construct validity and moderate internal consistency. The potential applications of this tool for kids with cognitive and linguistic impairments will require more investigation.

Levent Kirisci, (1996) evaluated to check the consistency and rationality of anxiety tools of STAIC on 675 adolescents of 12-18 years of age, recruited from both clinical and community sources. The result of assenting analysis specified that the tool was appropriate for teens. Lastly, the groups with and without anxiety disorders were distinguished by factor loading scores, IRT slope scores, and STAIC summary scores.

Ravinder (1977) evaluated the effect of state trait anxiety psychological stress and intelligence on laboratory learning and real-life learning (academic achievement) on 240 females. The tools used are Hindi Version of STAI (Spielberger, Sharma and Singh, 1973), Hindi version of General Mental Ability Test (GMAT) developed by Hundal (1962). Findings reported that learning takes place at different rates in different stages of learning, Interaction between anxiety and intelligence has not been found to be significant, the differences in performance have not been so much due to anxiety, but due to the experimental condition of ego-stress and impairment in learning has occurred due to ego-stress as well as the magnitude of difference between the performance of high anxiety and low anxiety was not very large.

2.2 Related to Academic Performance:

R. Sivakumar, (2022) sought to determine the impact of a memory game on academic achievement. Total sample was 80 students of IV standard equally divided into experimental (40) and control group (40). The outcomes of post-test for investigational cluster were better than control group, which show that games have good effect on improving the achievement for the primary stage.

Smolleck, et al., (2017) investigated how children's bad behaviour affected their academic achievement in early childhood education through observational case study on 18 children for 4 months. Results acknowledged that behavioural issues were encountered and attempted to prevent behavioural issues.

2.3 Related to Behavioural Problems:

Fareha Khan, et al., (2021) assessed and compare the behavioural problems among boys and girls. Sample consists of 100 adolescent boys and girls. The study showed teens have more mild and moderated issues with less severe issues. The least prevalent behavioural issue among teenage boys and girls was discovered to be substance misuse.

U. Harikrishnan, et al., (2021) evaluated the frequency of behavioural and emotional issues in relation to gender and geography. A Strengths and Difficulties Questionnaire (SDQ) analysis is performed. Multiple regression analysis showed a strong correlation between the total score of the tool with the educational settings and societal standing. The findings showed that school-going adolescents had emotional and behavioural issues.

Silje Hukkelberg, et al., (2019) studied the relationship between behaviour issues with societal skills. It included data from 54 independent studies and reports from parents and teachers. It was discovered that the sort of responder with the highest association was the one who reported both measures (a teacher or parent), as opposed to the parent-teacher pair who reported the measures together.

Nabanita Barman, et al., (2018) conducted a descriptive study on occurrence of problematic issue through a preliminary study on 50 students selected randomly with SDQ tool. The result showed 18% had abnormal behavioural, 12% borderline and 26% has conduct problems, however association was found between issues and demographic profile.

Samiullah Sarwar (2016) ascertained how parenting practices and parents' influence affect kids' behaviour. A qualitative interviewing approach was taken into consideration, using a sample of just two mothers who exhibited delinquent behaviour. According to the research, children raised in an authoritarian household experience more power abuse, which makes them rebellious and prone to problematic behaviour. Conversely, children raised in an authoritative household benefit from a moderate approach to parenting, which is encouraged

by the approach. Moreover, the study is carried on and refers to the experience of only two mothers.

Vidya. C (2015) investigated dimensions of problematic issues of progenies and its detrimental factors through their mother's health status. The research strategy was cross sectional survey on 812 children with their mothers. The result showed age, gender and psycho-socio-somatic health status of the mother appeared the primary factor for the problematic behaviour in children.

Hoshiar Sadiq Sangawi, (2015) examines through review on how parental practices affect the behavioural issues that primary school-aged children from diverse cultural backgrounds face. The study explored through articles, relevant studies with inclusion criteria which included 21 studies. Results revealed that parenting styles have an impact on children's behavioural problems which may vary across cultures. But there are limitations which must be noted and may contribute towards some inconsistency of the findings.

Christopher T. Barry (2012) reviewed the assessments of conceptualization and planning of issues and aspects that focused on relative benefits and drawbacks of various informants and instruments when evaluating kids with behavioural issues.

Louise Hayes, (2007) aimed to gather reports with SDQ by teachers of kids aged 5–10 years. Which indicated that boys had much more problems than girls and that boys had lower clinical levels of emotional problems. Also, Peer scale includes two interpretations for males, according to comparisons of the factor structure, with two items loaded with conduct issues and linked to more problematic behaviours. Conduct issues are more closely linked to lower pro-social abilities in girls.

Mehta (1996) aimed to analyse the different modules on problematic behaviour of 120 subjects, divided into 60 boys and 60 girls, aged between 9-12 years, divided into 5 groups consisting of 12 students in each group. The tools were developed by the researcher and standardized, as the researcher couldn't found standardised questionnaire. The outcome of the intervention strategies was effective. But Further research is required.

2.4 Related to Behavioural Therapy:

Maria Lidia Sica Szymanski, et al., (2020) analyses the connection between role-playing and kids' psychological growth in the age range of five to six. Total 12 children in preschool

were selected as samples, involved in six sessions of 45 minutes each. The results focused on the growth, meaning and change in thought process of children.

Kristi L. Perryman, et al., (2020) measured academic achievement and child-centered play therapy using a prevention-based paradigm. It revealed significant increase in 3 subjects and it also highlighted the significance of offering children who are at risk preventive interventions that promote their general mental health and wellness.

Basavaraj Shrinivasa, et al., (2019) overviews a piece of writing that attempts to give a concise explanation of the various ways that play can be a therapeutic tool for change, as well as the potential for therapy within play, and main play therapy philosophies. It also finishes by stressing the present problems and difficulties that play therapy practice faces as a therapeutic tool for children, and suggesting future directions.

Mohammad Tahan, et al., (2018) investigated strategies and skills of behaviour therapy technique on reducing the behavioural issues of kids with autism and pseudo experimental. Sample of 30 children were selected with autism equally divided into investigational and group in control. Results concluded that societal skill training has a noteworthy and favourable impact on reducing behavioural problems of communication skills improvement in children with autism.

Seema (2018) determined to examine how social skills instruction affects adolescents' social anxiety, self-esteem, and social competence with 200 pupils were equally divided into experimental group and control group. 10 sessions of social skills training intervention were given to experimental group. Result assessed high impact in dipping the social anxiety, increasing the self-esteem, whereas it also found that gender did not have any significant influence over lowering social anxiety while raising social competence and self-worth.

Maha Abdallah Rasheed Joma, (2016) studied how role-playing affected the learning outcomes of motivation, achievement over a two-month period on 125 sample students. Outcome had gender preference for female cluster and interaction between teaching method and gender contributed significantly to the differences in students' speaking skill achievement.

Poddar, (2016) aims to outline a comprehensive intervention program, conceptual design to provide rehabilitation for children in conflict with law through review of studies which includes psycho-education, music therapy, psychodrama, cognitive behaviour therapy and

cognitive retraining to enhance positivity. The programme aid in positive societal contribution and helped in modifying the mal-adaptive behaviour of the juveniles.

Zeynep Cetin, (2015) aimed to see the impact of art and collage making on children's reading and writing readiness. The study reviewed various literatures on pre-schoolers and different areas. The study recommended the educators for engaging paper art and collage projects as initiation for readiness in reading and lettering.

Brian Scott Phillips, (2013) aimed to see how role-playing results on critical thinking, motivation also attitude on 40 students and teacher's motivation and attitude. Pre and post assessments, surveys, interviews, pro and con grids, journal entries, and colleague observations were applied to analyse facts about the pupils and teacher. Results revealed an improvement on all the aspects of student which was taken into consideration before. Moreover, it also discovered improvement in the teacher's attitude and motivation aspects.

Asuman Aypek Arslan, (2013) intended to review literature in order to investigate the impact of art instruction on kids. It revealed from reviews that art education improves self-esteem and the self-respect to children because the emotion of success and satisfaction they feel and get. Through art and the evaluation of art education, a kid can occasionally express, understand, and learn, which aids in the development of a healthy personality and the active understanding of social life that makes them important.

Dawoodi Ghazal Esfnayar Nahid, (2013) presented a study to investigate how rational-emotive behaviour treatment affects teenagers suffering from behavioural disorders on 200 students equally divided into 100 each as control group and experimental group. The intervention continued in 7 sessions for seven weeks to experimental group. Result showed effective progress from the treatments.

Deepak Ramotra, (2012) studied the effect of art therapy and social skill training on behavioural problems, adjustment and academic achievement with 90 boy's students aged between 13-15 years. The data indicate that art therapy proved to be better for behavioural problems and adjustment and social skill training for academic achievement. The results support psycho-educational model and interprets overt behaviour especially, behaviour problems can be managed by using set intervention.

Stephen Scott, (**2008)** reviewed interventions of effective treatments, interventions, which shows what is effective and ineffective for young person to deal with the behavioural

problems, mainly conduct problem. Practical measures such as parent management training, promote social and scholastic learning, develop strength, Child therapies, interventions in school. Different modules of intervention were considered and even fewer receive evidence-based interventions were prime noticeable.

Maaike H. Nauta M.A, et al., (2003) evaluated three-month intellectual modules with kids having anxiety issue on 79 children aged 7-18 years. Before, throughout, and three months after treatment, parents and children participated in separate semi-structured diagnostic interviews. Hence, progressive growth was observed after the program was implemented with no effect in parenting.

Leesa Moriss, et al., (2003) determined to identify intervention youth using sport and physical activity to identify good practices principles with a total of 175 programs. There are thirty-two sporting, physical activity, and outdoor components; forty-six sport components; twenty-four outdoor components; seven physical activity components; nine sport and outdoor components; forty-nine sport and physical activity components; and eight aspects of both outdoor and physical activity. The majority of the programs increase self-esteem, offer alternatives to antisocial behaviour, and enhance social skills, according to a case study, survey, and review of the literature. It further states that sports either directly or indirectly helps in dropping and avoiding disruptive behaviour.

Paul J Frick, (2001) reviewed model of intervention that emphasizes interventions for youth with conduct disorder need to be comprehensive. Numerous factors that contribute to and sustain CD symptoms in children have been considered, including those related to the kid and the social environment in which they live. Furthermore, as individuals may develop CD along diverse pathways, therapies must be tailored to each child individually. Intervention approaches that are consistent and approved with contingency management program, parent management training, cognitive behavioural skills training, stimulant medication.

Ahmed Al-Ansari, et al., (1998) aimed to examine societal skills with problematic child aged from 10-14, with implementation for more than one month. The regularity with which these skills are applied has significantly increased, according to reports from teachers and parents.

Mythily. T, (1994) aimed to do a pilot study to see the impact of behaviour and class performance through a therapeutic program consisting of classical music and relaxation

training on 150 subjects, but the final work consisted of 17 girls and 25 boys of grade 5th, since the prime requirement of the therapeutic program was individual attention. Various tools were used in the study but no standardized tools were used except Behaviour Relaxation Training (BRT). The study showed integral improvements displayed all sides of child growth.

Harve E. Rawson, et al., (1993) to study the impact of a brief residential therapy program on depression in children with 99 samples with problematic issue and education debilities. The majority of kids came from low-income, broken homes, and were seen as socially and culturally underdeveloped. Pre- and post-tests using the Reynolds Childhood Depression Scale were carried out. The fact that the treatment patients' depression levels actually decreased significantly in comparison to the comparison groups provides strong statistical support for this notion.

2.5 Related to Counselling:

Malavika V. Mokashi (2022) sought to see the prevalence of behavioural problems in preschool children and their parent's practices. The phenomenological analysis revealed parents and teachers adopted few ineffective disciplinary measures and harsh punishments in management of behavioural problems.

Nesma Mohamed Tawfik, (2019) aimed to study effect of parent's counselling sessions on the modification of aggressive behaviour among 120 school children and their parents equally divided into experimental group and control group. Result showed more than half of the studied children of both schools had aggressive behaviour and problems in their families before intervention compared with the control group. It also concluded that the counselling sessions had improved the studied parent's knowledge and attitudes about modification of aggressive behaviour among children.

Sahu. A, et al., (2012) studied the personality and academic achievement of children after receiving parental counselling with 488 children, aged between 7-10 years. Questionnaire comprised of general information and 14 PF personality questionnaire developed by Cattel, which indicated substantial improvement post counselling.

Michael Donnelly, (2012) investigated the potential mediators of the behavioural results of parental interventions on children. A 2:1 randomization process was used to place families comprising 149 samples, aged 32-88 months in 2 categories: investigational (103) and group under control (46). Effects on hyperactive-inattentive behaviours of children, social

competence, and parent competences and well-being were more favourable for the intervention group. The findings demonstrated that neither risk variables nor child or family demographics could have mitigated the effects of a six-month intervention on the main child outcomes. The study emphasizes how crucial early parental assistance is for parents and kids who most need it.

2.6 Related to Physical Activity:

Georgiy Polevoy, (2022) determine the effect of physical activity given in their physical education class on memory indicators of school children. A total of 141 students, aged between 15-16 years were considered. The result of the study showed children who were engaged in physical workouts were able to significantly increase the test results of memory test.

Jiayu Li (2022) examined the effects of physical activity on happy emotions in children and adolescents by systematic review and meta-analysis. In the end, twenty-four articles were included. The results indicated that engaging in aerobic exercise for 30 to 60 minutes had a greater impact on positive emotions. It was also determined that children and adolescents who engaged in physical activity had considerably better moods than those who did not.

Silje Eikanger Kvalo, (2020) examined outcome of different modules of movement activity on teens growth and progress. The results with multilevel analysis showed a significant effect on psychological wellbeing, social support and peer and school environment.

Arnaud Philippot, et al., (2019) tried to record how well various training modalities can lessen preteens' symptoms of anxiety and despair. The intervention's result shown a decrease in the problems. Along with encouraging pleasant, non-competitive interactions amongst participants, the program also emphasized the connection between movement and enjoyment.

J. Arthi (2015) studied to investigate the impact of movement action and psycho-social interventions on the development of 60 children with attention deficit hyperactivity disorder. Four groups were made with 15 children in each group having 4^{th} group as control group, with 6 months intervention. The result showed that Physical activity helped to increase the level of neurotransmitters which enhances their attention and significant differences was found. It was concluded, children with combined physical activity and psychosocial intervention group had shown significant improvement on behaviour, academic & class room behavioural performance.

Simon Rosenbaum, et al., (2014) aim to see the effects of physical activity on mental illness though systematic review. The interventions modules were exercise programs, exercise counselling, lifestyle interventions, tai chi, and physical yoga. 39 appropriate trials were identified. The study revealed movement actions help to reduced problem and issues.

Rochelle M Eime, et al., (2013) displays the findings of a comprehensive review on the advantages that physical activity and sport have for children and adolescents' psychological and social wellbeing. It was based on electronic data with 30 selection criteria. The study makes recommendation that youth engage in community sports and exercise as recreational physical activity in an effort to improve their physical health, psychological and social well-being.

April Marie Thelen (2012) studied the research in order to determine how pretend play benefits kindergarten-aged children's cognitive and academic development. The criteria literature was publications, and studies bestowing to movements events. The analysed studies made it possible to identify reading and mathematics as relevant outcomes associated with pretend play. The study enables educators for expansion of teens. Future research is recommended.

Masoumeh Hashemi, et al., (2012) examined the impact of specific physical activities on behavioural issues in children aged three to six years on 60 male and female students for three months. The experimental group's pre- and post-test results showed a substantial difference across all behaviour concerns.

Aida Al Awamleh, (2010) investigated how a gymnastics program affected kindergarten students' motor skills and social behaviour of 54 kids aged 3-6 years. A control group and an experimental group were created out of the samples with Motorik Module test was used to evaluate motor skills, and the PKBS-2 was used to assess social behaviour. The Results showed that motor capabilities improved significantly.

Spela Golubovic, et al., (2008) sought to ascertain whether an association exists between structured physical activities and behavioural issues in children by examining 1831 children ages 4 to 10 who completed a physical activity and behaviour assessment questionnaire using a Likert scale. It revealed that girls’ input was lower than boys in systematized physical events and other issues.

Amanda J. Love, (2001) examine the effects of physical education class on the behaviour of 20 students (14 male and 6 female) of class 3 to 5 having ADHD were observed by classroom teacher and the result presented that significant interaction was found between time, PE, and ADHD in the non-PE condition, rating core increased significantly from pre to post for student with ADHD. It concluded that involvement in PE class had a positive expansion on kids

Margaret Cameron, et al., (2000) centred on an investigative study on the utilization of physical education and sports to deter crime. In order to reach its conclusion, this paper examined a wide range of research programs, sports and other physical activities. It highlights how community's infrastructure and environment support pro-social behaviour and make it easier than anti-social behaviour.

2.7 Related to Recreational Activitiy:

T. Jegadeesan, et al., (2020) evaluates the impact of classic games on societal skills of 30 teens with ADHD's equally divided into two groups aged between 8 to 10 years. Result clinched that traditional games provide substantial progress in societal skills.

Nurcan Demirel (2018) investigated the effect of rehabilitative gymnastic exercises on 18 students with hearing impairments and basic motor abilities were equally divided experimental and control group. The intervention lasted for 10 weeks and the result of the study concluded significant developments were found in gross motor development tests in the experimental group. No positive development was noticed in the control group.

Sharma, et al., (2015) examined how recreational pursuits affected the mental wellness of orphan children. 30 samples equally divided into experimental group and control group. Training imparted for 12 weeks to experimental group. The result revealed progressive growth in the extents of psychological wellbeing.

Atilay Birtürk, et al., (2015) examine the impact of leisure activities on pupils' ability to overcome state-trait anxiety for three months. Spilberger State-Trait Anxiety Inventory was used as tool on 60 students equally divided into experimental group control group. Significant difference was found in post-test in terms of state anxiety and trait anxiety. These results concluded that students that participated in recreational activity programs saw a reduction in both state and trait anxiety.

2.8 Related to Yoga:

Kirti Khunti, et al., (2022) examined to determine how yoga affects children's mental health and offers a summary of the results of research studies on the subject of yoga's impacts on school-aged children's mental health. Yoga therapies have been demonstrated in this review to be effective both therapeutically and prophylactically for mental health concerns in educational settings.

Prriyam Gunjal, et al., (2021) examined the impact of recreational and yoga events on enhancing autistic pupils' learning and distressed behaviour. Finding out how well the children aged 8 to 14 could communicate verbally and comprehend was the aim of the study. No outcome was described in more detail.

Alana Croft (2020) sought to conduct a meta-analysis and thoroughly evaluate the quality of the available research on yoga as a child and adolescent intervention. Ten different controlled trials were located in databases to determine the effectiveness and recommended dosage of yoga for anxiety. Based on the results of this review, controlled research including follow-up assessment is necessary. These studies offer preliminary evidence that yoga may enhance children's mental health.

A Kaur (2017) investigated the effect of yoga on test anxiety of 50 secondary school students equally divided into experimental and control groups. The intervention of two weeks made significant impact in reducing test anxiety after post-test in case of both male and female students. This indicated that gender difference did not make any impact on the test anxiety of students after yogic intervention.

S Rao Kothuri (2016) aimed to aid 47 adolescents screened with emotional and behavioural problems through behaviour modification and yoga module. The training total time was different for each module, and the outcome of the test comes with a prominent difference in parameters. So further research is required.

N Sharma, et al., (2015) studied how yoga and leisure activities can help children with autism who exhibit maladaptive and disturbed behaviour on 24 samples divided into four equal groups based on their similar characteristics for 105 weeks. The level and percentage of control and yogic group found to be improved on variable of maladaptive behaviour. Moreover, the yogic group improved more after two years' yogic practices as compare to control group and the significant changes were found.

Lindsay J. Kaplan (2013) aims to study how yoga helps children with anxiety. Similarities was found between discoveries and review. Moreover, more finding was required that surpass facts, statistical analysis to validate leading factors, aspects of yoga to deal with impact of anxiety on teens.

2.9 Concluding Discussion on the Basis of Critical Review:

On the basis of critical review and by monitoring the modules activity, it can be said that behavioural problem among students is quite significant to be discussed in case of school students. The intervention modules determine whether the problems may change or similar and whether it will have any effect on several parameters of learning in children. The past literature suggests mixed result regarding activities, asana practice, recreational activities, various behavioural therapies and training. Some studies reported no intra group differential increase or decrease to a certain level was noticed in yogic and control group, yogic and recreational group and control group respectively **(N Sharma, 2015)**. Some studies reported no database which were used, has no significant results in behavioural outcomes **(Jessica Giesige, 2018)**. Other research found that a low-to-moderate physical activity program decreased the symptoms of depression and anxiety in a non-clinical sample of pre-adolescents with primary education **(Arnaud Philippot, et al., 2019)**. Some studies were not further discussed after taken the test; hypotheses were framed followed by a questionnaire **(Ms. Priyam Gunjal, et al., 2021)**. Many studies were significant to treating anxiety of children with different program, but none have screened with behavioural problems, so it would be interesting to find out divergence. The researcher was inspired to elucidate the impact of this disparity from previous literature by different intervention program on difficulties of school going children with behavioural problem.

CHAPTER- III

METHODOLOGY

3.1 Sampling

3.2 Selection of Variables

3.3 Criterion Measures

3.4 Design of the study

3.5 Intervention Design

3.6 Intervention Protocol

3.7 Procedure of the Test

3.8 Intervention Schedule

3.9 Description of the Activities

3.10 Control Group

3.11 Tools Used

3.12 Development of Tools

3.13 Report Card for Academic Performance

3.14 Statistical Technique

CHAPTER- III

RESEARCH METHODOLOGY

In order to accomplish the specific goals stated, the process and procedures used during the study are referred to as "methodology." It is focused on the methodology of performing the research itself. However, the specific method used in given research will depend on the goals and nature of the study. The present study's research technique is covered in this chapter in order to achieve its goals.

It includes the account of sampling, sample description, selection of subjects, selection of variables, research design and administration of questionnaire, data collection, and research tools used to measure the variables under investigation, and lastly an explanation of the statistical analysis methodology.

3.1 SAMPLING

The study covered a total of 550 students for survey study and to set norms of the questionnaire (to adapt for moderation) which includes a government school going boy's and girl's students of Howrah district, aged between 11^{+} to 16 years and those studying in class VI to X. The survey study was carried out to determine the prevalence of behavioural issues among pupils and necessity required for early detection. Out of 550 students, complete and correct data was taken on 500 students (250= boys & 250= girls) and the result showed that boys were more prone to behavioural problems and problems of conduct in comparison to girls.

A total of 250 boys were screened through adapted and moderated questionnaire of SDQ from another government school. out of 250 only sixty (60) students with high SDQ score aged 11^{+} to 13^{+} years who met the requirements for inclusion were chosen with purposive selection method for the present study from a government aided Hindi Medium School at Liluah district Howrah, West Bengal, India and samples were assigned and distributed randomly into four groups.

Prior authorization was obtained before the study could conduct the experiment, taking ethical factors into account such as requesting written permission from school authorities. In the presence of the teacher-in-charge, parents and subjects received a detailed explanation of the study's aim as well as the testing protocols, resources, and curriculum.

After the selection of samples, they were alienated into four equal groups and the groups were furthered named as Physical Activity Group (PA), Behaviour Therapy Group (BT), Physical Activity and Behaviour Therapy Group (PABT) and Control Group (CG). Fig 1 (A) showed the distribution of samples.

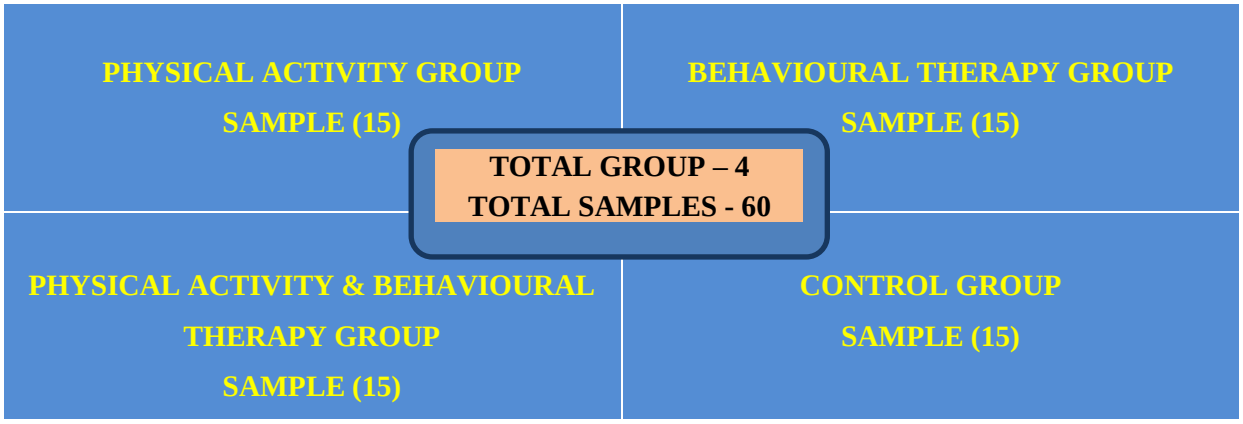


FIG- 1 (A): Distribution of Samples

Abbreviations of four groups were as follows: For Physical Activity Group **(PAG),** Behavioural Therapy Group **(BTG),** Physical Activity & Behavioural Therapy Group **(PABTG)** and Control Group **(CG).**

3.1.1 Selection of the Subjects

From sixty (60) students, each group, viz., **PAG, BTG, PABTG and CG** has fifteen students each in the group for the study. The subjects' ages varied from 11^{+} to 13^{+} years old.

3.2 SELECTION OF VARIABLES

Keeping in view the importance of Cognition, Affection, Academic Performance and Behavioural Problems, the variables are:

TABLE 1: States the Independent Variables and Dependent Variables.

INDEPENDENT VARIABLES	DEPENDENT VARIABLES
1. Physical Activity (P.A) 2. Behavioural Therapy (B.T) 3. Physical Activity & Behavioural Therapy (P.A.B.T)	1. Memory Span 2. Linear Perception 3. State-Trait Anxiety 4. Academic Performance 5. Behavioural Problem 6. Different components of Behaviour Problems 7. Pro-Social Behaviour

3.3 CRITERION MEASURES

For the purpose of present study, the following criterion are measured.

3.3.1 Inclusion criteria

- ✓ Students aged between 11^{+} to 13^{+} years were included in the study
- ✓ Students of class VI-VIII
- ✓ Living with both parents
- ✓ Children with behavioural problems were included.

3.3.2 Segregation criteria

- The study did not include young adults, middle-aged individuals, or elderly individuals.
- Pupil have any clinically significant psychological, physical and or disease/ disability were also excluded from the study.

3.4 DESIGN OF THE STUDY

The current study employed an experimental design with multiple groups. There were three treatment groups of 15 subjects in each group. The three groups were considered as the Experimental group and the other one was the Control group. The experimental group was treated with planned intervention for a period of twelve (12) weeks with modules of activity. The control group was not given any such training rather the subjects were controlled so that they did not participate in any organized training on a regular basis.

3.5 INTERVENTION DESIGN

All the tests and intervention session were conducted at the school premises and playground of Jagriti Hindi Vidyamandir. Training design was divided into four modules separately for four group, designed for 12 weeks to test all the independent variables on school boys. The intervention designs are given below in fig. 1(B):

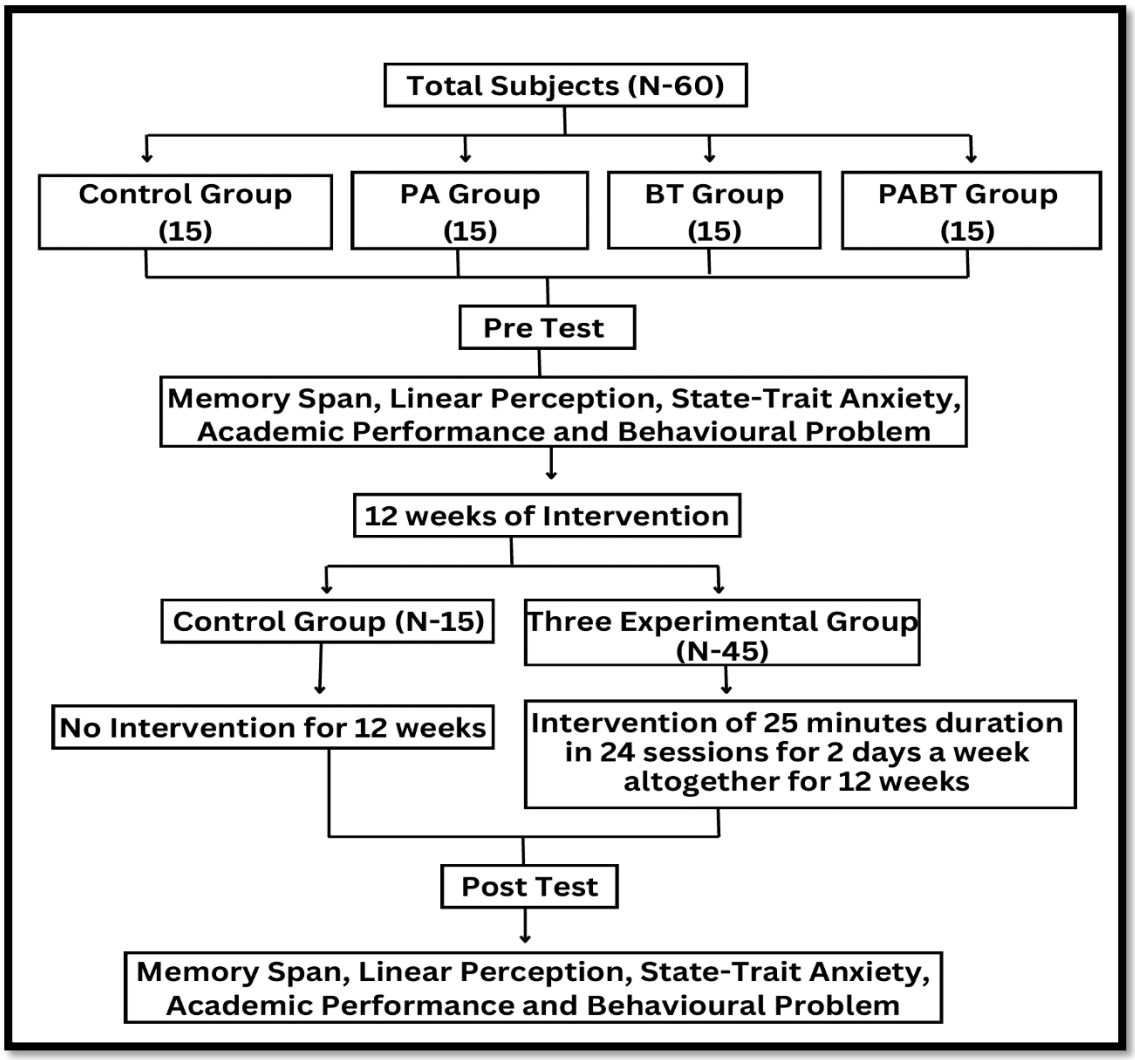


FIG: 1 (B) Intervention Design

3.6 INTERVENTION PROTOCOL

After going through the reviews of literature, paradigm, trainings and suggestions of subject experts, psychologist and counsellor, a comprehensive intervention design was prepared by expert and psychologist keeping in mind the critical information and strategies for the experimental groups in the present research, which includes physical activities of yogasanas, recreational activities, gymnastics, behavioural therapies includes shaping, paternities training, situational play, cluster activities, home task etc., and combination of both (physical activities and behavioural therapy). The intervention was given two days a week excluding vacation and holidays under the supervision of the counsellor, other teacher and in the presence of the researcher for the duration of twelve (12) weeks. There was total twenty-four (24) sessions of thirty-five minutes including preparation for each experimental group. Fig 1(C) represents the time of training.

Physical Activity Group	**Tuesday, Friday**
	11:30am to 12:05pm
Behavioural Therapy Group	**Tuesday, Friday**
	12:50pm-1:25pm
Physical Activity & Behavioural Therapy Group	**Tuesday, Friday**
	2:45pm to 3:20pm

FIG- 1 (C): Time Schedule of Three Experimental Groups

3.7 ADMINISTRATION OF THE TEST & INTERVENTION:

The personal data (Inclusion criteria-using the personal data sheet) was taken inside the classrooms. Before the comportment of every test, the subjects were escorted and assembled at the assigned place, and everything was explained to them. The intervention and the test were completed under the supervision of counsellor, and with the help of an assistant teacher, ICT teacher of the school and a B.P. Ed student. Before the intervention demonstration of activities was given before the subjects or explained and all efforts was made by the researcher to safeguard accuracy and uniformity in the administration of the test. The full activity or session was set for thirty-five minutes (35 min), out of which 10 minutes was kept for warm-up and to comfort the children and twenty-five minutes (25 min) was kept for specific session. All the tests and intervention were conducted on every child.

3.8 INTERVENTION SCHEDULE

The intervention schedule had been broadly classified into three intervention modules and a control group in table no. 2 as follows.

Table 2: Categorized Intervention Modules

Module 1	Module 2	Module 3	Module 4
Physical Activity (P.A)	Behavioural Therapy (B.T)	Physical Activity & Behavioural Therapy (P.A.B.T)	Control Group (C.G)
Yoga, Recreational Activities, Gymnastics (Floor exercise)	Social Skill Training, Collage Making, Role play Parents Counselling, Group Counselling etc.	All activities of P.A & B.T was imparted.	No treatment was specified.

3.8.1 INTERVENTION PARADIGM OF PHYSICAL ACTIVITY (P.A):

The table 3 states the physical activity comprised of Yoga activities for four weeks has been presented below.

Table 3: (Yoga-1st Activity)

Sl. No	Weeks	Day	Programme	Description
1.	1st	Tuesday	Vrikshanas, Trikonasanas, Tadasanas, Virbhradrasanas, Suryanamaskar	Introduction Orientation, Demonstration and Practice
2.		Friday	All the above	Practice and General Communication
3.	2nd	Tuesday	Bhadrasanas, Shavasanas, Sarvangasanas, Halasanas, Bhujungasana	Orientation, Demonstration and Practice
4.		Friday	All the above	Practice and General Communication
5.	3rd	Tuesday	Padmasana, Pawanmuktasana, Ardha Matsyendrasanas, Vajrasanas, Chakrasana	Orientation, Demonstration and Practice
6.		Friday	Janusirsasanas, Paschittomasanas, Dhanursanas, Shashankasana, Anulom-Vilom	Orientation, Demonstration and Practice
7.	4th	Tuesday	All the Above	Practice and General Communication
8.		Friday	Yoga Competition	Test

The table 4 states the physical activity comprised of Recreational Activities for next four weeks has been presented below.

Table 4: (Recreational Activity-2nd Activity)

Sl. No	Weeks	Day	Programme	Description
9.	5th	Tuesday	Physical Exercise (Stand up & sit down, Spot Jump, Push-up, etc.), Numbering (minor game)	Introduction Orientation, Demonstration and Practice
10.		Friday	Dumb Sheraz, Singing (Patriotic song)	Description, Demonstration, Practice
11.	6th	Tuesday	Hit on the circle, Blind man's Buff (minor game)	Orientation, Demonstration and Practice
12.		Friday	Dancing	Description, Demonstration, Practice
13.	7th	Tuesday	Blowing of Balloons, Memory Test	Description, Demonstration and Practice
14.		Friday	Catching, Bowling, Ram & Ravan (minor game)	Orientation, Demonstration and Practice
15.	8th	Tuesday	Shuttle Run, Zigzag Run, Soft Ball Throw	Orientation, Demonstration and Practice
16.		Friday	Drawing	Description and Practice

The table 5 states the physical activity comprised of Gymnastics Activities for last four weeks has been presented below.

TABLE 5: (Gymnastics-3rd Activity)

Sl. No	Weeks	Day	Programme	Description
17.	**9th**	Tuesday	General warming-up, Stretching & Limbering Movements Forward Roll, Backward Roll, Side Roll, Split Sitting Cooling Down	Introduction Orientation, Demonstration and Practice
18.		Friday	All the above	Practice and General Communication
19.	**10th**	Tuesday	General warming-up, Stretching & Limbering Movements T-Balance, V-Balance, Knee Balance, Frog Balance Cooling Down	Orientation, Demonstration and Practice
20.		Friday	All the above	Practice and General Communication
21.	**11th**	Tuesday	General warming-up, Stretching & Limbering Movements Shoulder Stand, Wall Balance, Hand Stand Cooling Down	Orientation, Demonstration and Practice
22.		Friday	All the above	Practice and General Communication
23.	**12th**	Tuesday	General warming-up, Stretching & Limbering Movements Cat Leap, Cartwheel, Arching Cooling Down	Orientation, Demonstration and Practice
24.		Friday	Gymnastics Competition	Test

3.8.2 INTERVENTION PARADIGM OF BEHAVIOURAL THERAPY TECHNIQUES

The table 6 states the Behaviour Therapy comprised of various techniques for twelve weeks has been presented below.

Table 6: Behaviour Therapy (B.T)

Sl. No	Weeks	Day	Programme	Description
1.	**1st**	Tuesday	Activity through Appraisal	Introduction Orientation, Demonstration
2.		Friday	Shaping and token economy	Orientation, Instructions with examples
3.	**2nd**	Tuesday	Role Play	Orientation, Demonstration, Practice and awareness
4.		Friday	Behavior Management	Discussion on Positive Behavior, Daily Check-up & Management

5.	**3rd**	Tuesday	Collage Making	Orientation, Demonstration, Practice
6.		Friday	Role Play	Orientation, Demonstration, Practice and awareness
7.	**4th**	Tuesday	Parents Counseling	Orientation, Discussion
8.		Friday	Group Activity	Focusing on sharing
9.	**5th**	Tuesday	Home task	Orientation, Demonstration (Focusing on good habits)
10.		Friday	Group Counseling	Situational Discussion
11.	**6th**	Tuesday	Task Analysis	Orientation, pros & cons
12.		Friday	Follow-up with parents	Discussion
13.	**7th**	Tuesday	Activity through Appraisal	Instructional
14.		Friday	Social Skill Training	Orientation, Task Analysis
15.	**8th**	Tuesday	Role Play	Orientation, Demonstration and Practice
16.		Friday	Behavior Management	Based on Peer Problem, Daily Check-up & Management
17.	**9th**	Tuesday	Collage Making	Orientation, Demonstration and Practice
18.		Friday	Role Play	Orientation, Demonstration and Practice
19.	**10th**	Tuesday	Parents Counseling	Orientation, Discussion on pros & cons
20.		Friday	Group Activity	Focusing on empathy for others
21.	**11th**	Tuesday	Home task	Orientation of Social Aspects
22.		Friday	Group Counseling	Orientation, Focusing on active listening and self-awareness
23.	**12th**	Tuesday	Task Analysis	Orientation, Discussion on pros & cons of behavior
24.		Friday	Follow-up	Discussion on pros & cons

3.8.3 INTERVENTION PARADIGM OF PHYSICAL ACTIVITY - BEHAVIOUR THERAPY TECHNIQUES

The table 7 states the physical activity & behaviour therapy activities for twelve weeks have been presented below.

TABLE 7: Physical Activity & Behaviour Therapy (P.A.B.T)

Sl. No	Weeks	Day	Programme	Description
1.	**1st**	Tuesday	Vrikshanas, Trikonasanas, Tadasanas, Virbhradrasanas, Suryanamaskar	Introduction Orientation, Demonstration and Practice
2.		Friday	Activity through Appraisal	Orientation
3.	**2nd**	Tuesday	Physical Exercise (Stand up & Sit down, Spot Jump, Push-up,etc), Catching, Bowling	Orientation, Demonstration and Practice
4.		Friday	Social Skill Training	Orientation, Task Analysis
5.	**3rd**	Tuesday	General warming-up, Stretching & Limbering Movements, T-Balance, V-Balance, Knee Balance, Frog Balance, Cooling Down	Orientation, Demonstration and Practice
6.		Friday	Role Play	Orientation, Demonstration, Practice and awareness
7.	**4th**	Tuesday	Bhadrasanas, Shavasanas, Sarvangasanas, Halasanas, Bhujungasana	Demonstration, Practice & repetition of previous asana
8.		Friday	Behavior Management	Discussion on Positive Behavior, Daily Check-up & Management
9.	**5th**	Tuesday	Dumb Sheraz, Singing, Dancing (patriotic song)	Orientation, Demonstration and Practice
10.		Friday	Collage Making	Orientation, Demonstration and Practice
11.	**6th**	Tuesday	General warming-up, Stretching & Limbering Movements, Forward Roll, Backward Roll, Side Roll, Split Sitting, Cooling Down	Orientation, Demonstration and Practice
12.		Friday	Role Play	Orientation, Demonstration and Practice
13.	**7th**	Tuesday	Padmasana, Pawanmuktasana, Ardha Matsyendrasanas, Vajrasanas, Chakrasana	Demonstration and Practice & repetition of previous asana
14.		Friday	Parents Counseling	Guidelines, Discussion on pros & cons
15.	**8th**	Tuesday	Hit on the circle, Potato Race, Zig Zag Run, Blind man's Buff (minor game)	Orientation, Demonstration and Practice
16.		Friday	Group Activity	Focusing on sharing
17.	**9th**	Tuesday	General warming-up, Stretching & Limbering Movements, Shoulder Stand, Wall Balance, Hand Stand, Cooling Down	Orientation, Demonstration and Practice
18.		Friday	Home task	Orientation of Social Aspects

19.	**10th**	Tuesday	Janusirsasanas, Paschittomasanas, Dhanursanas, Shashankasana, Anulom-Vilom	Demonstration and Practice & repetition of previous asana
20.		Friday	Group Counseling	Situational Discussion
21.	**11th**	Tuesday	Blowing of Balloons, Memory Test	Orientation, Demonstration and Practice
22.		Friday	Task Analysis	Orientation, Discussion on pros & cons
23.	**12th**	Tuesday	General warming-up, Stretching & Limbering Movements, Cat Leap, Cartwheel, Arching, Cooling Down	Orientation, Demonstration and Practice
24.		Friday	Follow-up with Parents	Discussion on pros & cons

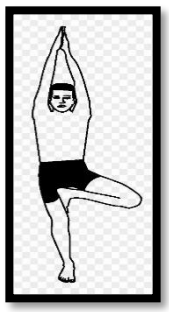
Note: specific intervention time (25min x 24 session = 600min)

3.9 DESCRIPTION OF THE ACTIVITIES:

In this section, description of yoga activities has been given.

3.9.1(A) PHYSICAL ACTIVITES (YOGA)

VRIKSHASAN (TREE POSE)



The asana Vrikshasana has been engaged from Sanskrit language 'Vrska', which comprised of two words i.e., Vriksh which means tree and asana means posture or position.

TECHNIQUE: Subjects were made to stand horizontally balancing on the right foot by bending the leftward genu placing the feet against opposite second joint with knee pointing outward inhale. Extend the arm above head and make namaskar mudra. Make the spinal straight and exhale. Join hands together, they slowly extended the elbow above the head were straight and kept their eyes focused on a point.

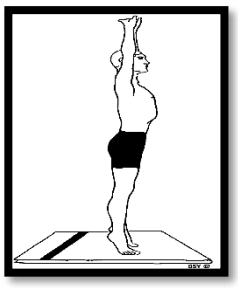
TRIKONASANAS (TRIANGLE STRETCH)

The Sanskrit words "Trikon" and "Asana" are combined to form the triangle position. Whereas "asana" signifies "posing," "Trikon" is associated with triangles.

TECHNIQUE: The participants were instructed to stand straight and space their feet roughly three feet apart. From one straight line, the arms were lifted in a lateral manner. With the legs

slightly bent, the torso was rotated to face left. Keep both arms parallel as you bring the left hand to the left foot. While maintaining a straight arm posture, stand back up. on the other side once more, bowed and exhaled while extending the arms. practiced five times.

TAD ASANA (PALM TREE POSE)



Tad asana is composed of two words, they are: tad and asana, which signify Palm tree whereas asana means posture. Therefore, in Tadasana shape of the body resemble with palm tree.

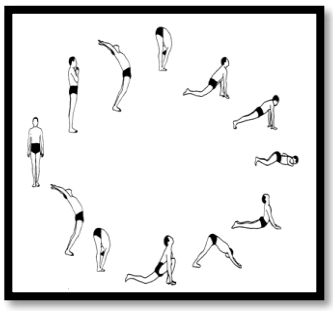
TECHNIQUE: Subjects were asked to stand with bases slightly at a distance in the normal stance placed sideward and to the shoulder width of the individual. It was asked to extend their arms above the head with straight elbows and fingers interlocked and heels were slowly raised from ground and the body was balanced on their toes.

VIRBHRADRASANAS (WARRIOR POSE)

The word virbhdarasana has been taken from two Sanskrit words Vira means hero whereas bhadra means friend. So, it is commonly called warrior pose.

TECHNIQUE: Subjects were expected to assume the posture of Tadasana, with your arms extended and your palms touching. They step or jump sideways to stretch their legs apart, making a two-thirds body-height distance, while breathing. with the rightward base pointing towards little rightward and trunk facing leftward, both feet turned ninety degrees so they face front, the opposite leg was kept straight and the left knee was bended till the thigh is equivalent to the floor for the anticipated outcome. The left knee and left foot swere pointed forward keeping the knee sealed. Faced toward the hands, the head should be bowed and tilted upward. Hold for one to four breaths in the asana. Same was repeated on the other side. Finally exhale and jump into tad asana

SURYANAMASKAR (SALUTATION TO THE SUN)



Surya means sun and namaskar means bowing or greeting. Therefore, Surya Namskar means greeting of the sun.

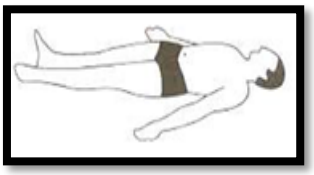
TECHNIQUE: Subjects were asked to stand upright, bring palms together in the prayer position and breathe out. After that stand upright and exhale and bring the palms together close to chest. Then stretch the elbow up over the head alongside the ears, and arched back from the waist and stretch the head back. Now exhale and bring the hands down to the floor, as he inhaled with stretched rightward leg, and dropped the right knee joint. Breath was held and exhaled, placed the knees, chest and chin on the ground. Then inhaled and slides the hips forward and arched the head and brought the chest up and exhaled and without moving his hands brought the hips up as high as possible then inhaled and brought the right foot forward between the hands and asked to exhale and brought the other foot forward, straightened the knees and brought the forehead down and inhaled as he stretched up and arched back with his head back and arms up alongside the ears then exhaled as returned to the starting position, feet together and hands by the sides.

BHADRASANAS (BUTTERFLY ASANS)

Baddha Konasana (Sanskrit language- बद्धकोणासन) is also known as Cobbler's Pose, Butterfly Pose, or Bound Angle Pose (named from the normal sitting position of Indian cobblers when they work). It's appropriate to sit for meditation if the knees are on the ground.

TECHNIQUE: Students were instructed to sit and touch their toes together. Bring the heels together as much as you can. Place hands underneath toes, interlocking fingers. Next, gently apply elbow pressure to the knees. both hands on knees, sitting with soles together. Next, lower your knees. When the pressure is released, the knees return to their preliminary position.

SHAVASANAS (CORPSE POSE)



'Shavasana' (corpse pose), in which 'Shava' means corpse and 'asana' means 'posture'. This pose resembles with the posture of a dead body therefore named as shavasana.

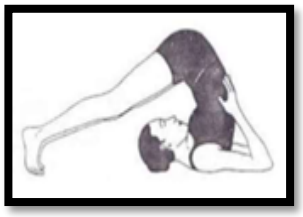
TECHNIQUE: Subjects were asked to be in supine posture with palm fronting up. Make distance of about one and half feet between legs and the body was in supine position with released whole body and stop all physical movements. This asana was supposed to be relaxation asana. It is very useful in removing the fatigue created due to the practice of another asana

SARVANGASANAS (THE SHOULDER STAND POSE)

It is a combination of two words Sarva means all and asana means limb. Therefore, Sarvang asana means whole body poses.

TECHNIQUE: The students were instructed to lie in supine position with raise and joined legs to a straight position. with fingers pointing in the direction of the spine, hands tucked beneath the buttocks. After exhaling, elevate your body softly by allowing your hands to walk backward and push you into position. They kept bringing their hands up to their backs until they were resting on their shoulders. held a straight posture for fifteen seconds while breathing regularly. As the posture grew easier, they lowered their feet halfway to the back of their heads. Slowly unfold after placing their hands on the ground.

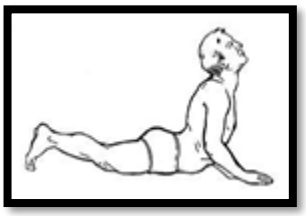
HALASANAS (PLOUGH POSE)



Halasana is derived from Sanskrit term Hala means plough and asana means posture. In this posture the body resemble with the shape of plough.

TECHNIQUE: Subject were asked to lie flat on the back with arm straight near the body, palms facing downward. Bend the trunk upward upright, hips first & slowly lower the legs from trunk over the head till the toes touch the floor. Remain same for couple of minutes & return to initial stage & relax.

BHUJUNGASANA (COBRA POSE)



'Bhujanga' in Sanskrit means 'cobra' and 'Sacrum asana'.

TECHNIQUE: The subjects were asked Lie prone on the floor, stretch legs back with top of the feet on the floor spread your hands on the floor under your shoulders, hug the elbows back into

your body. Begin to straighten the arms to lift the chest off the floor, narrow the hip points, but don't be harden the buttocks. Distribute the backbend evenly throughout the entire spine. Firm the shoulder blades against the back, putting the side ribs forward, hold the pose from 15 second breath easily, and relax back to the floor with an and exhalation.

PADMASANA (LOTUS POSE)

Padmasana is considered to be conventional yoga posture. The display of hands and feet in this pose look like the petals of a lotus flower which grows in the mud and blooms above the water opens toward the sun.

TECHNIQUE: Subjects were asked to take their seat on the folded blanker with legs outstretched, bend each leg & place each foot on the opposite thigh, sole turned upward. Pull the foot as high as high as possible. Keep the palms of the right & left hand on the right & left knees, touching the thumbs with tips of index fingers & gaze at the tip of the nose. Keep the head, neck & spinal column straight, erect and breath slowly.

ARDHA MATSYENDRASANAS (Half Fish Posture)

This asana is very important and it portray like a half fish position. It improves flexibility of the body also improving the postures in teens.

TECHNIQUE:

With legs straight, take a seat and unwind throughout your body. Left leg bent, left heel placed close to right buttock. keep the rightward sole parallel to ground apart from leftward genu. Both buttocks should remain on the mat. Maintain the pose for 15 seconds and breathing evenly, same will be repeated to opposite leg.

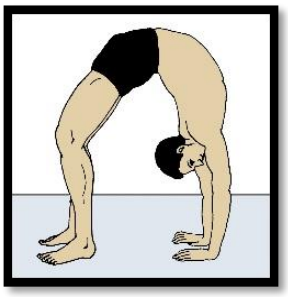
VAJRASANAS (THE THUNDERBOLT POSE)

Vajrasana comes from two Sanskrit word vajra and asana which means the thunder bolt pose.

TECHNIQUE: Sit on the ground, lying the leg straight. Bend the knee's, the foot kept back, & sit on the leg, sole outward, heels should be touched with the hip, palm placed on the knees with spine straight.

Breath in and out. The posture helps the digestive System, and knee problem can be solved.

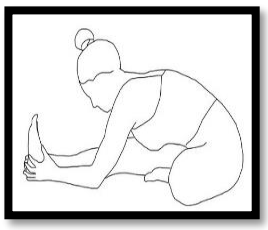
CHAKRASANA (WHEEL POSE)



Full body asana is wheel posture, which is known as chakrasana. The terms चक्र chakra, which means "wheel," and आसन āsana, which means "posture" or "seat," are the source of the word Chakrasana. It has numerous advantages, including cardiac revitalization and improved blood flow to tissues and organs. It also enhances general physical and mental wellbeing, strengthens the spine, and increases flexibility.

TECHNIQUE: Go to supine posture, then keeping the palm on the ground, bent the elbow for support. Bend the knee to raise the body, lift the body up-ward keep the foot little apart. It becomes like arch, hold for 10 seconds. Breathe evenly and maintain the position for a few seconds, then go back to the normal position slowly as before.

JANU SIRSHASAN (HEAD-TO-KNEE POSE)



This full forward fold stretches the entire length of your back, your ankles to your hips, and your side body as well. It helps to stretch body and keep relaxed.

TECHNIQUE:

The participants were instructed to bend their right knee and rest their right foot against their left inner thigh while sitting with their legs extended in front of them. The patient extends their spine, flexes their left foot, presses the top of their thigh downward, and raises their arms to either side of their head as they inhale.

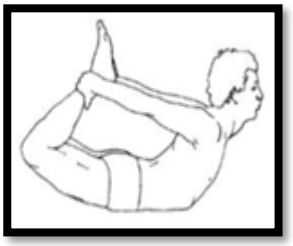
PASCHITTOMASANAS

The back muscles are fully stretched by "Paschimottanasana," also known as the seated forward "bend pose." "Paschima" in Sanskrit means "west" or "back," while "uttana" means "stretch" or "extended."

TECHNIQUE: Students were asked to sit down with your legs stretched, lie side by side and toes point upwards, stretch your lower back & raise your arms, look forward straighten your back & knee the chest & breath-in freely. Slowly bend forward, stretch your crown upward & try not to lose the supporting dynamism of the lower back, leg will not move or tilt. The

moment you notice that you can only bent further by bending the lower back, move your hand to your lower legs, then ankles or feet. Keep the shoulder down, breathe in & out across the entire procedure, Every-time you exhale, bend further towards your legs and stretch out arms forward, slowly raise your upper body, legs lying same. Return back to starting position. Practice of this asana stretches hamstrings, shoulder relieve stress.

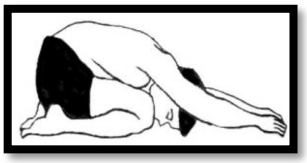
DHANURSANAS (BOW POSITION)



Here, 'Dhanu' means 'bow' and Asana specifies a 'posture'. So, it is 'the Bow Pose'.

TECHNIQUE: Subjects were asked to lie flat on your stomach with your arms stretched on both sides, place your right or left cheek on the floor, bend the knees with the feet-up, hold the ankles close or at the level of buttock. Inhale & straighten up your neck & head, are the entire the body upward, lift the head, chest, thigh off the floor for 5-6 second and exhale & return to the floor smoothly. Now leave the ankles & let the legs gradually return to the floor, bring arm & heads to the floor & relax 6-8 second. Practice activates & strengthen all the major & minor joint of the body, abdominal muscles organs, develops digestive power, removes fat.

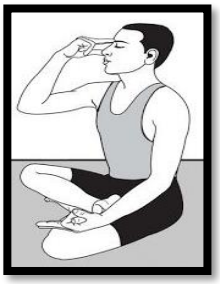
SHASHANKASANA



Hare Pose, also known as Shashankasana, is a meditative yoga pose that represents the tranquil aspects of the moon. By encouraging deep, regular breathing, it stretches the spine, especially the lower back, and fosters calmness and mental clarity.

TECHNIQUE: Subjects were asked to sit in vajra asan and from that initial position bend slowly forward from the abdominal muscles kneeling down, back stretched and both hands slowly parallel on the floor keeping in relax position.

ANULOM-VILOM (BREATHING EXERCISE - ALTERNATE NOSTRIL)



'Anuloma-Viloma' is a simple translation of Sanskrit term Nadi Shodhana.

TECHNIQUE: Subjects were asked to close right nasal with their thumb and breathe in from left nasal cavity. Breathe out of your right nostril

while closing your left nostril with your middle and ring fingers. Inhale deeply via your right nasal cavity now. Close your right nasal cavity now, open your left, and inhale and exhale via your left.

3.9.1(B) PHYSICAL ACTIVITES (RECREATIONAL ACTIVITIES)

In this section, description of recreational activities has been specified.

PHYSICAL EXERCISE (STAND UP & SIT DOWN, SPOT JUMP, PUSH-UP)

TECHNIQUE: Investigator divided the subjects in two groups and asked them to sit down on command of 'Sit down', stand up on the command of 'Stand up', jump on the command of 'Jump' and to do push-up on command of 'Push-Up'. Researcher told the children to perform the activity instantly on the command equitably. One who skipped the command was taken out of the group.

IMPORTANCE: This activity helps to follow instructions, develop the habit of listening to others, create awareness of their surrounding and physically active.

NUMBERING (MINOR GAME)

TECHNIQUE: The researcher has asked the students to make a big circle and instructed that they will continue to count the number on the table of two (2) and while counting they should clap. If the children won't clap or count wrong number, they will be out. The children who will survive at last will be the winner. In this activity the counting can be of any table.

IMPORTANCE: At a basic level, playing a game of numbers helps a child gain an understanding and practice maths, develop quick ability to response, think strategically, involves in adaptive learning and push themselves to cognitive enhancement further.

DUMB SHERAZ (ON GOOD HABITS)

The dumb charades game is an interesting game which is played among teenagers and small children. The children get excited in finding the answers through actions from their representative member.

TECHNIQUE: Researcher had divided the subjects into two groups and asked the children to sit and kept a bowl of chits. From each group one child was called alternatively and asked to pick up a chit and make the action of activity written on it. The children who will go to act

should not open his/her mouth and convey the answer only through actions. There is a particular time provided by the opponent team for the player to act. Each team get 5 chances. So, they send their 5 different members representative each time to act. In each chit one good habit have been written e.g., 'Hand wash before eating', and without uttering any single word the student act accordingly through his action, and the fellow team member had to guess, if the answer is correct, the gets 1 point. Team with maximum point wins the game.

IMPORTANCE: This game provides an opportunity to develop bonding, understanding ability among peer, improves communication, allow concepts and group cohesion.

SINGING (PATRIOTIC SONG)

Researcher chooses three songs which included theme of patriotism as well as entertainment and made all the children learn those songs in proper rhythm.

The song was namely:

1. Hum honge kamyab ek din

2. Sare jahan se acha, Hidustan hamara

3. Itni shakti hame de na data

TECHNIQUE: In this activity, the total students were divided into two teams. Each team gets 4 papers of patriotic song. Then a time was allotted, to prepare the song rthmically in groups and each group presents their performance. Both teams were appreciated, and the researcher made the student understand the importance of the song.

IMPORTANCE: Groups of people singing patriotic songs demonstrate their ardent support and dedication to their own nation. Songs are a universally calming and joyful medium. Performing well for your own nation is encouraged by patriotic songs, which in still a sense of duty and fulfilment in listeners towards society, nation by patriotism. This goes beyond just an emotion.

HIT ON THE CIRCLE

It is a type of recreational activity or a minor game played individually or in teams.

TECHNIQUE: Researcher had made five circles on the wall with score of one to five on each circle. The students were divided into two teams, each child was given 2 chances to hit

on the circle with a small size football and score a point. Therefore, the total score of the team with high numbers decides the winner.

IMPORTANCE: It creates attention; precision sets goals into children's minds, and improves the pattern of thinking, self-esteem and self-reliance, creativity and sense of accomplishment, and fun.

BLIND MAN'S BUFF (MINOR GAME)

The game Blind Man's Buff is played in a roomy setting, such an outdoor plaza, with one player assigned to the role of a blind man.

TECHNIQUE: The researcher asked the samples to stand and scatter everywhere in the hall, try to avoid the children who is blindfolded and ask a child to be blindfolded and gropes around attempting to touch the other children without being able to see them. When the blindfolded child catches someone, the caught child becomes the catcher.

IMPORTANCE: This game is great for helping students develop a feeling of their position in space, develops auditory perception, listening skills, develop habit of following instructions, build teamwork, and gross motor skills.

DANCING

In this activity, few music was played and students are asked to feel free, enjoy the time with everyone.

TECHNIQUE: Investigator asked subjects for line-up and taught some easy steps of dance and got them practice. The researcher did some dance steps on the music, which were then followed by the students. Then the students performed in teams, and they were allowed to do so as their own by incorporating all.

IMPORTANCE: This activity keeps students' fun-filled united, develops group cohesion and develops integrity, trust and loyalty among students.

BLOWING OF BALLOONS

TECHNIQUE: Researcher made the subjects sit in two equal groups and gave each group twenty balloons and asked the children to blow them. The group who will finish blowing the balloons first will be declared winner.

IMPORTANCE: It was an encouragement and motivation of the subject to perform in team helping each other to complete the activity. Moreover, blowing balloons activates the parasympathetic nervous system which reduces heart rate and helps in relaxation of muscles.

MEMORY TEST

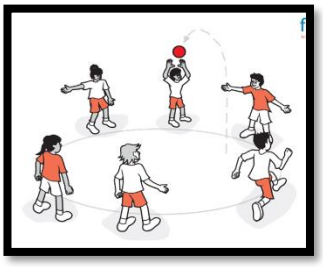
Memory test is an evaluation that assesses a person's memory ability and it is one of the most played, popular and valued game in school, because it finds out the recalling ability and enhance short term memory of the students.

TECHNIQUE: Researcher made the subjects sat in a classroom and kept around 15 stationary items in another classroom (by the side) covered with a cloth until the test starts. Then the students were instructed to go to the other classroom where the item were kept. The cloth was removed for 30 sec, in that meantime they had to remember the items. Then they came back to their places and wrote those items in a piece of paper and submitted. The subjects paper submission was taken in serial order. Hence, the subjects who had written the maximum correct items at the forefront will be declared winner and first, second and third place was given accordingly.

IMPORTANCE: It helps control, evaluate and improve a person's memory. It also expands working memory and access long term memory. The test also provides fun element among students.

CATCHING

The most popular manipulating skill and essential to sports performance is catching (Getchell & Haywood, 2009). The goal of catching is to quickly progress to the next movement by using your hands to intercept an object and trap it against your body or the arm of your opponent.



TECHNIQUE: Researcher asked the subjects to make a big circle and when their names was called, they have to come in the centre of the circle to receive the white ball which was batted at height maintaining precision about the timing, control over the ball. Alternately, the subject's names were called. Each one of the subjects got five chances to receive the ball. Each successive receive get them one point.

IMPORTANCE: It helps build hand-eye coordination and timing skills. Throwing and catching assists with hand-eye coordination and helps to develop fine motor skills by controlling the specific movement.

BOWLING

It is one of the skills in cricket, but here it has been taken in the form of recreational activity with minimum requirement of a tennis ball.

TECHNIQUE: At the basic level the researcher asked the students to line up in a single line. Each one of them gets three chances to bowl over the wicket at a distance of 3 feet. The focus of each child is to hit the wicket. The child who has maximum wicket will be the winner

IMPORTANCE: It improves mental well-being and develops controlling ability to focus on goals while concentrating on the task.

RAM & RAVAN (MINOR GAME)

This is a minor game played among students for fun in two teams. Generally, the name can be change anytime and it requires minimum of 5 members and maximum of 10.

TECHNIQUE: The researcher asked the subjects to make two teams, name each team as 'Ram' and other 'Raven'. Players of both teams stand on their respective line facing each other. When the researcher names a team, opponent team starts attacking by touching and make them out, while the team whose name was not called start running towards their safe zone and vice-versa. The team member who survives till the end, that team will be declared as winner.

IMPORTANCE: This game develops listening, focussing ability, communication of the child, also develops leadership quality, team spirit towards the goal and strong friendship, understanding and adaptation improving overall well-being.

SHUTTLE RACE

The researcher asked the subjects to stand in two lines equal in numbers. A finishing point was marked and five points were marked in between 10 m line.

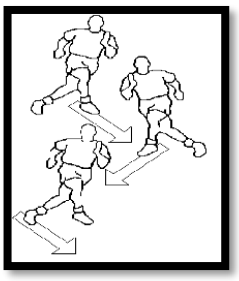
TECHNIQUE: when the researcher whistles, one each member of both groups starts running and they need to touch each marked place and return back to starting point. The child who returned back to starting point at first will be the winner. Like this, all other samples were competed with each other.

IMPORTANCE: It brings entertaining moments among student, develop agility and improves speed, with fixed target approach. Moreover, it creates fun and enjoyment among children while cheering for each other.

ZIGZAG RUN

The researcher asked to stand in two lines equal in numbers. A finishing point was marked and test requires the subjects to run a course around cones in the shortest possible time in Zig-Zag way.

TECHNIQUE: when the researcher whistles, one each member of both groups starts running in zig-zag manner and return back to starting point. The child who returned back to starting point at first will be the winner. Like this, all other children will compete with each other.



IMPORTANCE: It develops agility and brings challenging ability to maintain speed as much as possible while changing direction. Moreover, it creates fun and enjoyment among children while cheering for each other. The researcher also taught the children that though in life we have cross point just like cone points, we should focus on our goal.

SOFT BALL THROW

TECHNIQUE: Researcher made the subjects stand in two teams and provided them a soft ball. then she fixed the target point and asked subjects to hit the target and also told the one, whose ball will not have reached the target will lose the chance and other who will hit the target will have to run behind the ball and get it back, and hand it over to another child. Each child will get three chances with one point score for each proper target. Total points of each member will calculate to declare the winner team.

IMPORTANCE: It improves precision, correctness and develops linear perception to focus on target maintaining the distance. It also creates lively environment in student aspiration.

DRAWING

The researcher asked the subjects to sit and distributed drawing pages, colours and other essential materials among samples.

TECHNIQUE: Researcher asked the students to draw and colour anything they wanted to do. 15 minutes time was given to complete the task. Later, all the paintings were appreciated, encouraged by the class teacher and researcher, and also pasted into classroom.

IMPORTANCE: This activity helps the child to present their imagination into the broadsheet, which implies their mental thought process and they will also be encouraged to practice the activity again.

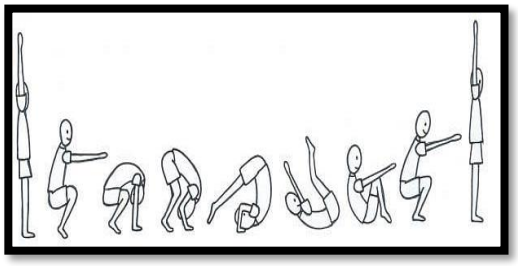
3.9.1(C) PHYSICAL ACTIVITES (GYMNASTICS ACTIVITIES)

In this section, description of gymnastics activities has been specified.

GENERAL WARMING-UP, STRETCHING & LIMBERING MOVEMENTS

It is always necessary to pin point on the session before any activity with a little bit of stretching for flexibility and to avoid injury and limbering movements help in the ranges of movements to prepare for physical exertion.

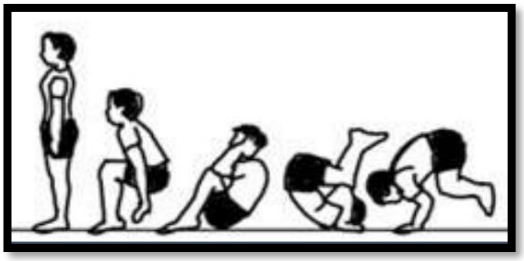
FORWARD ROLL



TECHNIQUE: Firstly, stand straight then bend knees and sit, head will be lock in the middle of the knees with cat posture, chin will touch with neck. Hands on the ground with toe touch heel up, hip will be raised upward then roll forward weight on the neck with help of palm and hands. After that, stand as fast as possible without the support of the hand.

IMPORTANCE: Helps in physical development contributing to overall strength development, also body awareness. Mastering the forward roll helps children become more aware of their bodies in space.

BACKWARD ROLL



TECHNIQUE: Firstly, stand straight then bend knees and sit, head will be lock in the middle of the knees; chin will be near the neck. Hands on the ground with toe touch heel up, hip will be raised with a force to go back and roll over backward, vertebra will touch first, legs remain bended, and then stand straight without any support. All the postures were done very smoothly.

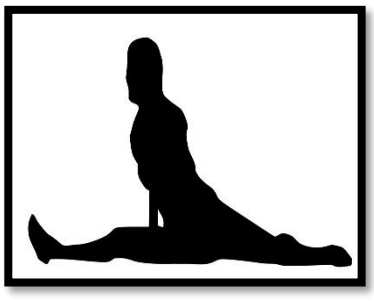
IMPORTANCE: It helps students to be aware of fall by providing students with an atmosphere that inspires concentration, challenge and creativity, and helps stimulate minds.

SIDE ROLL

TECHNIQUE: Firstly, stand straight then bend and hold the knees tightly with both hands crossed and sit head will be lock in the middle of the knees; chin will be near the neck. Hands on the ground with toe touch with a force to go side and roll over sideward on the shoulders with legs remain bended.

IMPORTANCE: It is a great way to stretch your back and lower back and it helps to mobilise the spine for movement. It gives a challenge to overcome the barriers without any support, holding their knees.

SPLIT SITTING



TECHNIQUE: Firstly, stand straight then slowly apart the legs as much as possible. Balance will be equal on both the legs and then sit while joining the hands together, if needed hand support with the ground may be taken.

IMPORTANCE: It leads to notable improvements in your flexibility, mobility, range of motion, posture, and provide mental benefit of happiness, self-fulfilment, emotional regulation, and achievement satisfaction.

T-BALANCE

TECHNIQUE: Firstly, stand straight then slowly bend from waist and stand on your strongest leg with full body weight on the single leg while in bend position. Both the hands were by the side of the body. Look straight and keep fingers tightly to maintain balance.

IMPORTANCE: Enhances muscle strength and joint support, coordination, body awareness, and fall prevention.

V-BALANCE

TECHNIQUE: Firstly, sit parallel to the ground keeping both legs straight and hands on the legs. Hold the big finger of the toe and raise the legs upward by balancing on the hip, while move the vertebrae back by giving balance. Lift the legs with hands straight, pull down the head and remain in the posture for 10 sec then slowly come back to the relax position or initial position.

IMPORTANCE: Helps to strengthen core, lower extremity, control body balance improve concentration, enhanced mental focus, stress reduction.

KNEE BALANCE

TECHNIQUE: Firstly, sit on the ground, then turn opposite and put weight on both knees. After that, stand on one knee and is made straight in the air pointed the toe with the help of hands on the ground. Raise head, look straight and hands by the side of the body in the air.

IMPORTANCE: Body awareness, fall prevention, increased muscular strength, joint support, improves concentration, focus and coordination.

FROG BALANCE

TECHNIQUE: Firstly, stand straight then bend, keep the palm of the hands on the ground near shoulder line. Bend and place knee locking and laid the weight near the elbow. Look straight maintain and control balance for 10 seconds.

IMPORTANCE: It helps to strengthen the core, improves balance, weight management, improve focus and concentration.

SHOULDER STAND

TECHNIQUE: Firstly, lay down flat in supine position on the ground gradually elevate upright both the legs firmly press against the chest. Breathe slowly concentrating on the activity because it requires attention. It is more like sarvangasan.

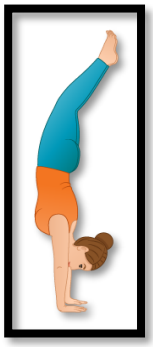
IMPORTANCE: It improved mental wellness, skin health, flexibility. It stimulates the throat chakra which directs communication and self-expression.

WALL BALANCE

TECHNIQUE: Firstly, stand straight then put both hands on the ground, together lifting the legs one by one or together straight up vertically in the air with the help of wall. Head will remain balanced within both shoulders and both legs were kept on the wall. Hold the position for 15 sec then come back to starting phase and stand straight.

IMPORTANCE: A wall acts as an excellent tool for alignment, helping correct posture. Enhances balance, leaning against the wall targets stabilizing core muscles, thereby improving balance, and focus on set goal.

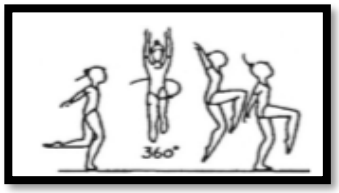
HAND STAND



TECHNIQUE: Firstly, stand straight then put both hands on the ground, together lifting the legs one by one or together straight up vertically in the air. Head will remain balanced within both shoulders. Hold the position for 15 sec then come back to starting phase and remain stand straight.

IMPORTANCE: Practice of handstands are a great way to relieve stress and anxiety because it forces to maintain balance and concentrate which can help clear mind. Practise of handstands may help lower stress.

CAT LEAP



TECHNIQUE: Firstly, stand straight in one leg by rising the heels then leap and put one leg by bending in the corner of the other leg thigh, with 360^0 turns with both hands straight in the air by the side of the body and look forward.

IMPORTANCE: Practice of car leap encourages positive feeling in the body, which can have a positive impact on happiness and mental wellbeing. Practice of this activity contest the feelings of anxiety and depression.

CARTWHEEL

TECHNIQUE: Firstly, stand straight then put left leg and left shoulder in front of the body (sideward) and both one by one over the head very quickly bend on the ground like a wheel with about $1^1/_2$ feet difference and same will be done with right hand with a certain distance, body will remain straight with the fall and head move or go with the body. Cartwheel has four postures; hand-hand-leg-leg.

IMPORTANCE: It helps to strengthen the stability, improves readiness. The rotational movement bring flexibility and build self-assurance.

ARCHING

TECHNIQUE: Firstly, stand straight with a gap between the legs at the level of the shoulder, and then bend backward down from trunk with both hands over the head backward, palm facing the sky and touch the ground. Both knees will bend and support the body to go down, the head from neck bend down and look up. Both the fingers of the hand were attached together and fingers of the foot remain outside.

IMPORTANCE: It can improve flexibility, strengthen core muscles, and promote spinal health, relieve stiffness and reduce tension from the body.

3.9.2 BEHAVIOURAL THERAPY TECHNIQUES:

In this section, description of behaviour therapy has been specified.

ACTIVITY THROUGH APPRAISAL

TECHNIQUE: The researcher asked three students to sit in three different rooms, with an A4 size paper, Pencil, eraser, Colour box separately. Each child was given 15-20 min times to draw and colour anything of their own. Out of the 3 Students, one student was given positive appraisal (given by the researcher) continuously during the drawing. Second child was given negative appraisal (by the counsellor ma'am) and thirdly, the 3rd child did not get any appraisal. After the completion, the students were called to sit with counsellor ma'am.

IMPORTANCE: It helps to understand the abilities, interest and personalities of the child. It also helps to predict the child psychology, understanding the strengths and weaknesses of the child.

SOCIAL SKILL TRAINING

TECHNIQUE: The psychologist had a general interaction with the students. Then the drawings were shown and they were asked to choose the best among them. The counsellor found a peer relationship or interpersonal among them. But few students have their own opinion and dissimilarity which shows social bonding was missing among them. Then they were asked about the feeling while drawing, when they were constantly receiving negative and positive appraisal about his drawing, what was hurtful, what they did not like, how he felt during the time of negative and positive appraisal, how the positive appraisal motivated them to draw more better and beautiful picture.

It was also explained to the subjects about the positive aspect of social aspect, motivation which should keep continues throughout their school days and life. Hence social skill training plays a very important role to bring light to the thought process of subject attachment.

IMPORTANCE: The decision of the students about the drawing shows similarity and clarity about the drawing which shows social bounding among the student. Through S.S.T, subjects learn self-control, learn interpersonal skills. The students expressed their feeling of bad angered, confusion, frustration when received negative appraisal and encouragement, enthusiasm, aspiration when received positive appraisal.

SHAPING AND TOKEN ECONOMY

TECHNIQUE: It was explained to the subjects of controlling anger, angered by not feeling bad but to embrace with patience, a negative thought with anger will serve bad effect to our

lives, to our health in that case we should use those thing which is not harmful like to drink water or to play and hit football on the wall, or bounce ball, play with the ball to control our anger, moreover wait for a while to hold anger without speaking anything to others and this techniques will definitely benefit them in their lives.

IMPORTANCE: It helps in positive reinforcement to encourage desired behaviour and discourage problematic ones; it also offers therapeutic settings with many advantages, help children to visualize progress, learn to self-monitor and to regulate behaviour.

ROLE PLAY

TECHNIQUE: The total students (15) were divided into two groups of 7 & 8 students. Firstly, a group was called and then the researcher narrated structured role play to the students. Each child got a character and it was told by the researches "that" it was upon them, to act and behave to express their own behaviour.

The topic was "classroom situation", a trail play was done to make the subjects understand the theme. Each one of the characters was played by the students himself. Some of them were little worried, some were laughing, some are confident. After the trial play, students became very confident, they were happy and excited and the researcher also guided whenever require. When the play was finally done, they were asked about the experience while playing the character as well as the experience of role play, moreover what they learned about the character.

The researcher under the supervision explained how they should behave inside the classroom, with senior and other people, which behaviour should be appreciated and how they inculcate in their daily life. The students were also asked, if they had any query anything that they want to know to understand. students must feel free about themselves, about what they have learned, how they conduct and open up to certain things.

IMPORTANCE: Role play gave chance to showcase ability, to develop his leadership quality, register behaviour in the class, develop behaviour pattern, learn to navigate social situations, group cohesiveness, anticipate consequences and finding solutions to problems which come out and make sense of real-life situations, to explore, investigate and experiment various experiences.

BEHAVIOUR MANAGEMENT

TECHNIQUE: It was explained to the students about the different ways to the handle situation of anger, a fight with siblings and advised to be polite with their siblings and with others. Politeness or anything which will be said with love, will be heard more and understood more than anything said with negativity so with parents, friends, siblings one should be polite. The students made to understand the importance of coping with understanding the behaviour of their own and others. The also showed interest in sharing thoughts and opened up with their issues, about their family, their past behaviour, and shared many situations that took place. Therefore, the behaviour of the subjects was addressed and managed accordingly.

IMPORTANCE: It focuses on maintaining positive habits and behaviours and reduce negative ones, build relationship, create positive learning environment, helps dealing in poor and disruptive behaviour, and promotes pro-social behaviours.

COLLAGE MAKING

It is a collage of a simple craft activity that involves pasting items paper, photographs, leave, cottons on a sheet of paper. For collage making, stationaries item like gum, coloured paper, sketch etc. were shown to the students. The coloured paper was teared into very small pieces by the children without using any kind of sharp materials. Small groups were made with 3-4 subjects in each group. Two different sketches were given to each group.

One group had a sketch where few students were playing into the garden, boys and girls together without any garden discrimination as well as plantation were done in the garden area by two children, other children were playing and adoring on a see-saw. The park garden had an open space greenery environment with free-soul, joy and happiness.

The second groups had a sketch where a family enjoying inside a garden having food playing football mother watching the scenery with younger child, father was playing with the other children one boy and one girl without any difference in playing football with daughter and son. The scenario represents love, happiness, care, towards each other in the family by spending quality time with dear ones.

TECHNIQUE: The researcher asked the subjects to participate in the activity of collage making and everyone should cooperate with each other, without any hesitation, discuss with one another and enjoy within the groups. The selection of colour appropriate place, design, everything was discussed among them and they decide what to do. In between the session, the researcher and the counsellor provided positive reinforcement, encourage during their work and understanding of the concept of the activity and assisted them accordingly. 30 min time was allotted to the group to finish. Now the researcher asked the children about their experiences, expectation and what they learned from the collage making, each student had their own opinion and justified the work how they perceive the things for better understanding and control, each one of them were separately asked about their feeling and what they learned from the group activity. The researcher explained the need of group activity, the important of working together, the importance of each two sketch which represents their real-life situation.

IMPORTANCE: Collage making develops the interpersonal relationship, peer-group relation and social development as they share materials and tools. It helps child to concentrate, build fine motors skill, develop child awareness of colour and texture, learn the skills such as giving, sticking, taping, tearing, etc. They become creative and learn about design, pattern making, dimension and composition. They learn to develop their own ideas by talking and discussing things. They develop the habit of talking and listening to them. The guidance and supervision were very important as each child feels good about their work when they were praised and this give them confidence, encouragement to finish their work neatly.

PARENTS COUNSELLING

Parents were already informed about the meeting over phone to come for counselling with the counsellor.

TECHNIQUE: It started with a general introduction. The parents were asked that the child have any problem at home or any anger issues and defines the boy mindful and sharp mind but parents reported and complaint many problems like ill-mannered behaviour of taking money without asking, fight with mother, anger issue at home and does not listen to anything or their stubbornness and after many other conversations, following are advised.

Parents and the child should not fight, the child must be asked about any problem, he has been facing & parents should never fight in front of children, their friend’s group must be

checked and keep on checking the group activity, parents may allow children to buy anything of their choice, if given money and advice child to take healthy food always, parents should encourage the child to recitation, drawing etc. anything they love or like, they should be taught to choose the correct characteristics, behaviour pattern. The child must have idea to understand the wrong and right pattern of behaviour. It was also advised to keep check or monitor for 1 week after the instruction given by and then after 1 week.

IMPORTANCE: It helps parents to improve their relationship with their child, gain effective parenting skills, gain better understanding of their child's needs at each developmental stage and learn how to support, inculcate and comfort their child.

GROUP ACTIVITY:

TECHNIQUE: The subjects were asked to bring stationary items from their home and it will be shared in their group activity. They were divided into small groups. Then the researcher asked them to draw and paint of their own discussing the topic among themselves by using the items shared among them. They were given 25 minutes time to finish the task. Later, it was asked to them, to describe their topics and what thoughts drawn them to draw the particular painting.

IMPORTANCE: It provides a more diverse perspective, develops better communication, encourage creativity, accountability, develop confidence and problem-solving skills. Moreover, group activity provides opportunities to every child to participate.

HOME TASK

TECHNIQUE: In home task session, students were individually called and the researcher had a general discussion about how they are feeling, how their study was going etc. when the child become familiar and discussed about their feeling, academics or anything they want to share. Then the researcher asked the subjects for some home tasks of performing and writing five good habits that students will do of their own and then write it down in their copy. The good habits may be anything like helping people, performing social activities, helping out-mother in the kitchen, good behaviour in peer-group, respect people etc. Therefore, in next session, it will be discussed.

IMPORTANCE: Chores help teach life skills, promote independence, sense of responsibility, build strong work ethics, boost self-esteem, promotes gender equity.

GROUP COUNSELLING

TECHNIQUE: In this session, five subjects were called in groups so that they can be asked about their task and quality advice will be given properly. It was asked to them one by one about their home task which was given. They found it very excited and they themselves pointed out the task which they did and was eager to share. Listening to each other practical tasks, they were surprised, happy that their friends are really nice, even the child approached the other child about the importance and necessity of the good work. After listening to the good works, practical involvement, good morals, purity of heart among the students, techniques of token of economy and shaping was used, so that the child will have a of impact positive reinforcement to do better in the coming future. Child behaviour will be rewarded, once they push or think themself to act accordingly, have good principles to inculcate in the society. The researcher praised, encouraged the child to continue to keep up the good work in the coming future.

The Researcher used the skill of shaping in group counselling where the desired behaviour of the child was expected and makes the child understand that the successive act or behaviour each time the child does, will always give him a good approach and step by step this behaviour will give him a good pathway, and he should continue following the habits. Shaping can help the child to have obedience behaviours. Therefore, all the samples were called in groups and the same process as well as the interaction was made with the subjects.

IMPORTANCE: It facilitates giving and receiving support, including the opportunity to develop both socialization and communication skills. It develops sensibility among peer by creating an environment of input and empathetic.

FOLLOW-UP WITH PARENTS

TECHNIQUE: The researcher, after a week, follow-up the session with the parents of each child. The researcher asked about the child's behaviour, their involvement in family, relationships with siblings, peer group relationships, behaviour in the classroom, any complain from school etc. Many parents had reported with good habits of the child, anger management, self-control, understanding behaviour of the child, listening attitude, creative ideas have increased in the child, moreover they reported of becoming more patience than before.

The Researcher also discussed the idea of parents Counselling and what was told to them (parents) should continue to get a desired behaviour, good academics of the child with sound knowledge of everything around them. The Researcher praised the parents that their work will embrace the child's future and this will help the children to be more goal oriented in the future. Their intelligence will showcase their talents, bit when they give their efforts in building up the future of the child without any behavioural problem.

IMPORTANCE: Follow-up counselling makes it possible for such problems to be addressed and effectively dealt with as they continue to arise. It acts as a support during the transition from a therapeutic setup to the external world. It lessens the likelihood of relapse, enabling the client to talk about any concerns that are coming up as they work to integrate the new discoveries.

3.9.3 PHYSICAL ACTIVITY & BEHAVIOURAL THERAPY TECHNIQUE

The description of the modules program of physical activity and behavioural therapy were already described above.

3.10 CONTROL GROUP

No intervention was given to control group but the children of this group used to do school and home activities.

3.11 TOOLS USED:

The tool used for the current research has been specified.

i. Strengths and Difficulties Questionnaire (SDQ) - **Robert N. Goodman (1997)**
ii. State-Trait Anxiety Inventory for Children (STAIC) - **Chales D. Spielberger (1973)**
iii. Nonsense Syllables for Memory Span **(**Ebbinghaus, 1885) - **H. R. Psyche & Scientific Co. Bangladesh**
iv. Muller-Lyer Illusion for Linear Perception (Franz Carl Muller-Lyer, 1889) - **H. R. Psyche & Scientific Co. Bangladesh**

3.12 DEVELOPMENT OF TOOL

3.12.1 Strength and Difficulty Questionnaire (SDQ)

For the adaptation and moderation of questionnaire on behavioural problems, backward forward method of translation has been used. The steps are:

i. Firstly, the Strength and Difficulty Questionnaire (SDQ) has been translated in Hindi by two Hindi moderator (specialized in Hindi and English), separately and in Bengali by two Bengali moderator (specialized in Bengali and English), separately.

ii. Secondly, 3rd Hindi moderator has combined the two separate Hindi questionnaires into one questionnaire, given by 1st and 2nd moderator. Similarly, 3rd Bengali moderator has combined the two separate Bengali questionnaires into one questionnaire, given by 1st and 2nd moderator.

iii. Thirdly, 4th moderator specialized in Hindi and English has translated the Hindi version of questionnaire into English. Similarly, 4th moderator specialized in Bengali and English has translated the Bengali version of questionnaire into English language.

iv. Fourthly, 5th moderator had completed the moderation by comparing the original English questionnaire with the new English version.

v. Data were collected from 500 students for statistical analysis and norm establishment.

vi. Split half reliability was calculated and the reliability value is 0.67

vii. Item validity was established through Item-Total correlation and those items were retained the correlation of which were over 0.6.

3.12.1.1 Description of SDQ

In order to measure psychological adjustment in children and identify any emotional or behavioural issues, the Strengths and Difficulties Questionnaire (SDQ) is a quick, 25-item screening instrument for teens and young people aged 4 to 17 years The first 25 items in the SDQ comprise a total of 25 questions of 5 gages of 5 issues each, namely Emotional, Conduct, Hyperactivity, Peer, and Pro-social.

3.12.1.2 Administration and Procedure

i. To run the test and to collect the data, the forms were given to the subjects and researcher has given the instructions regarding the items. So that all the instruction was properly heard by the children.

ii. The children were also assisted if they needed guidance to answer the statements.

iii. There is a minimal amount of time required to respond to only 25 items; therefore, there was no time limit imposed on the children.

3.12.1.3 Scoring: The scoring was validated by 3-point scale, which is 0, 1, 2 with change of score in five reverse items. In view of the total scores of gages assess the total difficulties of the child.

3.12.2 State-Trait Anxiety Inventory for Children (STAIC)

For adaptation and moderation of questionnaire, backward forward method of translation has been used. The steps are:

i. Firstly, the state-trait anxiety questionnaire for children comprises of two parts, i.e. **S-anxiety (C1) and T-anxiety (C2)** has been translated in Hindi by two Hindi moderator (specialized in Hindi and English), separately.
ii. Secondly, 3rd Hindi moderator has combined the two separate Hindi questionnaires into one questionnaire, given by 1st and 2nd moderator.
iii. Thirdly, 4th moderator specialized in Hindi and English has translated the Hindi version of questionnaire into English.
iv. Fourthly, 5th moderator has completed the moderation by comparing the original English questionnaire with the new English version.
v. Data collected from 60 students and Reliability, Validity and Norm were established
vi. Split half reliability was calculated and the reliability value is 0.52
vii. Item validity was established through Item-Total correlation and those items were retained the correlation of which were over 0.5.

3.12.2.1Description of STAIC

i. The inventory has two separate test forms of 20 statements each (C-1) and (C-2) ask students about their general and current feelings in terms of state and trait anxiety.
ii. In overall, students who are higher in T-Anxiety experience S-Anxiety elevations more frequently and with greater intensity than low T-Anxiety children because they perceive a wider range of situations as risky or threatening. (**Charles D Spielberger, Mind Garden, Inc, 2010), (Mental Health National Outcomes and Casemix Collection)**.

3.12.2.2 Administration and Procedure of State-Trait Anxiety Inventory (STAIC):

i. To collect the data, the forms were given to groups and the researcher has made specified instructions regarding Form C1 and C2. So that all the instruction was properly heard completed within 10 minutes.
ii. Disparity in instructions between the two sections of the inventory is something that the subjects always be aware of.

3.12.2.3 Scoring:

The scoring was validated by 3-point scale, with 0, 1, 2 value for both forms with change of score in ten items in C-1 form. In view of the total scores of items assess the score separately for two test forms.

3.12.3 Nonsense Syllables for Memory Span

The nonsense syllables were initially introduced by German psychologist Ebbinghaus as a learning tool to assess memory ability. Nonsense syllables were employed in order to reduce the impact of association during the memory process. Since the Nonsense Syllables method was used with simple English letters and it was easily understood by the samples, so it was not required to translate the syllables in Hindi letters.

3.12.3.1 Description of the Test

The nonsense syllables were used for cognitive assessment, which measures short-term memory, attention, executive functions. The tool has two sides of table with syllables. Commonly used erection in consonant-vowel, such as “pim”, “dab” etc.

3.12.3.2 Administration and Procedure of the Test

The researcher had a series of nonsense syllables on two tables (both side of the tool) and exposed to the subjects for just a thirtieth of a second at two different times. Then by dragging vertically each syllable, the subjects had to memorise and write those nonsense syllables shown to them immediately after the tenth syllable on a paper already provided to them. Once table A was shown and the subjects submitted the paper, similarly table B was shown to them. Later, 2nd paper was collected. They had to submit the paper, once they cannot recall anymore.

3.12.3.3 Scoring:

Average of correct syllables of the two tables was interpreted as the score.

3.12.3.4 Reliability and Validity:

The validity of the tool was standardized and referred by H. R. Psyche & Scientific Co. Bangladesh. The forward digit recall, backward digit recall, and nonsense syllable repetition tests had higher correlation coefficient was over 0.60.

3.12.4 Muller-Lyer Illusion

In Muller Lyer Illusion method, set of lines was used to interpret the cognitive and visual perception, accurately defining length of the lines is wedged by the arrowheads' route. So, it was easily identified and understood by the samples and there was no need of translations.

3.12.4.1 Description of Muller-Lyer Illusion Test

The most well-known version of the tool consists of two equivalent outlines of 16 cm. The line with the arrows pointing inward looks to be much longer than the other when comparing the two. In some variations, an arrow of each kind is placed at the end of a single line. The observer frequently finds themselves off to one side when attempting to locate the line's centre point.

3.12.4.2 Administration and Procedure of Muller-Lyer Illusion Test

The researcher asked the children to come and sit one by one. The Muller-Lyer test was handled by the researcher and then one child was asked to keep eyes on adjusted level. One researcher starts increasing or decreasing the length and the child was not allowed to go to the opposite direction. Then the child wherever found the mid-point level says to stop and that point was noted. Hence, five chances were given to each child.

3.12.4.3 Scoring of Muller-Lyer Illusion Test

The illusion was seen to increase with the difference in length between the line you matched to the experimental stimuli and the line you matched to the control stimuli. This illusion score enabled to test predictions from the hypothesis (**The Mind Project).** The average of total chances was calculated and interpreted as the score.

3.12.4.4 Reliability and Validity

The standardized tool was referred from H. R. Psyche & Scientific Co. Bangladesh. The average fractional mix-up of line section length for the Muller-Lyer illusion reached from 1.4% to 20.3%.

3.13 Report Card for Academic Performance

School report card was used and assessed to evaluate the academic performance of the children.

3.13.1 Description of Academic Performance:

Academic Performance in general or academic achievement referred to the measures of student performance across various academic subjects, test taken through summative examinations. The academic performance can relate to a single topic or the cumulative score across multiple disciplines through quantitative assessment.

3.13.2 Administration of Academic Performance:

The subjects were asked to submit the photo copy of their previous result of the school, before the intervention and also the photo copy of their result after the intervention activity.

3.13.3 Interpretation of Academic Performance:

The marks of the children were taken into consideration to evaluate the performance in academics and the total marks was 500 divided by five main subjects, interpreted in percentage was used for evaluation.

3.13.4 Importance of Academic Performance:

Academic Performance is the competence, that the students display in school subjects in which they received instructions. It plays a vibrant role in the fulfilment of the harmonious progress of the child which leads to have better education in the society.

3.14 STATISTICAL ANALYSIS:

After the collection of data, it was tabulated considering the objectives of the study and was analysed statistically. Since the study employed experimental with longitudinal and time series design for the four groups namely, physical activity group, behavioural therapy

technique group, physical activity-behavioural therapy technique group and control group was used. To acquire empirical validation for the suggested study, the raw data was analysed and subjected to various tests, including descriptive tests, paired t-tests, repeated measures analysis of variance, and post-hoc analyses (Kramer, Tukey HSD). The 0.05 significance level chosen for the test. A statistical analysis of statistics kingdom (online) was used to calculate and interpret the data. The interpretation was also pictorially presented through bar diagrams.

CHAPTER- IV

RESULTS, INTERPRETATION & DISCUSSION

4.1 The Data

4.2 Data presentation

4.2.1 Presentation of Data before Experiment against different variables for Cont. & Exp Group (Homogeneity Test)

4.3 Presentation of Pre & Post Data against different variables Cont. & Exp. Groups

4.4 Presentation of Data, against different variables of Exp. groups separately to see the effect of intervention Session-wise

4.5 Presentation of Post-Test of Data against different variables of Cont. & Exp. Groups

4.6 The Results

4.7 Testing of Hypotheses

4.8 Discussion of Results

CHAPTER- IV

PRESENTATION OF DATA, RESULTS, INTERPRETATION AND DISCUSSION

The current study's results were reported in this chapter after being assimilated using the method defined in chapter III. The collected data of control group and experimental groups prior and after the therapeutic intervention on the variables were statistically analysed by using the appropriate method has been presented in the following tables, and the results were then interpreted in light of the knowledge already known and the hypothesis was put out.

4.1. THE DATA

Sixty (60) boys were selected for these research studies, who were 11^{+} to 13^{+} years of age. In the present research, the data of dependent variables which includes Anxiety, Memory Span, Linear Perception, Academic Performance, and different components of Behavioural Problem were presented. The scores of descriptives statistics were also specified under variables were given under specified section.

4.2 DATA PRESENTATION:

Collected figures have been obtainable along statistical analysis and interpretation. For better understanding the data have been presented in different sequential section with graphical representation in different figures and tables.

4.2.1 Presentation of Data Before Experiment Against Different Variables for Control and Experiment Group

To find out the homogeneity among groups according to dependent variables, Shapiro-Wilk test & ANOVA was done.

Table 8: Presentation of Homogeneity Test of Dependent Variables

Variables	CG	PA	BT	PABT	W	p-value
	Mean and Sd	Mean and Sd	Mean and Sd	Mean and Sd		
State Anxiety	34.13 ±4.02	34.8±5.94	36.07±5.13	31.33±4.14	.94	.894
Trait Anxiety	39.2±6.74	40.73±6.26	40.2±5.32	38.33±5.52	.97	.990
Memory Span	0.87±0.58	0.77±0.56	0.7±4.9	1.53±1.06	.79	.137
Linear Perception	8.99±0.94	7.79±1.00	8.14±1.04	8.03±0.86	.87	.398
Academic Performance	245.87±88.41	237.13±74.42	171.33±56.00	205.4±88.80	.93	.805
Emotional Problem	4.67±1.35	5.07±1.91	5.07±1.22	5.53±1.30	.94	.891
Conduct Problem	4.47±1.36	4.07±1.16	3.8±2.65	3.93±2.02	.93	.794
Hyperactivity Problem	4.8±1.86	3.67±1.45	3.6±1.80	3.27±1.62	.85	.305
Peer-Problem	2.67±1.54	3.4±1.76	3.73±1.58	3.47±1.68	.88	.493
Total Difficulty	16.6±3.25	16.2±3.34	16.27±4.96	16.27±2.40	.78	.119
Pro-social Behaviour	8±1.89	7.67±1.91	8.2±1.70	7.13±2.36	.95	.947

In table 8, the variables were homogeneous and all samples for all the dependent variables were equally distributed among Control Group and Experimental Groups. So parametric statistics were used. The graphical representation of homogeneity Test was presented in **figure no.2(i) & figure 2(ii)**

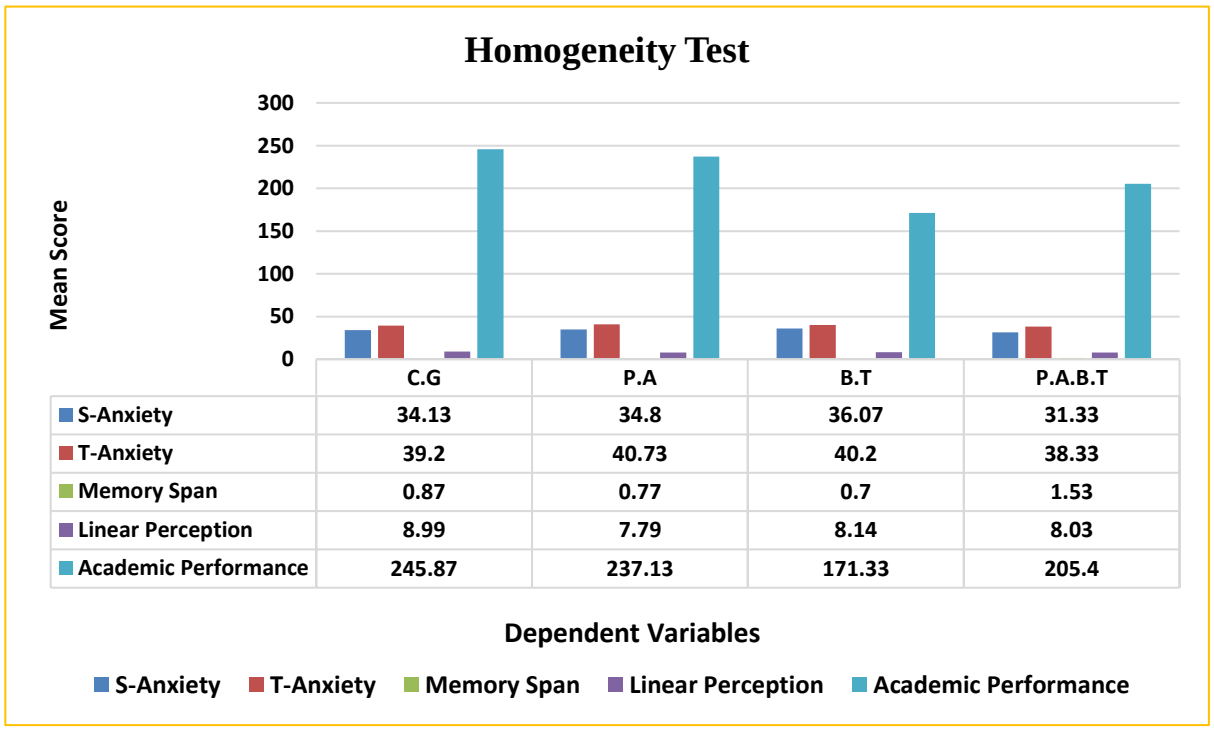
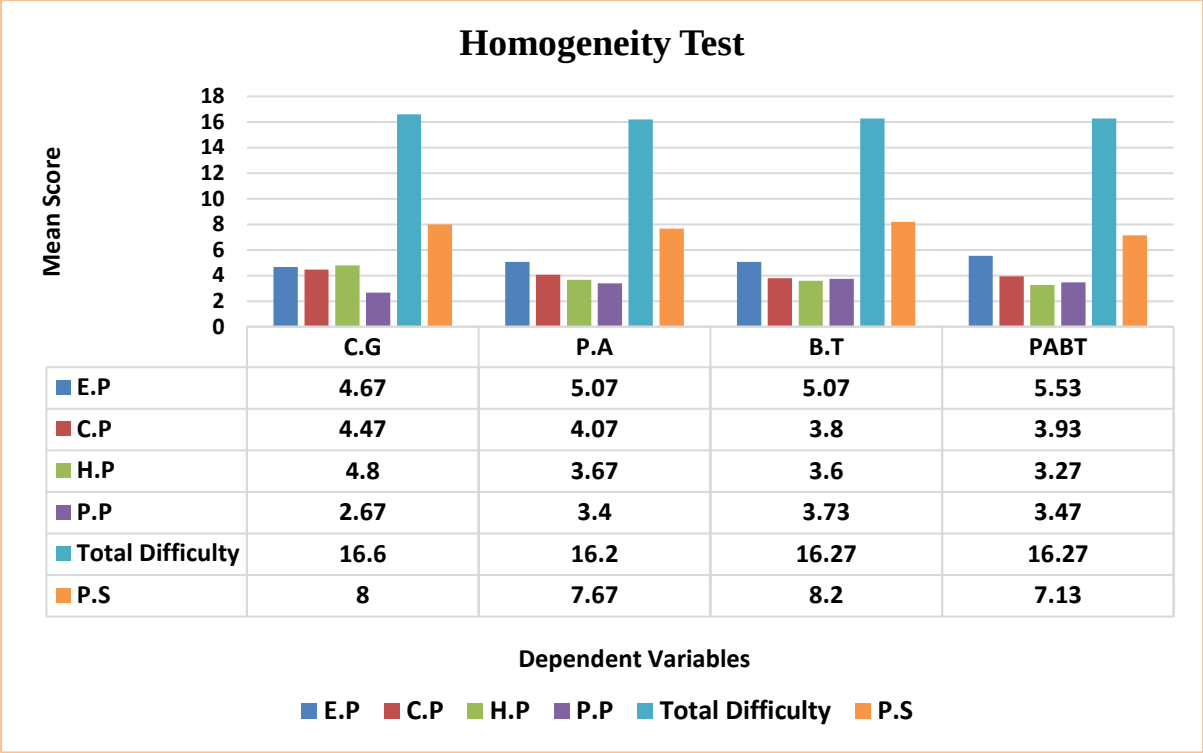


Fig no.2(i) Homogeneity Test among Groups

In Figure 2(i) showed that the mean value of dependent variables (State Anxiety, Trait Anxiety, Memory Span, Linear Perception, Academic Performance) was normally distributed among the four groups (CG, PAG, BTG, PABTG).



	C.G	P.A	B.T	PABT
E.P	4.67	5.07	5.07	5.53
C.P	4.47	4.07	3.8	3.93
H.P	4.8	3.67	3.6	3.27
P.P	2.67	3.4	3.73	3.47
Total Difficulty	16.6	16.2	16.27	16.27
P.S	8	7.67	8.2	7.13

Fig no.2(ii) Homogeneity Test among Groups

In Figure 2(ii) showed that the mean value of dependent variables (Emotional Problem- **E.P**, Conduct Problem- **C.P**. Hyperactivity Problem- **H.P**, Peer-Problem- **P.P**, Total Difficulty in behavioural problem and Pro-social Behaviour- **P.S**) was normally distributed among the four groups (CG, PAG, BTG, PABTG).

4.3 Presentation of Pre and Post data against different variables of Control and Experiment Groups separately to see the effect of each intervention (PAG, BTG, PABTG):

4.3.1 PHYSICAL ACTIVITY GROUP:

In this section, comparison between pre-post data against dependent variables with the effect of Physical Activity intervention has been presented below and the p-value with the red colour designating a non-significant value.

Table-9: Comparison between pre & post-test of State Anxiety of Physical Activity Group (Experimental Group)

STATE ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	34.8	±5.9	14	-3.19	<.001
Post- Test		28.93	±4.3			

***Table value=2.14 *Significance Level at 0.05**

Table- 9 displays the pre-test mean and standard deviation score as 34.8 and ±5.9, however post-test was 28.93 and ±4.3 respectively, which indicated that intervention program helped subjects to evolve from the feeling of apprehension, the activities help to manage and build self-esteem. Since the obtained t-value (-3.19) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. This shows that physical activity intervention was substantial in dipping the state anxiety of boys. The bar illustration in terms State Anxiety was presented in figure no.3

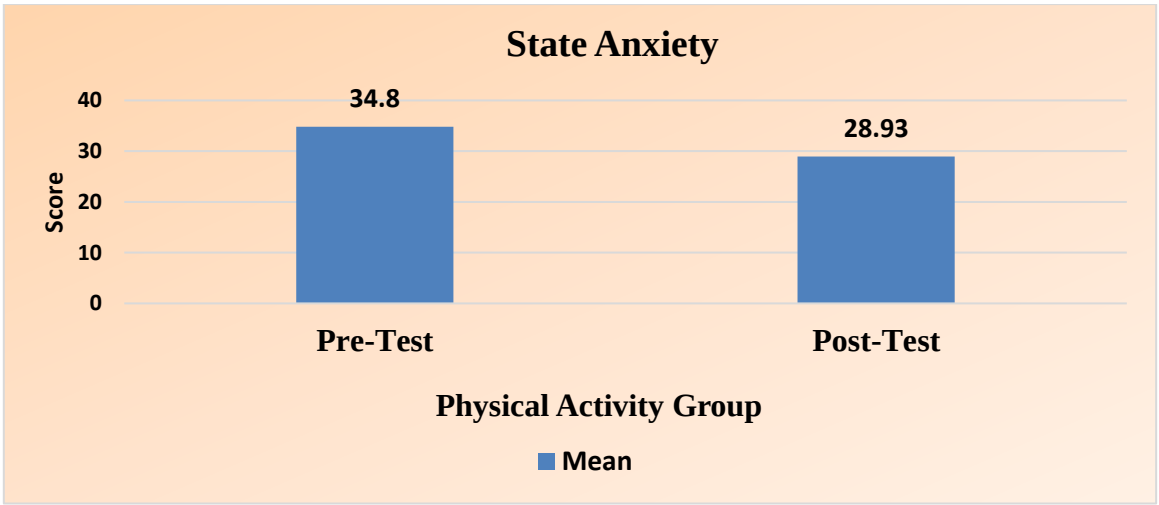


Fig no.3 State Anxiety of Physical Activity Group

In Figure 3 showed that the mean value of Post-test (28.93) was lower than to pre-test (34.8) which indicates that physical activity intervention was effective in terms of state anxiety.

Table- 10: Comparison between pre & post-test of Trait Anxiety of Physical Activity Group (Experimental Group)

TRAIT ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	40.7	±6.3	14	-5.86	<.001
Post- Test		32.3	±4.3			

***Table value=2.14 *Significance Level at 0.05**

Table- 10 displays the pre-test mean and standard deviation score as 40.7 and ±6.3, however post-test was 32.3 and ±4.3 respectively, which indicated that programs bought stable tendency, thinking pattern, helps to provide positivity, change their personality dimension through participation in physical activity. Since the obtained t-value (-5.86) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. The bar illustration in terms Trait Anxiety was presented in figure no.4

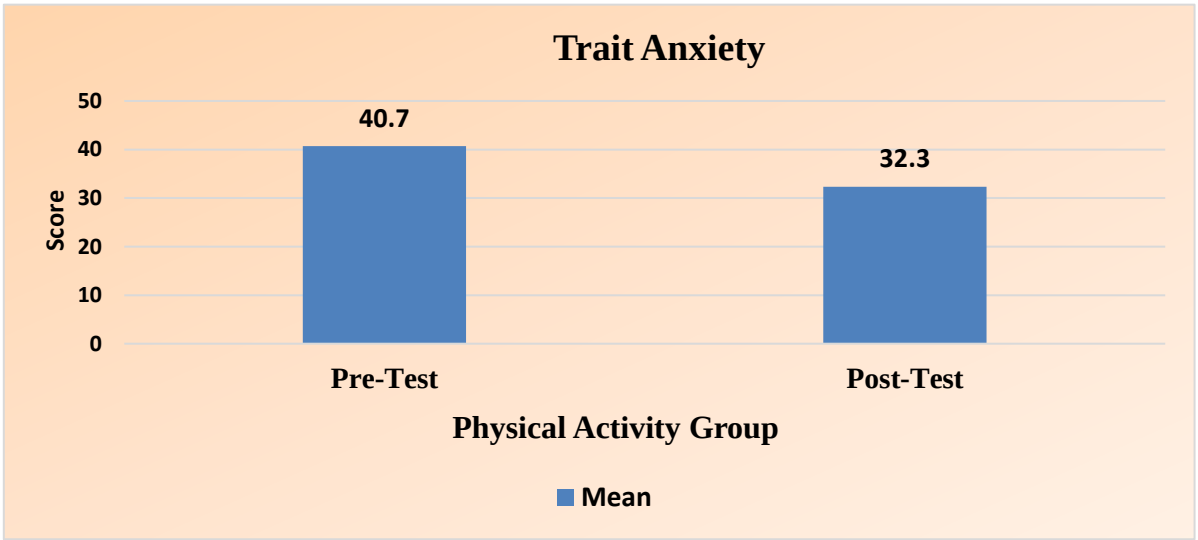


Fig no. 4 Trait Anxiety of Physical Activity Group

In Figure 4 showed that the mean value of Post-test (32.3) was lower than to pre-test (40.7) which indicates that physical activity intervention was effective in terms of trait anxiety.

Table- 11: Comparison between pre & post-test of Memory Span of Physical Activity Group (Experimental Group)

MEMORY SPAN						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	0.8	±0.6	14	-6.1	<.001
Post- Test		2.2	±0.9			

***Table value=2.14 *Significance Level at 0.05**

Table- 11 displays the pre-test mean and standard deviation score as 0.8 and ±0.6, however post-test was 2.2 and ±0.9 respectively, which indicated that intervention program assisted the subjects to pay attention, follow instructions, complete homework. Since the obtained t-value (-6.1) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. This shows that the intervention has made significant impact on memory span among boys. The bar illustration in terms Memory Span was presented in figure no.5

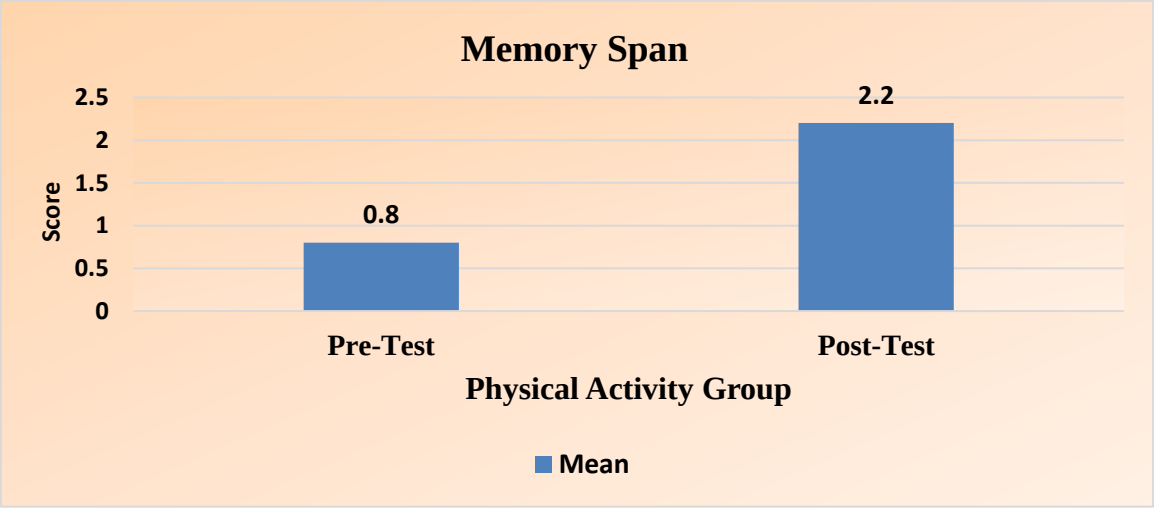


Fig no. 5 Memory Span of Physical Activity Group

In Figure 5 revealed average value of after test (2.2) stayed higher over pre-test (0.8) which indicates that physical activity intervention has improved memory span.

Table- 12: Comparison between pre & post-test of Linear Perception of Physical Activity Group (Experimental Group)

LINEAR PERCEPTION						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	7.8	±1	14	6.3	<.001
Post- Test		9.6	±0.6			

***Table value=2.14 *Significance Level at 0.05**

Table- 12 displays the pre-test mean and standard deviation score as 7.8 and ±1, however post-test was 9.6 and ±0.6 respectively. Since the obtained t-value (6.3) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, disproving null hypothesis. It displays that the module of physical activity has made significant effect in the linear perception of boys. The bar illustration in terms Linear Perception was presented in figure no.6

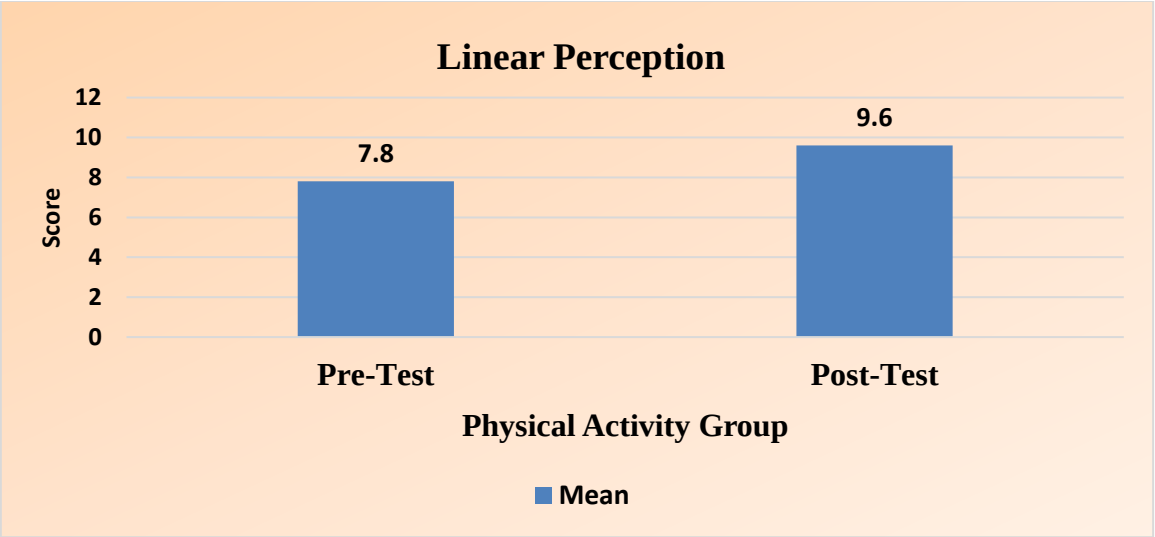


Fig no.6 Linear Perception of Physical Activity Group

In Figure 6 showed the average value of post-test (9.6) stayed higher over pre-test (7.8) which indicates that physical activity intervention has also improved linear perception.

Table- 13: Comparison between pre & post-test of Academic Performance of Physical Activity Group (Experimental Group)

ACADEMIC PERFORMANCE						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	237.1	±74.4	14	1.5	0.15
Post- Test		268.5	±117.7			

***Table value=2.14 *Significance Level at 0.05**

Table- 13 represents the attained t-value (1.5) lower in case of table value (2.14) accepting null hypothesis with no significant difference between pre-test and post-test. But the mean of post-test showed a slightly higher mean (268.5), albeit not significantly higher than the pre-test. The bar illustration in terms Linear Perception was presented in figure no.7

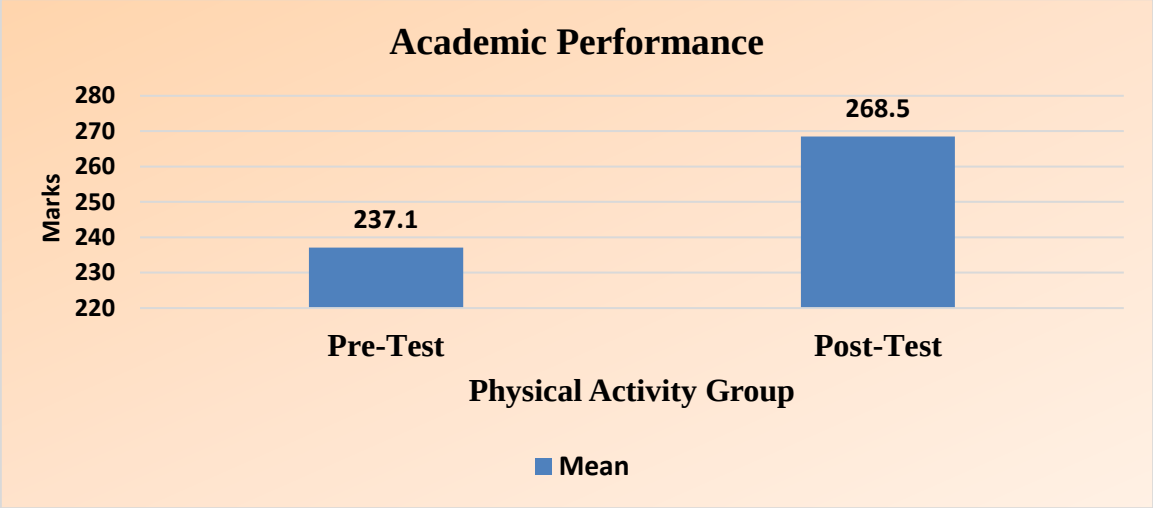


Fig no.7 Academic Performance of Physical Activity Group

In Figure 7 showed the average value of after-test (268.5) stayed higher over pre-test (237.1) which indicates that physical activity intervention has improved little but consistent.

Table- 14: Comparison between pre & post-test of Behavioural Problem of Physical Activity Group (Experimental Group)

BEHAVIOURAL PROBLEM						
Components	**Test**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Emotional Problem	Pre	5.1	±1.9	14	-6.6	<.001
	Post	1.9	±1.3			
Conduct Problem	Pre	4.1	±1.2		-4.4	<.001
	Post	2.2	±1.2			
Hyperactivity Problem	Pre	3.7	±1.4		-1.6	0.1
	Post	2.9	±1.5			
Peer-Problem	Pre	3.4	±1.8		-2.6	0.02
	Post	1.7	±1.5			
Total Difficulty	Pre	16.2	±3.3		-6.4	<.001
	Post	8.7	±3.8			
Pro-social Behaviour	Pre	7.7	±1.9		2.7	0.02
	Post	9.3	±1.3			

***Table value=2.14 *Significance Level at 0.05**

Table 14 represents score of behavioural problems of children between pre-test and post-tests, significant improvement was found in Emotional Problem (E.P) with t-value (-6.6), Conduct Problem (C.P) with t-value (-4.4), Peer-problem (P.P) with t-value (-2.6), Total Difficulty with t-value (-6.4), Pro-social behaviour (P.S) with t-value (2.7), were all higher over table value, disproving null hypothesis, along significant, except Hyperactivity problem (H.P) the obtained t-value (-1.6) was slighter than the table value (2.14) accepting null hypothesis. The bar illustration of Physical Activity Group in terms of Behavioural Problems was presented in figure no.8

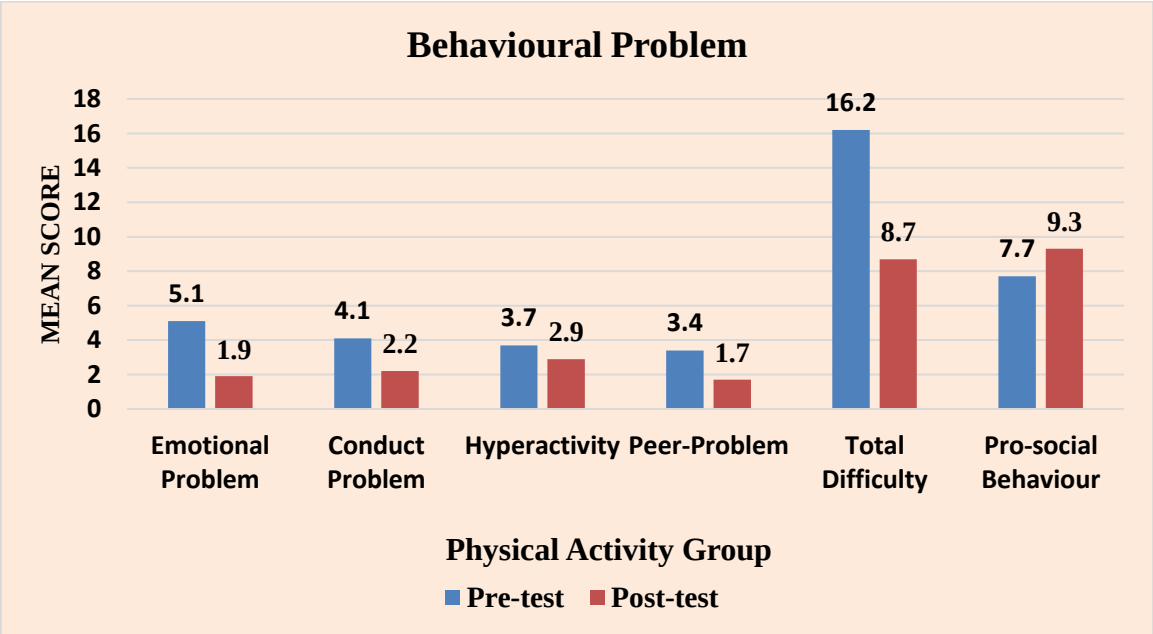


Fig no.8 Behavioural Problem of Physical Activity Group

From Figure 8, showed that the average of all variables revealed that after experiment variables was lower, which indicates that the physical activity intervention was effective, whereas the average value of pro-social behaviour indicates improvement after intervention.

4.3.2 BEHAVIOURAL THERAPY GROUP

In this section, comparison between pre-post data against dependent variables with the effect of Behavioural Therapy intervention has been presented below and the p-value with the red colour designating a non-significant value.

Table-15: Comparison between pre & post-test of State Anxiety of Behavioural Therapy Group (Experimental Group)

STATE ANXIETY						
Student Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	36.1	±5.1	14	-2.6	.019
Post- Test		31.6	±5.8			

***Table value=2.14 *Significance Level at 0.05**

Table- 15 shows that post-test had lower Mean (31.6) in state anxiety than pre-test mean (36.1) which indicates that with help of intervention, subjects were able to cope with stressful situation and the obtained t-value (-2.6) was higher than table value (2.14) rejecting the null hypothesis, along significant. The bar design of Behaviour Therapy Group in terms of State Anxiety was presented in figure no.9

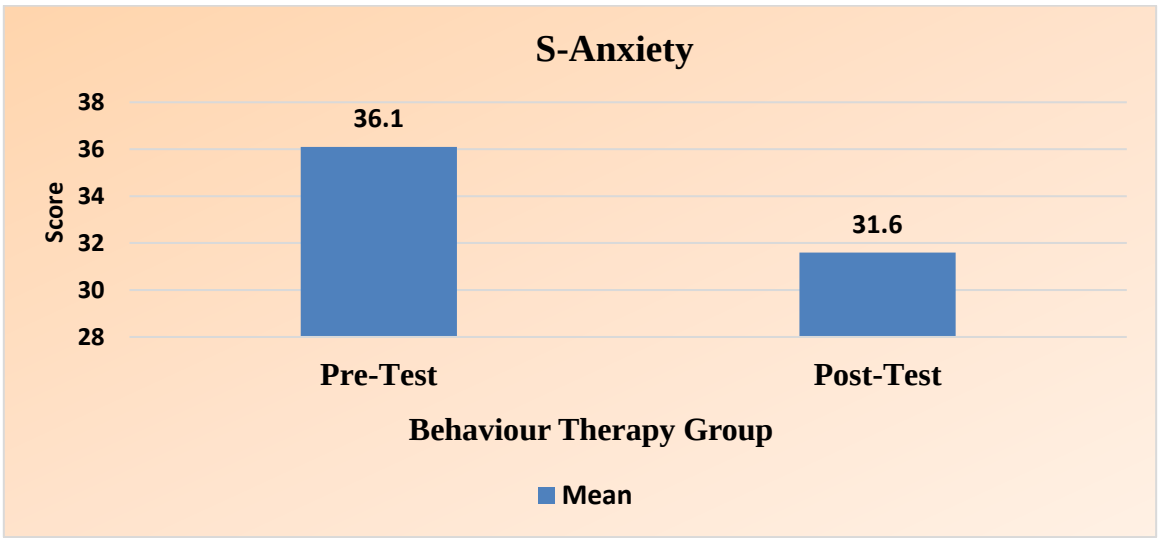


Fig no.9 State Anxiety of Behaviour Therapy Group

In Figure 9 showed that the average value of after-test (31.6) was lower than pre-test (36.1) which indicates that behaviour therapy intervention has reduced state anxiety of children.

Table-16: Comparison between pre & post-test of Trait Anxiety of Behaviour Therapy Group (Experimental Group)

TRAIT ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	40.2	±5.3	14	-3.5	.003
Post- Test		33.7	±5.6			

***Table value=2.14 *Significance Level at 0.05**

Table- 16 shows that post-test had lower Mean (33.7) in trait anxiety than pre-test mean (40.2) which indicates that with help of intervention, children were able to have a healthy personality in stressful situation and as far as the obtained t-value (-3.5) has been concerned was higher than table value (2.14) disproving the null hypothesis indicates that trait anxiety of two tests differ significantly. The bar illustration of Behaviour Therapy Cluster in terms of Trait Anxiety was presented in figure no.10

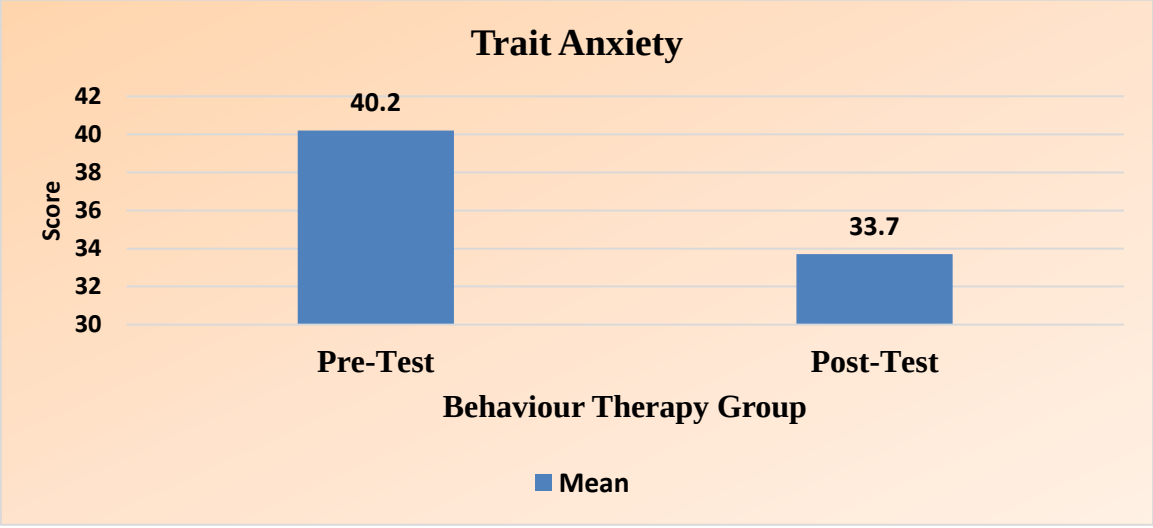


Fig no.10 Trait Anxiety of Behaviour Therapy Group

In Figure 10 showed the average value of after-test (33.7) was lower than pre-test (40.2) which indicates that behaviour therapy intervention has reduced trait anxiety of children.

Table-17: Comparison between pre & post-test of Memory Span of Behaviour Therapy Group (Experimental Group)

MEMORY SPAN						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	0.7	±0.5	14	-4.4	<.001
Post- Test		1.7	±1			

***Table value=2.14 *Significance Level at 0.05**

Table-17 displays the pre-test mean and standard deviation score as 0.7 and ±0.5, however post-test was 1.7 and ±1 indicated that intervention program assisted to pay attention, recall tasks and be reasoning. Since the obtained t-value (-4.4) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. This shows that the therapy technique has made significant impact on memory span among boys which had helped them to recall the things. The bar diagram of Behaviour Therapy Group in terms of Memory Span was presented in figure no.11

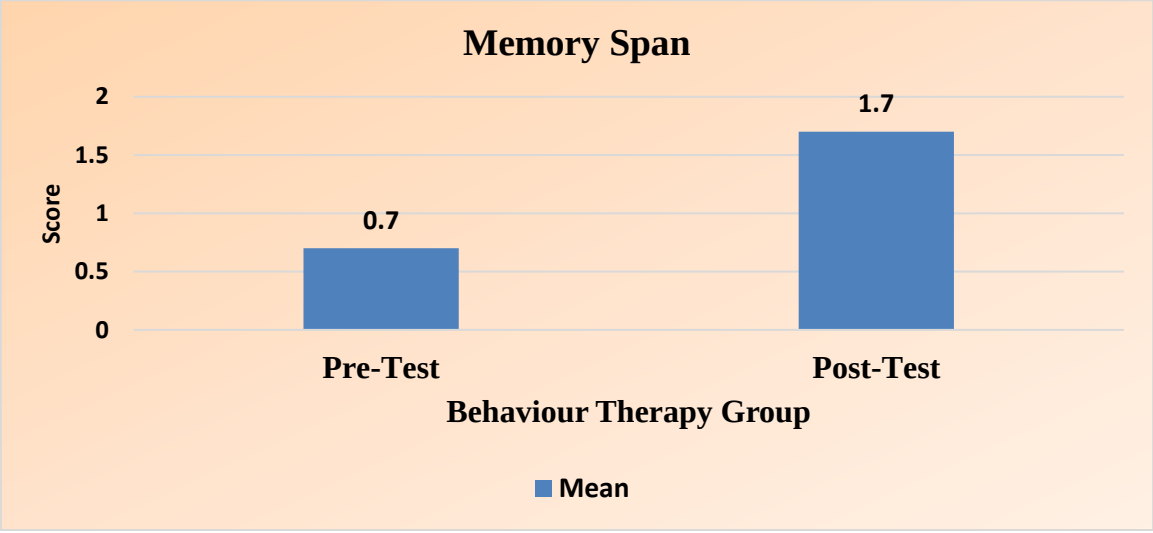


Fig no.11 Memory Span of Behaviour Therapy Group

In Figure 11 displayed the value of Post-test (1.7) stayed over pre-test (0.7) which indicates that behaviour therapy intervention has improved memory span of children.

Table-18: Comparison between pre & post-test of Linear Perception of Behaviour Therapy Group (Experimental Group)

LINEAR PERCEPTION						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	8.1	±1	14	5.2	<.001
Post- Test		9.6	±0.8			

***Table value=2.14 *Significance Level at 0.05**

Table-18 displays the pre-test mean and standard deviation score as 8.1 and ±1, however post-test was 9.6 and ±0.8 indicates that children had significant effect of behaviour therapy. Since the obtained t-value (5.2) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. The graph depiction of Behaviour Therapy Group in terms of Linear Perception was presented in figure no.12

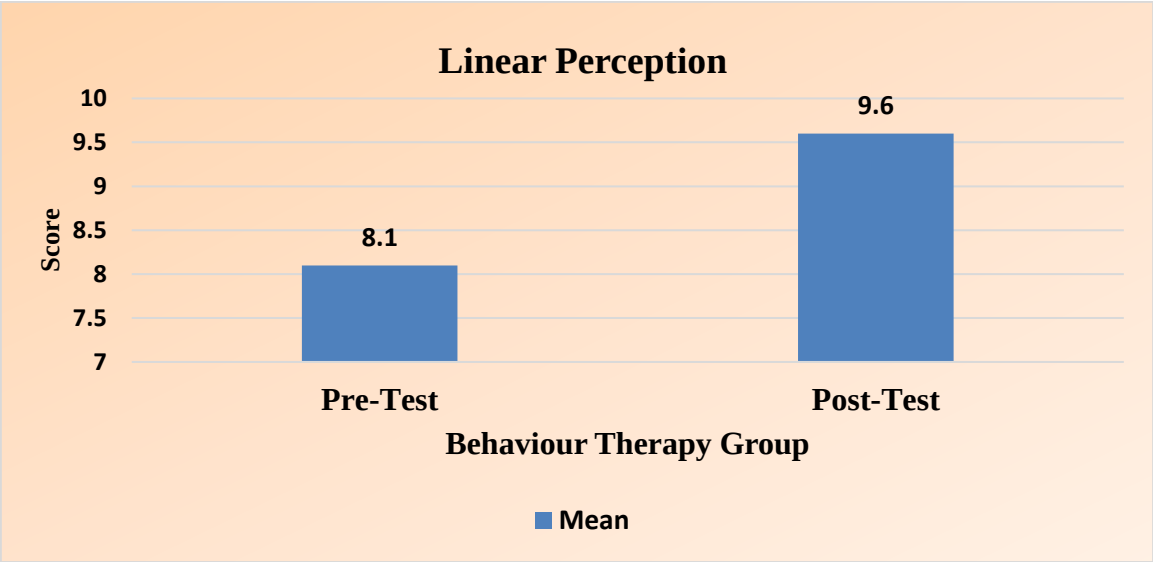


Fig no.12 Linear Perception of Behaviour Therapy Group

In Figure 12 showed the average value of Post-test (9.6) stayed over pre-test (8.1) which indicates that behaviour therapy intervention has improved linear perception of children.

Table-19: Comparison between pre & post-test of Academic Performance of Behaviour Therapy Group (Experimental Group)

ACADEMIC PERFORMANCE						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	171.3	±56	14	1.5	.154
Post- Test		207.7	±100.6			

***Table value=2.14 *Significance Level at 0.05**

Table- 19 displays the pre-test mean and standard deviation score as 171.3 and ±56, however post-test was 207.7 and ±100.6 indicates higher mean though insignificant (.154). Since, obtained t-value (1.5) was lower than the table value (2.14) accepted null hypothesis. The bar diagram of Behaviour Therapy Group in terms of Academic Performance was presented in figure no.13

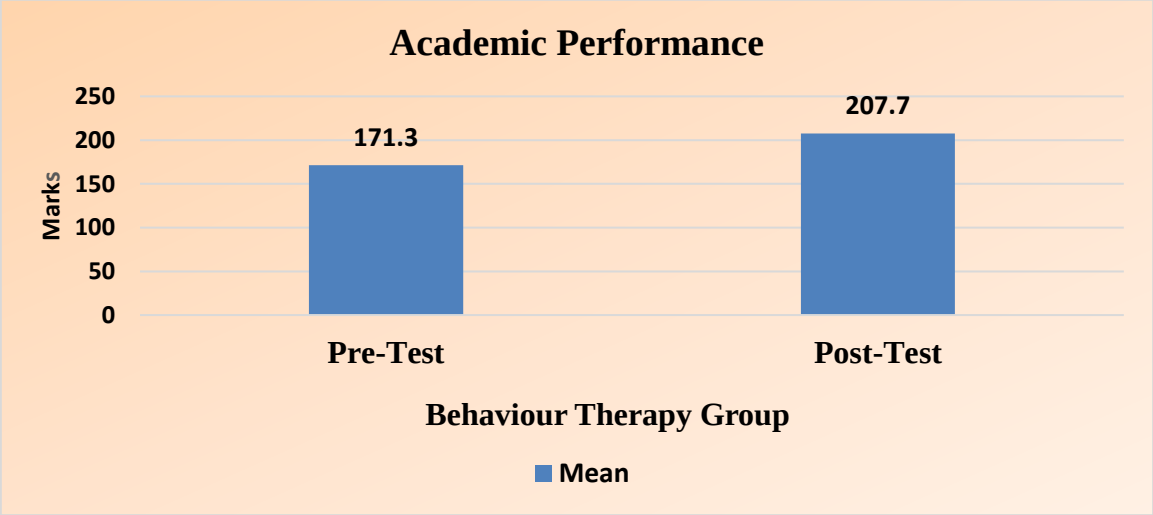


Fig no.13 Academic Performance of Behaviour Therapy Group

In Figure 13 showed average value of Post-test (207.7) was over pre-test (171.3) which indicates that behaviour therapy intervention has improved academic performance of children and it will be better if it continues further.

Table-20: Comparison between pre & post-test of Behavioural Problem of Behaviour Therapy Group (Experimental Group)

BEHAVIOURAL PROBLEM						
Components	**Test**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Emotional Problem	Pre	5.1	±1.2	14	-5.4	<.001
	Post	2.6	±1.1			
Conduct Problem	Pre	3.8	±2.7		-2.3	0.04
	Post	2.1	±1.7			
Hyperactivity Problem	Pre	3.6	±1.8		-4.4	<.001
	Post	1.6	±1			
Peer-Problem	Pre	3.7	±1.6		-3.2	.007
	Post	1.7	±1.7			
Total Difficulty	Pre	16.3	±5		-4.9	<.001
	Post	8.2	±3.9			
Pro-Social Behaviour	Pre	8.2	±1.7		3.4	.004
	Post	9.6	±0.7			

*** N=15 *Table value=2.14 *Significance Level at 0.05**

Table- 20 represents score of behavioural problems of children between pre-test and post-tests, significant variance was found in Emotional Problem (E.P) with t-value (-5.4), Conduct Problem (C.P) with t-value (-2.3), Hyperactivity problem (H.P) with t-value (-4.4), Peer-problem (P.P) with t-value (-3.2), Total Difficulty (SD) with F-value (-4.9), Pro-social behaviour (P.S) with t-value (3.4), so null hypothesis is rejected, indicates that the behavioural therapy techniques was effective in the behaviour of subjects. The bar illustration in terms of Behavioural Problems was presented in figure no.14

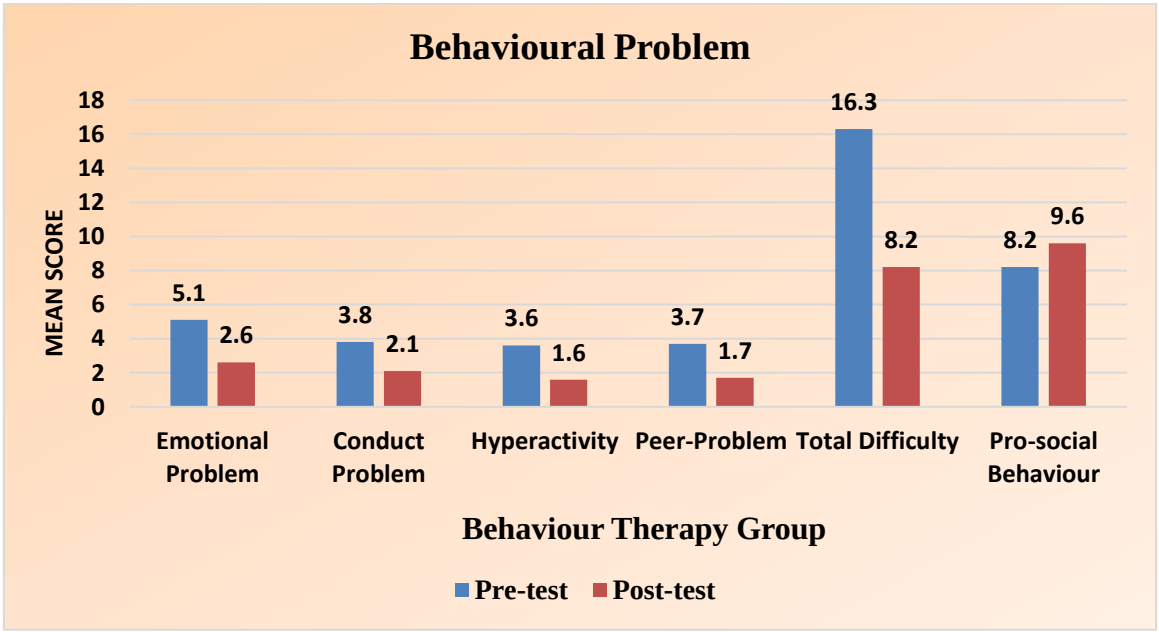


Fig no.14 Behavioural Problem of Behaviour Therapy Group

From Figure 14, showed average value of dependent variables revealed that after-test was lower than the pre-test, which indicates that behaviour therapy intervention was effective, whereas the mean value of pro-social behaviour indicates over after-test signify intervention was effective for students to behave in a better way.

4.3.3 PHYSICAL ACTIVITY& BEHAVIOUR THERAPY GROUP:

In this section, comparison between pre-post data against dependent variables with the effect of Physical Activity & Behavioural Therapy intervention has been presented below and the p-value with the red colour designating a non-significant value.

Table-21: Comparison between pre & post-test of State Anxiety of Physical Activity & Behaviour Therapy Group (Experimental Group)

STATE ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	31.3	±4.1	14	-5.8	<.001
Post- Test		23.7	±2.8			

***Table value=2.14 *Significance Level at 0.05**

Table- 21 shows that post-test had lower Mean (23.7) in state anxiety than pre-test mean (31.3) which indicates that with help of intervention, children were able to cope with stressful situation and as far as the t-value is concerned, indicates that in case of state anxiety, Mean of the two tests of children differ significantly from each other as the obtained t-value (-5.8) was higher than table value (2.14) disproving the null hypothesis, found significant ($p<.001$). The bar illustration of Physical Activity & Behaviour Therapy Group in terms of State Anxiety was presented in figure no.15

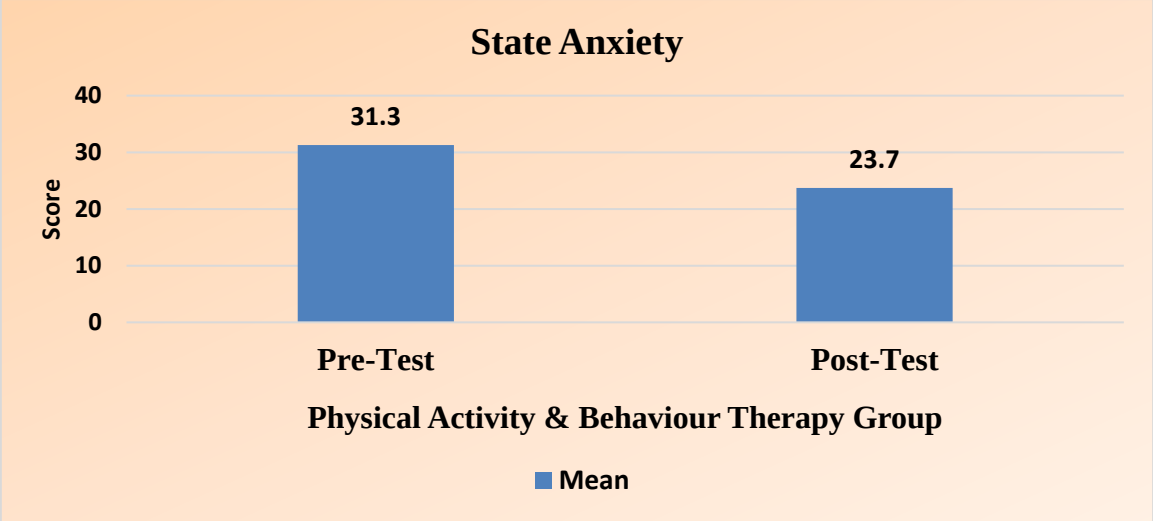


Fig no.15 State Anxiety of Physical Activity & Behaviour Therapy Group

In Figure 15 showed average value after-test (23.7) was lower than pre-test (31.3) which indicates that Physical Activity & Behaviour Therapy intervention has improved State Anxiety and it will be reduced if it continues further.

Table-22: Comparison between pre & post-test of Trait Anxiety of Physical Activity & Behaviour Therapy Group (Experimental Group)

TRAIT ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	38.3	±5.5	14	-9.6	<.001
Post- Test		24.1	±2.1			

***Table value=2.14 *Significance Level at 0.05**

Table- 22 shows that post-test had lower Mean (24.1) in trait anxiety than pre-test mean (38.3) which indicates that with help of intervention, children were able to have a healthy personality in stressful situation and as far as the t-value is concerned, indicates that in case of trait anxiety of Mean of the two tests differ significantly from each other as the obtained t-value (-9.6) was higher than table value (2.14) rejecting null hypotheses, along significant. The bar illustration of Physical Activity & Behaviour Therapy Group in terms of Trait Anxiety was presented in figure no.16

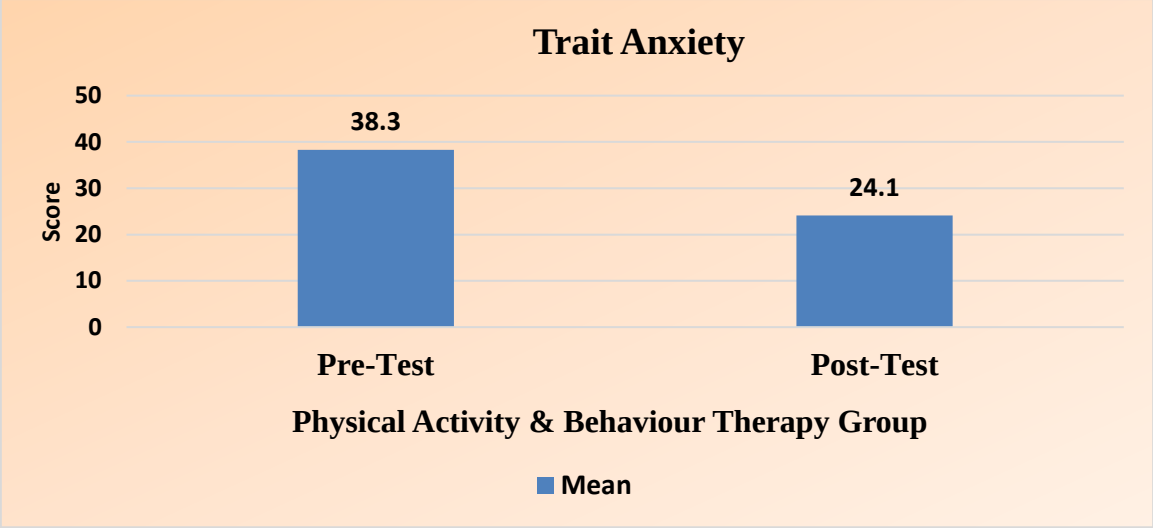


Fig no.16 Trait Anxiety of Physical Activity & Behaviour Therapy Group

In Figure 16 showed average value of after-test (24.1) was lower than pre-test (38.3) which indicates that Physical Activity & Behaviour Therapy intervention has reduced Trait Anxiety of samples.

Table-23: Comparison between pre & post-test of Memory Span of Physical Activity & Behaviour Therapy Group (Experimental Group)

MEMORY SPAN						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	1.5	±1.1	14	6	<.001
Post- Test		2.6	±1.3			

***Table value=2.14 *Significance Level at 0.05**

Table- 23 displays the pre-test mean and standard deviation score as 1.5 and ±1.1, however post-test was 2.6 and ±1.3 respectively, which indicates that with the incorporation of intervention program memory span of children have improved to be attentive, recall tasks, reasoning. Since the obtained t-value (6) is higher than the table value (2.14), disproving null hypothesis and p-value is less than significance level was considered significant. This shows that the therapy technique has made significant influence on memory span among boys. The bar illustration of Physical Activity & Behaviour Therapy Group in terms of Memory Span was presented in figure no.17

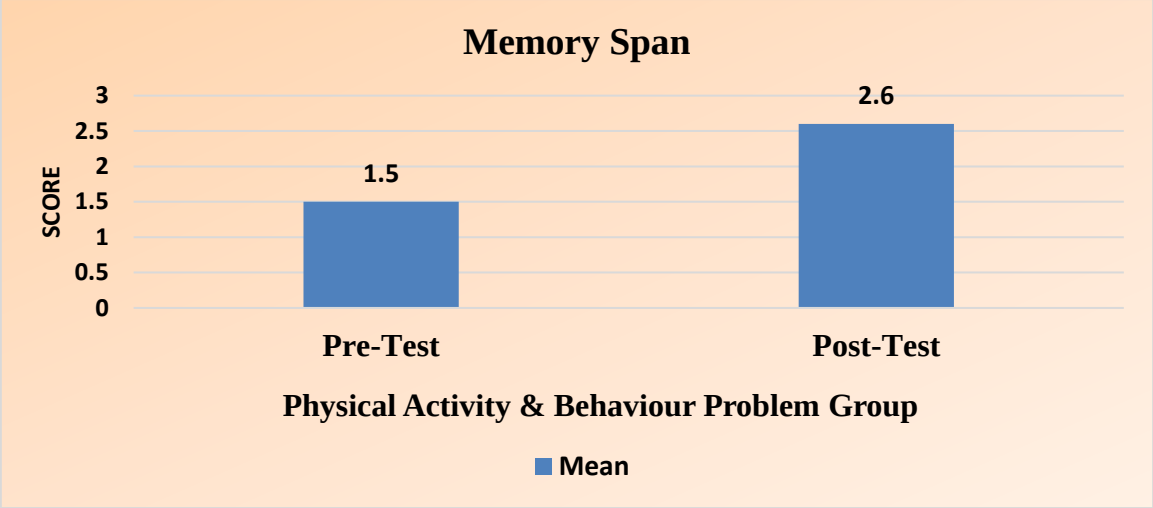


Fig no.17 Memory Span of Physical Activity & Behaviour Therapy Group

In Figure 17 showed that the mean value of after-test (2.6) was over pre-test (1.5) indicates that Physical Activity & Behaviour Therapy intervention has improved Memory Span.

Table-24: Comparison between pre & post-test of Linear Perception of Physical Activity & Behaviour Therapy Group (Experimental Group)

LINEAR PERCEPTION						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	8	±0.9	14	6.7	<.001
Post- Test		9.6	±0.5			

***Table value=2.14 *Significance Level at 0.05**

Table- 24 represents the Mean of pre-test=8, whereas the Mean of post-test=9.6, which indicates that subjects have enhancement. Since the obtained t-value (6.7) is higher than the table value (2.14) and the p-value is less than significance level was considered significant, rejecting null hypothesis. The bar illustration of Physical Activity & Behaviour Therapy Group in terms of Linera Perception was presented in figure no.18.

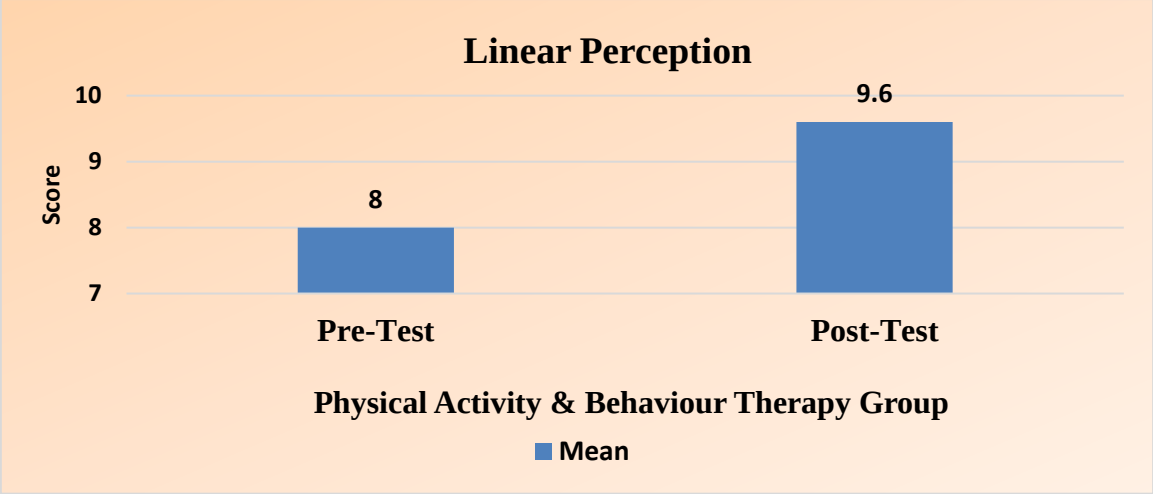


Fig no.18 Linear Perception of Physical Activity & Behaviour Therapy Group

In Figure 18 showed average value after-test (9.6) was over pre-test (8) which indicates that Physical Activity & Behaviour Therapy intervention has improved Linear Perception and it will be better if intervention continued further.

Table-25: Comparison between pre & post-test of Acdemic Performance of Physical Activity & Behaviour Therapy Group (Experimental Group)

ACADEMIC PERFORMANCE						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	205.4	±88.8	14	1.9	.072
Post- Test		246.9	±104.3			

***Table value=2.14 *Significance Level at 0.05**

Table- 25 displays the pre-test mean and standard deviation score as 205.4 and ±88.8, however post-test was 246.9 and ±104.3 indicates higher mean though insignificant (.072). Since, obtained t-value (1.9) was lower than the table value (2.14) accepted null hypothesis. The bar diagram of Behaviour Therapy Group in terms of Academic Performance was presented in figure no.19

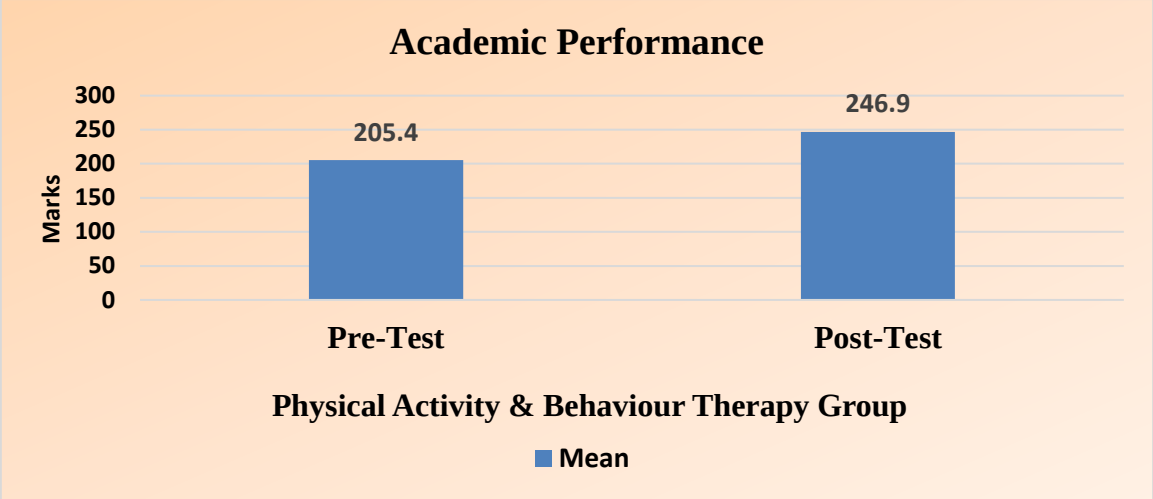


Fig no.19 Academic Performance of Physical Activity & Behaviour Therapy Group

In Figure 19 showed average value after-test (246.9) was over pre-test (205.4) which indicates that Physical Activity & Behaviour Therapy intervention has improved Academic Performance.

Table-26: Comparison between pre & post-test of Behavioural Problem of Physical Activity & Behaviour Therapy Group (Experimental Group)

BEHAVIOURAL PROBLEM						
Components	**Test**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Emotional Problem	Pre	5.5	±1.3	14	-13.2	<.001
	Post	0.3	±0.7			
Conduct Problem	Pre	3.9	±2		-7.7	<.001
	Post	0.3	±0.7			
Hyperactivity Problem	Pre	3.3	±1.6		-7.5	<.001
	Post	0.3	±0.6			
Peer-Problem	Pre	3.5	±1.7		-4.4	<.001
	Post	0.9	±1.1			
Total Difficulty	Pre	16.3	±2.4		-18.4	<.001
	Post	1.8	±2.1			
Pro-Social Behaviour	Pre	7.1	±2.4		3.7	.002
	Post	9.5	±0.9			

***N=15 *Table value=2.14 *Significance Level at 0.05**

Table-26 represents score of behavioural problems of children between pre-test and post-tests, significant improvement was found in Emotional Problem (E.P) with t-value (-13.2), Conduct Problem (C.P) with t-value (-7.7), Hyperactivity problem (H.P) with t-value (-7.5), Peer-problem (P.P) with t-value (-4.4), Total Difficulty (SD) with F-value (-18.4), Pro-social behaviour (P.S) with t-value (3.7) as the obtained t-value of all dependent variables were higher than table value (2.14) disproving null hypotheses found significant, specifies that

intervention techniques and the modules have made significant impact in the behavioural problems of boys. The bar illustration of before and after test of Behavioural Problems was presented in figure no.20

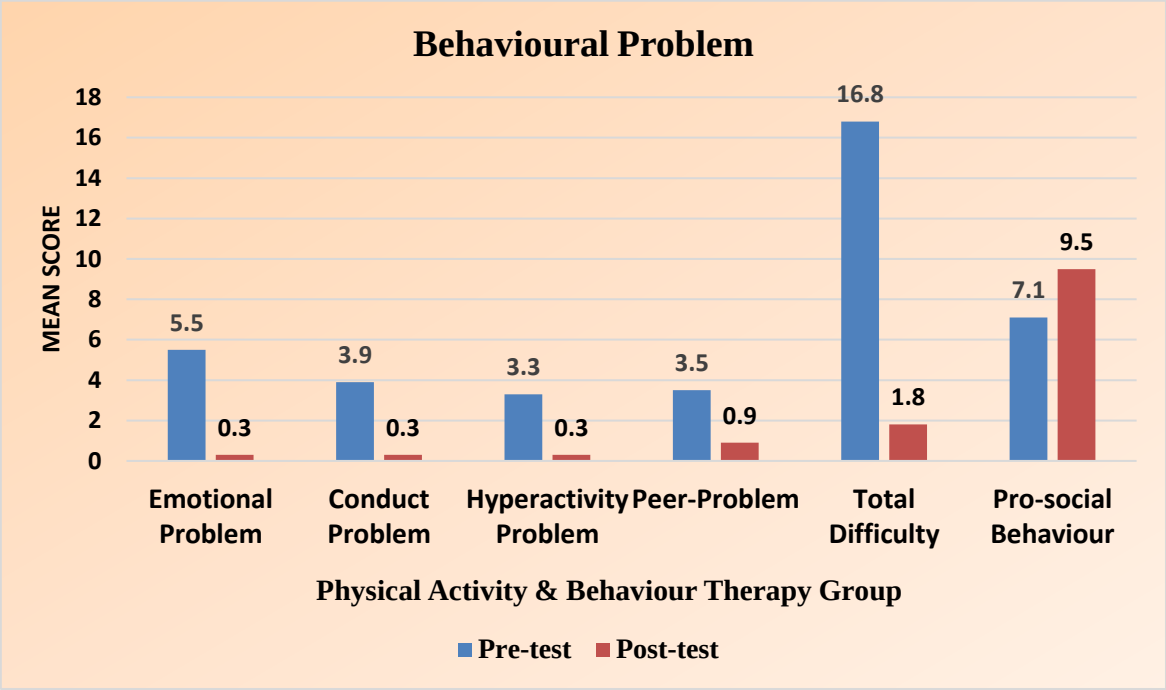


Fig no.20 Behavioural Problem of Physical Activity & Behaviour Therapy Group

From Figure 20, showed average of all variables revealed that after-test were much lower to pre-test, which indicates that the combined intervention was very effective, whereas the mean value (post) of pro-social behaviour indicates over pre-test, which signify intervention was effective to change behaviour.

4.3.4 CONTROL GROUP:

In this section, comparison between pre-post data against dependent variables with no treatment has been presented below and the p-value with the red colour designating a non-significant value.

Table-27: Comparison between pre & post-test of State Anxiety of Control Group

STATE ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	34.1	±4	14	0.7	.47
Post- Test		33.1	±5.8			

***Table value=2.14 *Significance Level at 0.05**

Table- 27 displays the pre-test mean and standard deviation score as 34.1 and ±4, however post-test was 33.1 and ±5.8 indicates insignificant (.47). Since, obtained t-value (0.7) was lower to table value (2.14) accepted null hypothesis. The bar diagram of Control Group in terms of State Anxiety was presented in figure no.21

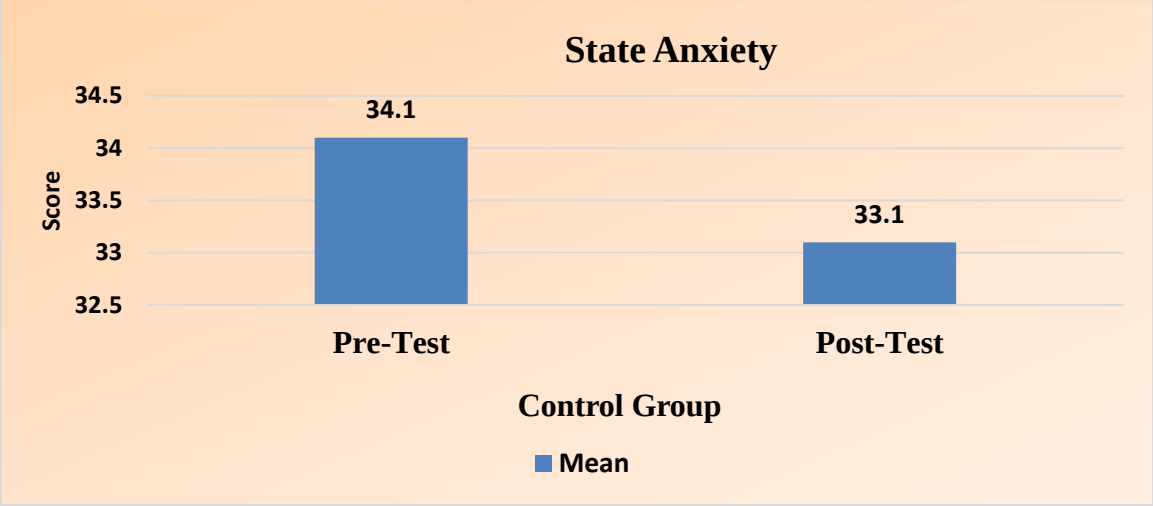


Fig no.21 State Anxiety of Control Group

From Figure 21, showed no such great variance in before and after-test which signify that when no intervention was given, the problem will remain same and also it depend on the situations of the child in terms of State Anxiety.

Table-28: Comparison between pre & post-test of Trait Anxiety of Control Group

TRAIT ANXIETY						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	39.2	±6.7	14	-0.9	.37
Post- Test		38.1	±5.8			

***Table value=2.14 *Significance Level at 0.05**

Table- 28 displays the pre-test mean and standard deviation score as 39.2 and ±6.7, however post-test was 38.1 and ±5.8 indicates insignificant (.37). Since, obtained t-value (-0.9) was lower to table value (2.14) accepted null hypothesis. The bar diagram of Control Group in terms of Trait Anxiety was presented in figure no.22

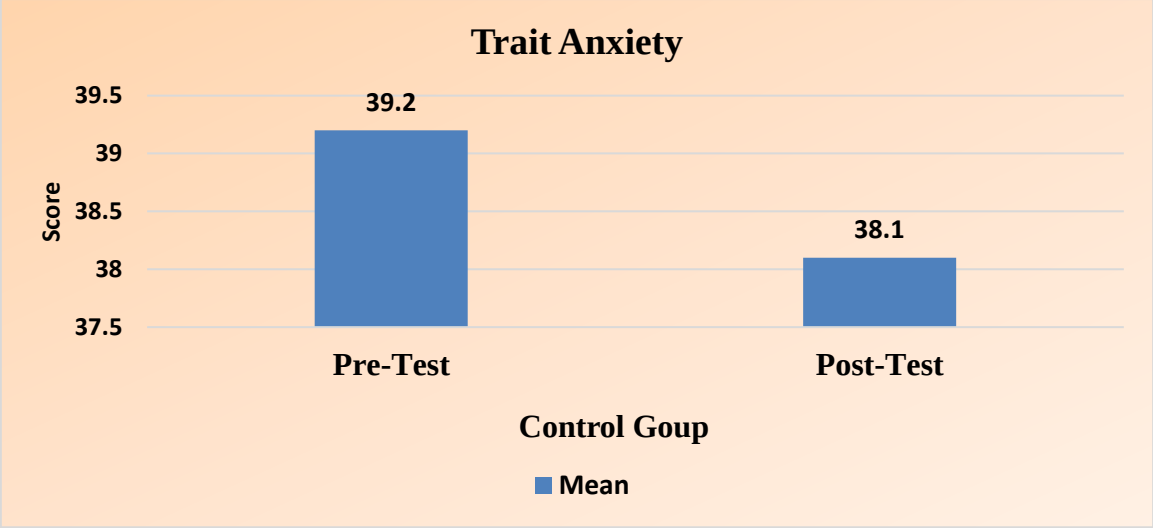


Fig no.22 Trait Anxiety of Control Group

From Figure 22, showed no such great variance in before and after-test which signify that when no intervention was given, the problem will remain same and change according to their behaviour in different situations in terms of Trait Anxiety.

Table-29: Comparison between pre & post-test of Memory Span of Control Group

Memory Span						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	0.9	±0.6	14	4.8	<.001
Post- Test		1.7	±0.7			

***Table value=2.14 *Significance Level at 0.05**

Table- 29 displays the average before test was 0.9 and after-test 1.7 respectively, indicates slight variance in terms of memory span in control group. Since the obtained t-value (4.8) was higher than table value (2.14) rejecting null hypotheses and considered significant. The bar illustration of Memory Span was presented in figure no.23

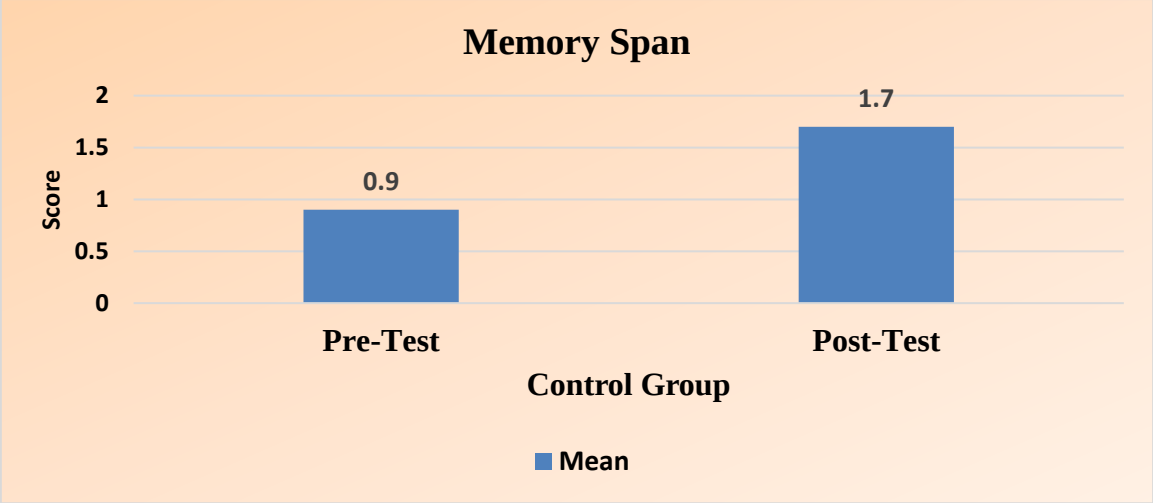


Fig no.23 Memory Span of Control Group

From Figure 23, showed that the difference in mean of pre & post-test which may be due to the fact that children continuously prepare for summative examination and continuous be in study, which may be the effect on memory span.

Table-30: Comparison between pre & post-test of Linear Perception of Control Group

LINEAR PERCEPTION						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	9	±0.9	14	-1.9	.08
Post- Test		8.4	±0.7			

***Table value=2.14 *Significance Level at 0.05**

Table- 30 displays the pre-test mean and standard deviation score as 9 and ±0.9, however post-test was 8.4 and ±0.7 indicates insignificant (.08). Since, obtained t-value (-1.9) was lower to table value (2.14) accepted null hypothesis indicates that the linear perception reduced in children due to no treatment. The bar illustration of Control Group in terms of Linear Perception was presented in figure no.24

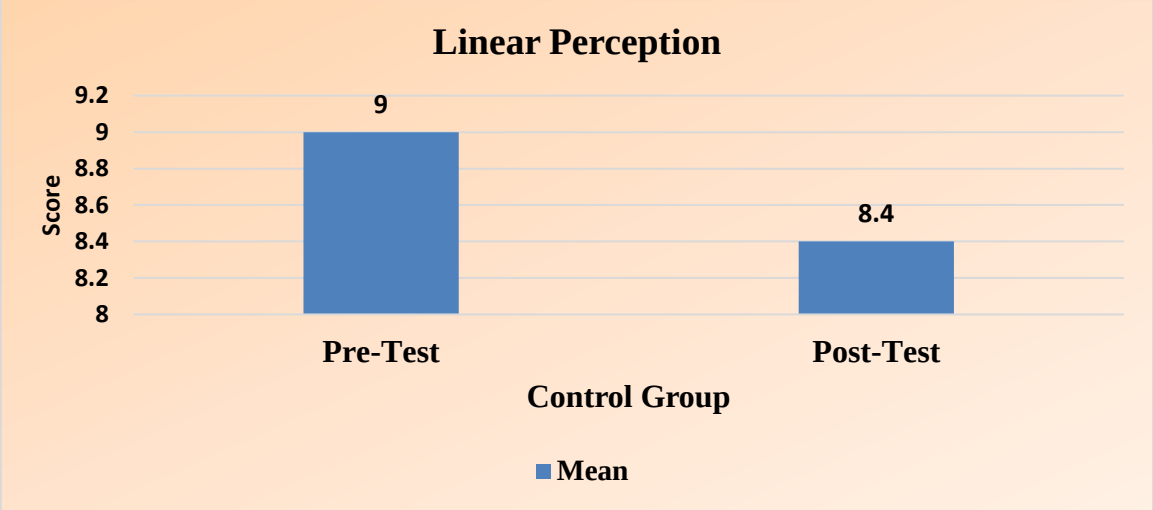


Fig no. 24 Linear Perception of Control Group

From Figure 24, showed no variance found in previously and afterward test which signify that when no intervention was given, the problem will remain same and decrease in terms of Linear Perception.

Table-31: Comparison between pre & post-test of Academic Performance of Control Group

ACADEMIC PERFORMANCE						
Test	**N**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Pre-Test	15	245.9	±88.4	14	0.5	.637
Post- Test		259.8	±107.2			

***Table value=2.14 *Significance Level at 0.05**

Table- 31 displays the pre-test mean and standard deviation score as 245.9 and ±88.4 however post-test was 259.8 and ±107.2 indicates insignificant (.637). Since, obtained t-value (0.5) was lower to table value (2.14) accepted null hypothesis. The bar illustration of Control Group in terms of Academic Performance was presented in figure no.25

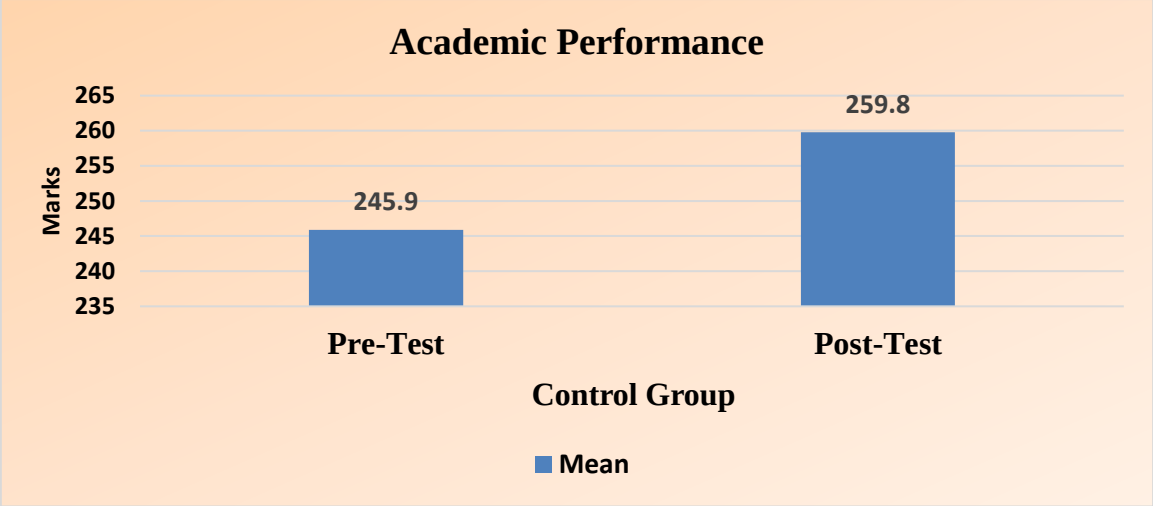


Fig no.25 Academic Performance of Control Group

From Figure 25, showed no significant change from previous to afterward mean signify that when no intervention was given, the problem will remain same or may change a little in terms of Academic Performance.

Table-32: Comparison between pre & post-test of Behavioural Problem of Control Group

BEHAVIOURAL PROBLEM						
Components	**Test**	**Mean**	**Sd**	**Df**	**'t'**	**p-value**
Emotional Problem	Pre	4.7	±1.3	14	-0.6	.546
	Post	4.3	±2.3			
Conduct Problem	Pre	4.5	±1.4		2.7	.016
	Post	5.7	±1.8			
Hyperactivity Problem	Pre	4.8	±1.9		0.1	.914
	Post	4.9	±1.7			
Peer-Problem	Pre	2.7	±1.5		3.4	.004
	Post	4.3	±1.8			
Total Difficulty	Pre	16.6	±3.2		2.1	.06
	Post	18.7	±3.3			
Pro-Social Behaviour	Pre	8	±1.9		1.3	.199
	Post	8.7	±1.4			

***N=15 *Table value=2.14 *Significance Level at 0.05**

Table-32 represents score of behavioural problems of children between pre-test and post-tests, significant difference was found as the obtained t-value in Conduct Problem (CP=2.7) and Peer-problem (PP=3.4) was higher than table value (2.14) disproving null hypothesis, along significant. But the obtained t-value of Emotional Problem (-0.6), Hyperactivity (0.1), Total difficulty (2.1) and Pro-social behaviour (1.3) were lower to table value (2.14)

accepting null hypotheses and not significant as p-value was more than significance level. The bar illustration of Control Group in terms of Behavioural Problem was presented in figure no.26

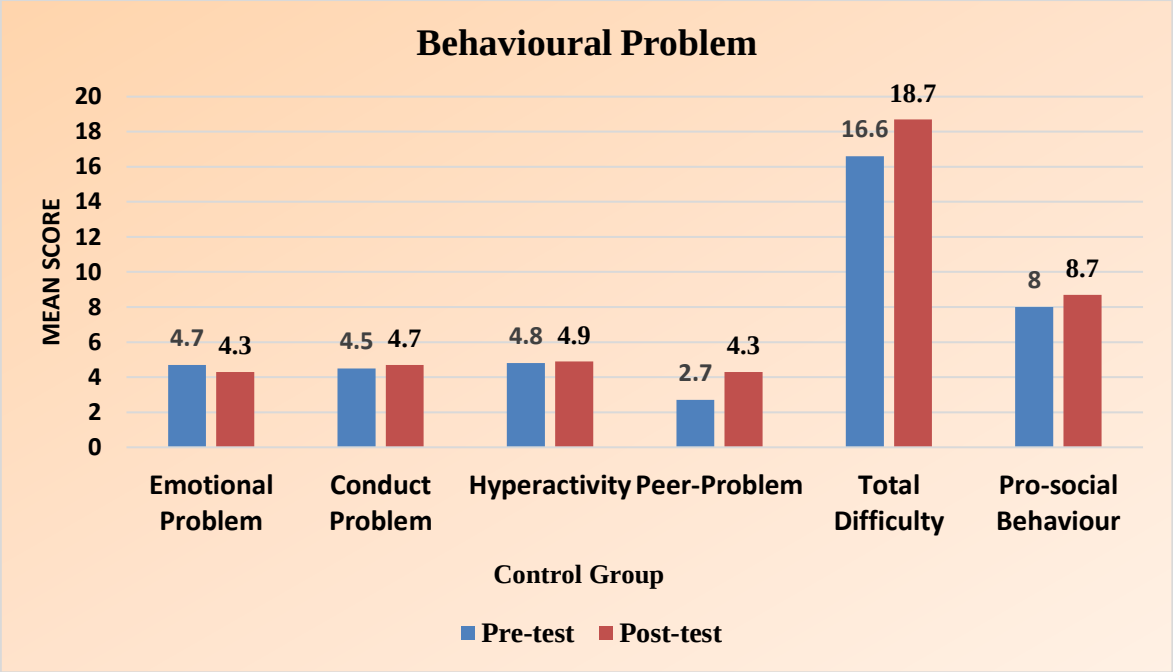


Fig no.26 Behavioural Problem of Control Group

From Figure 26, showed that the post-test all the variables has increased due to no treatment and very little difference was found in emotional problem and pro-social behaviour, where post-test showed slight change.

4.4 Presentation of data against different variables of Experimental Groups separately to see the effect of Session-wise comparison (Repeated Measures ANOVA):

4.4.1 PHYSICAL ACTIVITY GROUP:

In this section, comparison of session -wise effect on dependent variables with intervention of Physical Activity has been presented below and the p-value with the red colour designating a non-significant value.

Table-33: Comparison between Session-wise of State Anxiety of Physical Activity Group (Experimental Group)

State Anxiety							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	34.8	32.73	32.6	28.93	3	5.64	.002

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table- 33 represents the Mean of Yoga=PT1, were 32.73, whereas the Mean of Recreational Activities=PT2, were 32.6, respectively, indicated that the combined programs of Yoga and Recreational activities helped the children to focus, boost happiness, unlocked energy flow, improved posture, improve moods and change the lifestyle with lessen state anxiety. Whereas Gymnastics with Mean of Gymnastics=PT3 group were 28.93 showed better results in comparison with Yoga and Recreational Activity, which indicated calmness, balance, concentrate, builds personal discipline with positive mental wellbeing help to avoid stressful situation of children. The obtained F- ratio (5.64) was over the table value (5.56) disproving null hypothesis along significant. The bar illustration in terms of State Anxiety was presented in figure no.27

TABLE 33 (i) Post-hoc Analysis of State Anxiety for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	2.07	1.31	9.4175	0.27
x1-x3	2.2	1.85	9.4175	0.19
x1-x4	5.87	10.18	9.4175	0.006
x2-x3	0.13	0.01	9.4175	0.91
x2-x4	3.8	15.93	9.4175	0.001
x3-x4	3.67	11.23	9.4175	0.004

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.33 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 3, post-test 1 & post-test 3, post-test 2 & post-test 3, (**x1-x4, x2-x4, x3-x4**) are significantly different.

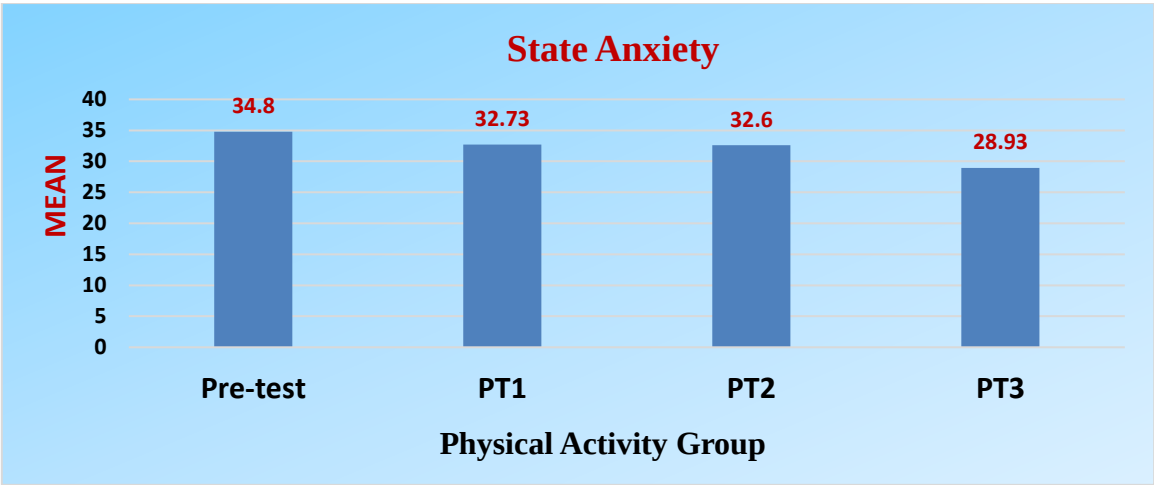


Fig no.27 State Anxiety of Physical Activity Group

In Figure 27 revealed the average of Post-test (PT3) was lesser (28.93) in comparison to pre-test (34.8), moreover, PT1 and PT2 were remained stagnant.

Table-34: Comparison between Session-wise of Trait Anxiety of Physical Activity Group (Experimental Group)

Trait Anxiety							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	40.73	35.2	34.23	32.33	3	11.04	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table- 34 represents the Mean of Yoga=PT1 were 35.2, whereas the Mean of Recreational Activities=PT2 were 34.23 and the Mean of Gymnastics=PT3 were 32.33 respectively, indicated that the three interventions program gradually help the children to maintain their trait anxiety. Further, it can be said that the activity of yoga improved the trait anxiety with mind and body to relax, improves mood, enhance the sense of well-being, develop the habit of listening, and develop social skills. The obtained F value (11.04) was over the table value (5.56), rejecting null hypothesis along significant. The post-hoc analysis was presented in table no.35(i).

TABLE 34 (i) Post-hoc Analysis of Trait Anxiety for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	5.53	9.06	9.4175	0.009
x1-x3	6.47	9.78	9.4175	0.007
x1-x4	8.4	34.33	9.4175	<.001
x2-x3	0.93	0.45	9.4175	0.51
x2-x4	2.87	6.13	9.4175	0.03
x3-x4	1.93	3.34	9.4175	0.09

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.34 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3 and post-test 1 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4**) are significantly different. The bar illustration of Physical Activity Group in terms of Trait Anxiety was presented in figure no.28

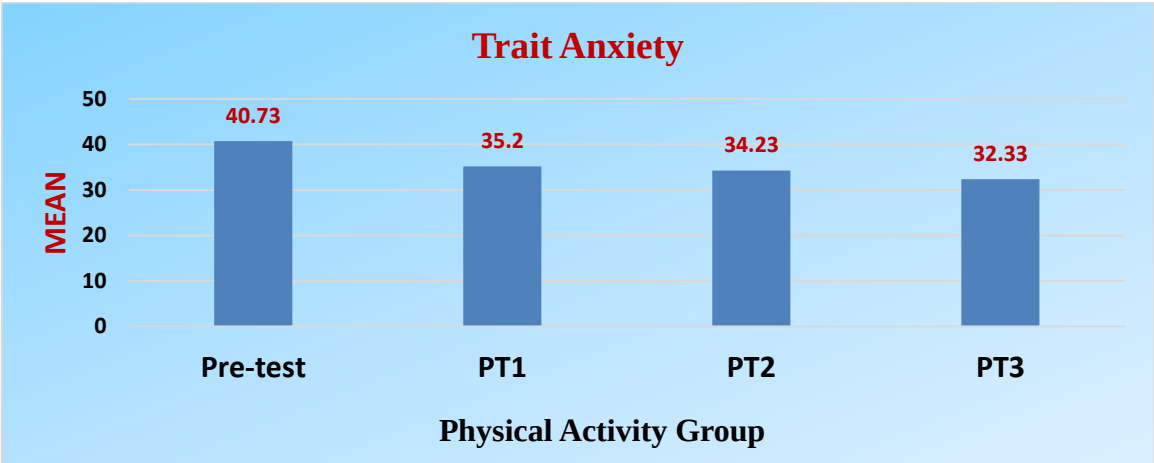


Fig no.28 Trait Anxiety of Physical Activity Group

In Figure 28 showed that average of Post-test (PT1) stood reduced with the activity of yoga (35.2) in comparison to pre-test (40.73), later the difference in PT2 and PT3 were remained less.

Table- 35: Comparison between Session-wise of Memory Span of Physical Activity Group (Experimental Group)

Memory Span							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	0.77	1.3	2.63	2.17	3	14.61	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-35 represents the Mean of Yoga=PT1 was 1.3, Recreational Activities=PT2 was 2.63 and Gymnastics=PT3 was 2.17 respectively, indicates that programs of Yoga, Recreational activities and Gymnastics intervention were gradually effective in terms of memory span. Whereas yoga turns out to be more effective in comparison to other two activity. The obtained F (14.61) was higher than table value (5.56) rejecting null hypothesis along significant as the p-value (<.001) is less than the significance level. The post-hoc analysis was presented in table no.35(i).

TABLE 35 (i) Post-hoc Analysis of Memory Span for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.53	5.57	9.4175	0.03
x1-x3	1.87	23.81	9.4175	<.001
x1-x4	1.4	37.08	9.4175	<.001
x2-x3	1.33	11.55	9.4175	0.004
x2-x4	0.87	15.41	9.4175	0.001
x3-x4	0.47	1.7	9.4175	0.21

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.35 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, post-test 1& post-test 2, and post-test 1 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x3, x2-x4**) are significantly different. The graphical representation of Physical Activity Group in terms of Memory Span was presented in figure no.29

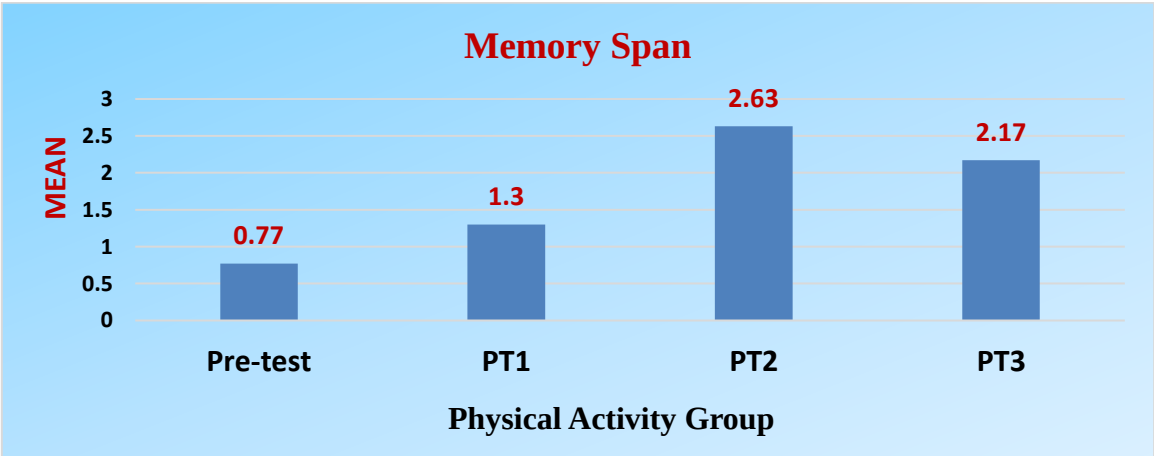


Fig no.29 Memory Span of Physical Activity Group

In Figure 29 showed that average score of Post-test (PT2) was higher by activity of Recreational Activity (2.63) in comparison to pre-test (0.77) and other remaining activity.

Table-36: Comparison between Session-wise of Linear Perception of Physical Activity Group (Experimental Group)

Linear Perception							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	7.79	8.09	8.93	9.57	3	20.4	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table- 36 represents the Mean of Yoga=PT1 was 1.3, Recreational Activities=PT2 was 2.63 and Gymnastics=PT3 was 2.17 respectively, indicates that programs of Yoga, Recreational activities and Gymnastics intervention were gradually effective in terms of memory span. The obtained F (20.4) was higher than table value (5.56) rejecting null hypothesis along statistically significant, since the p-value (.002) is less than the significance level. The post-hoc analysis has been presented in table no.36 (i).

TABLE 36 (i) Post-hoc Analysis of Linear Perception for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.3	1.71	9.4175	0.21
x1-x3	1.14	16.18	9.4175	0.001
x1-x4	1.77	40.16	9.4175	<.001
x2-x3	0.84	16.21	9.4175	0.001
x2-x4	1.5	28.99	9.4175	<.001
x3-x4	0.64	7.47	9.4175	0.02

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.36 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 2, post-test 1 & post-test 3 and post-test 2 & post-test 3 (**x1-x3, x1-x4, x2-x3, x2-x4, x3-x4**) are significantly different. The graphical representation of Physical Activity Group in terms of Linear Perception was presented in figure no.30.

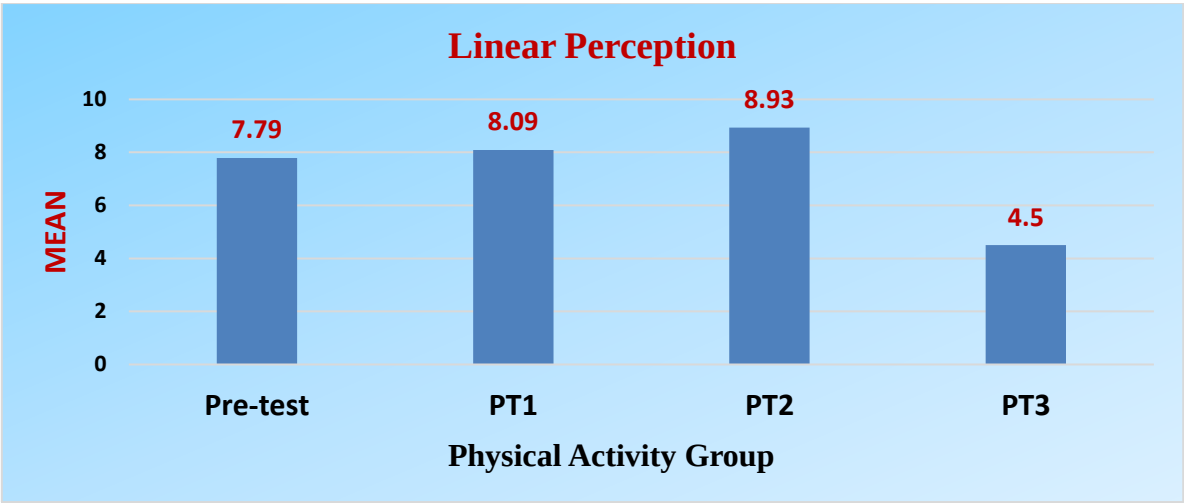


Fig no. 30 Linear Perception of Physical Activity Group

In Figure 30 displayed average score of Post-test (PT2) was advanced with the activity of Recreational Activity (8.93) in comparison to pre-test (7.79) and other remaining activity.

***Note:** For Physical Activity Group (PA), the Academic Performance data was taken for pre & post-test only. Hence, session-wise (PT1, PT2, PT3) statistics was not done.

Table- 37: Comparison between Session-wise of Behavioural Problem of Physical Activity Group (Experimental Group)

Behavioural Problem						
Components	**P0**	**PT1**	**PT2**	**PT3**	**F**	**p-value**
Emotional Problem	5.07	3.67	3.33	1.93	10.32	<.001
Conduct Problem	4.07	3.73	3.4	2.2	4.88	.005
Hyperactivity Problem	3.67	2.93	2.67	2.87	1.58	.209
Peer-Problem	3.4	2.33	3.73	1.67	4.77	.006
Total Difficulty	16.2	12.67	13.13	8.67	11.07	<.001
Pro-Social Behaviour	7.67	8.33	7.6	9.27	5.38	.003

***df=3 *N=15 *Table value=5.56 *Significance Level at 0.05**

Table- 37 presents score of behavioural problems between session-wise, hence significant difference was found in Emotional Problem (E.P), Conduct Problem (C.P), Peer-problem (P.P) with slight difference, Total Difficulty (SD), Pro-social behaviour (P.S) as the p-value was less than significance level, except Hyperactivity problem (H.P) with (p=.209), rejecting hypotheses. So, it affirmed that physical activities, i.e., yoga, recreational activities and gymnastics had gradual effect on children with behavioural problem. The post-hoc analysis has been presented from table no. 37 (i)-37 (vi).

TABLE 37 (i) Post-hoc Analysis of Emotional Problem for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.4	4.7	9.4175	0.05
x1-x3	1.73	11.08	9.4175	0.004
x1-x4	3.13	43.19	9.4175	<.001
x2-x3	0.33	0.19	9.4175	0.67
x2-x4	1.73	12.89	9.4175	0.002
x3-x4	1.4	9.44	9.4175	0.008

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 3, and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4**) are significantly different.

TABLE 37 (ii) Post-hoc Analysis of Conduct Problem for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.33	0.47	9.4175	0.50
x1-x3	0.67	1.35	9.4175	0.27
x1-x4	1.87	19.39	9.4175	<.001
x2-x3	0.33	0.35	9.4175	0.57
x2-x4	1.53	6.19	9.4175	0.03
x3-x4	1.2	7.88	9.4175	0.01

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (ii) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 3, post-test 1 & post-test 3 and post-test 2 & post-test 3 (**x1-x4, x2-x4, x3-x4**) are significantly different.

TABLE 37 (iii) Post-hoc Analysis of Hyperactivity Problem for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.73	1.98	9.4175	0.18
x1-x3	1	3.28	9.4175	0.09
x1-x4	0.8	2.47	9.4175	0.14
x2-x3	0.27	0.32	9.4175	0.58
x2-x4	0.07	0.02	9.4175	0.88
x3-x4	0.2	0.21	9.4175	0.66

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (iii) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that there is no significant difference between them.

TABLE 37 (iv) Post-hoc Analysis of Peer-Problem for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.07	2.81	9.4175	0.12
x1-x3	0.33	0.34	9.4175	0.57
x1-x4	1.73	6.94	9.4175	0.02
x2-x3	1.4	4.9	9.4175	0.04
x2-x4	0.67	0.89	9.4175	0.36
x3-x4	2.07	19.11	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (iv) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 3, post-test 1 & post-test 2 and post-test 2 & post-test 3 (**x1-x4, x2-x3, x3-x4**) are significantly different.

TABLE 37 (v) Post-hoc Analysis of Total Difficulty for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	3.53	9.44	9.4175	0.008
x1-x3	3.07	4.7	9.4175	0.05
x1-x4	7.53	40.85	9.4175	<.001
x2-x3	0.47	0.09	9.4175	0.76
x2-x4	4	7.7	9.4175	0.01
x3-x4	4.47	14.77	9.4175	0.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (v) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 3 and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4**) are significantly different.

TABLE 37 (vi) Post-hoc Analysis of Pro-social Behaviour for Physical Activity Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.67	1.89	9.4175	0.19
x1-x3	0.07	0.02	9.4175	0.88
x1-x4	1.6	7.5	9.4175	0.01
x2-x3	0.73	2.9	9.4175	0.11
x2-x4	0.93	5.9	9.4175	0.03
x3-x4	1.67	12.87	9.4175	0.003

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.37 (vi) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 3, post-test 1 & post-test 3 and post-test 2 & post-test 3 (**x1-x4, x2-x4, x3-x4**) are significantly different. The graphical representation of Physical Activity Group in terms of Behavioural Problem was presented in figure no.31

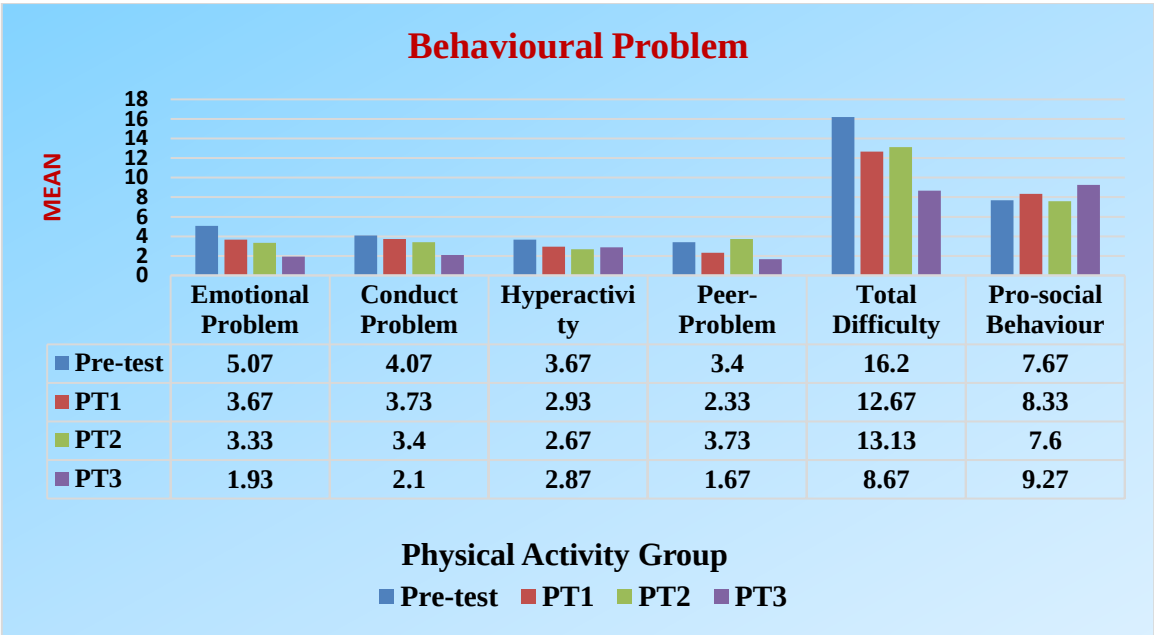


Fig no.31 Behavioural Problem of Physical Activity Group

From figure 31 showed that in terms of Emotional Problem ((PT3=1.93), Conduct Problem (PT3=2.06), Peer-Problem (PT3=1.67) and Total Difficulty (PT3=8.67) the mean score of Post-test 3 was lower in comparison to the respective Pre-test, which indicates that activity has a gradual decreased effect to reduce behavioural problem, whereas activity of Gymnastics was better. Moreover, it showed that in terms of Hyperactivity all the activity modules (PT1, PT2, PT3) were similar and effective in comparison to Pre-test and in terms of Pro-social behaviour Post-test (PT3=9.27) had improvement in comparison to other activity.

4.4.2 BEHAVIOUR THERAPY GROUP:

In this section, comparison of session -wise effect on dependent variables with intervention of Behaviour Therapy has been presented below and the p-value with the red colour designating a non-significant value.

Table-38: Comparison between Session-wise of State Anxiety of Behaviour Therapy Group (Experimental Group)

State Anxiety							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	36.07	30.13	30.2	31.6	3	8.96	.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-38 represents the Mean value (PT1=30.13) after 4th weeks (PT2=30.2) after 8th week, and (PT3=31.6) after 12 weeks of intervention, indicates that the activity of (PT1) was more effective to children in state anxiety and in comparison, to pre-test (P0=36.07), the therapy benefited the children in terms of state anxiety. Since the p-value (.001) is less than the significance level and the F (8.96) value was higher than table value, disproving null hypothesis along significant. The post-hoc analysis was obtainable in table no. 38 (i).

Table 38 (i) Post-hoc Analysis of State Anxiety for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	5.93	13.32	9.4175	0.002
x1-x3	5.86	14.46	9.4175	0.001
x1-x4	4.47	6.9	9.4175	0.02
x2-x3	0.07	0.02	9.4175	0.89
x2-x4	1.47	1.37	9.4175	0.26
x3-x4	1.4	2.48	9.4175	0.14

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.38 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2 and pre-test & post-test 3 (**x1-x2, x1-x3, x1-x4**) are significantly different. The graphical representation of Behaviour Therapy Group in terms of Behavioural Problem was presented in figure no.32

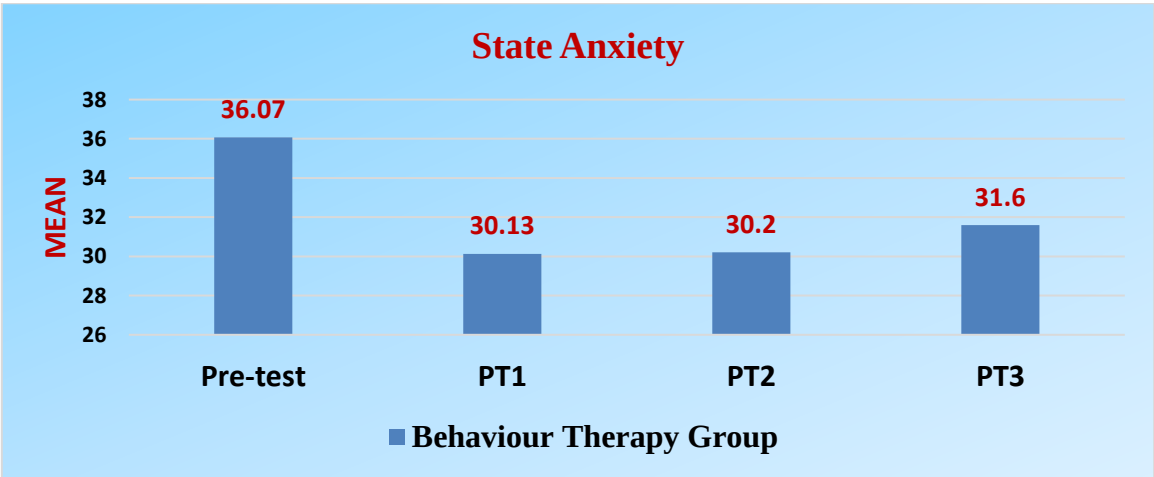


Fig no. 32 State Anxiety of Behaviour Therapy Group

In Figure 32 showed average score of Post-test (PT1) was reduced and better with the activity of Yoga (30.13) in comparison to pre-test (36.07) and other remaining activity.

Table-39: Comparison between Session-wise of Trait Anxiety of Behaviour Therapy Group (Experimental Group)

Trait Anxiety							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	40.2	37.27	35.6	33.73	3	7.64	.002

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-39 represents the Mean value (PT1=37.27) after 4th weeks of Behavioural Therapy, (PT2=35.6) after 8th weeks and (PT2=33.73) after 12 weeks of intervention, indicates that the activity of (PT1) intervention were more effective to children in trait anxiety and in comparison, to pre-test (P0=40.2) specifies the importance of therapy along significant with p-value (.002) disproving null hypothesis as F value (7.64) was higher than table value (5.56). The post-hoc analysis was presented in table no. 39 (i).

TABLE 39 (i) Post-hoc Analysis of Trait Anxiety for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	2.93	4.09	9.4175	0.06
x1-x3	4.6	9.27	9.4175	0.009
x1-x4	6.47	12.51	9.4175	0.003
x2-x3	1.67	5.54	9.4175	.034
x2-x4	3.53	4.86	9.4175	.045
x3-x4	1.87	3.39	9.4175	.087

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.39 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pair that means of pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 2 and post-test 1 & post-test 3 (**x1-x3, x1-x4, x2-x3, x2-x4**) are significantly different. The graphical representation of Behaviour Therapy Group in terms of Trait Anxiety was presented in figure no.33

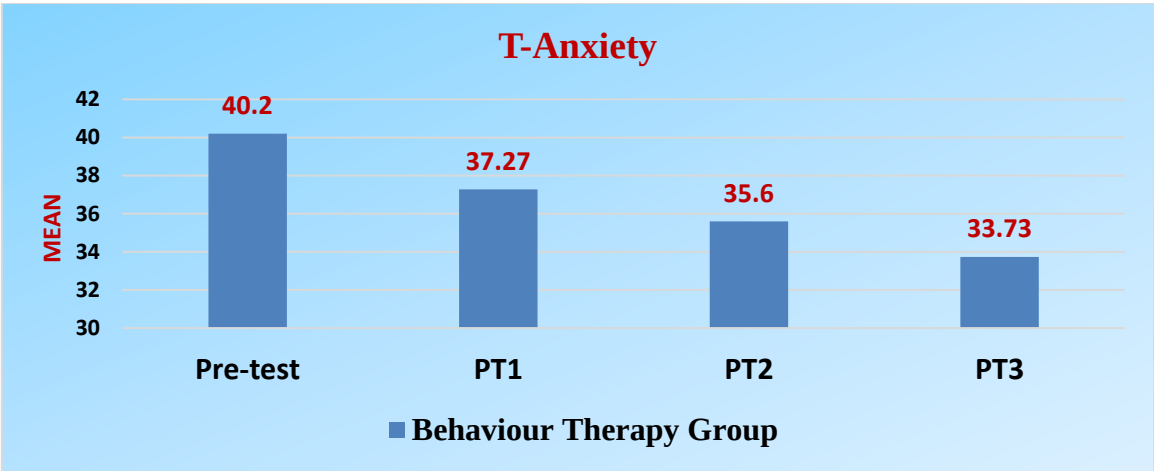


Fig no. 33 Trait Anxiety of Behaviour Therapy Group

In Figure 33 presented average score of Post-test (PT3) was lesser with the activity of Gymnastics (33.73) in comparison to pre-test (40.2) and other remaining activity.

Table-40: Comparison between Session-wise of Memory Span of Behaviour Therapy Group (Experimental Group)

Memory Span							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	0.7	2.3	1.77	1.73	3	12.37	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-40 represents the Mean value (PT1=2.3) after 4th weeks of Behavioural Therapy, (PT2=1.77) and after 8th weeks (PT2=1.73) after 12 weeks of intervention, indicates that the activity of (PT1) intervention were gradually effective in terms of memory span and in comparison, to pre-test (P0=0.7) indicates that the therapy has helped the students to recall things, memorize and being attentive. The obtained F (12.37) was higher than table value (5.56) rejecting null hypothesis along significant as p-value (<.001). The post-hoc analysis has been presented in table no. 40 (i).

TABLE 40 (i) Post-hoc Analysis of Memory Span for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.6	21	9.4175	<.001
x1-x3	1.07	17.79	9.4175	<.001
x1-x4	1.03	19.11	9.4175	<.001
x2-x3	0.53	9.58	9.4175	<.001
x2-x4	0.57	2.88	9.4175	0.11
x3-x4	0.03	0.02	9.4175	0.88

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.40 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, and post-test 1 & post-test 2 (**x1-x2, x1-x3, x1-x4, x2-x3**) are significantly different. The graphical representation of Behaviour Therapy Group in terms of Memory Span was presented in figure no.34

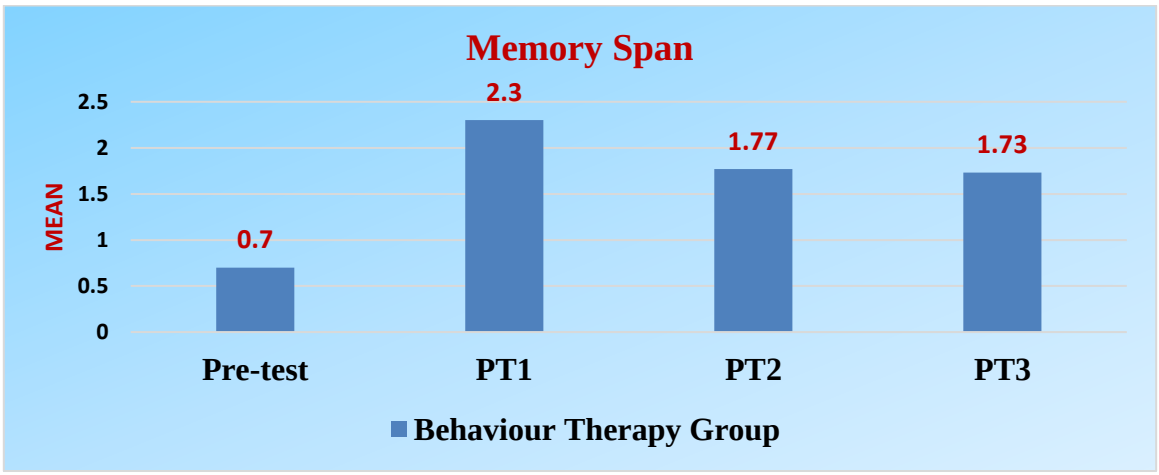


Fig no.34 Memory Span of Behaviour Therapy Group

In Figure 34 displayed average score of Post-test (PT1) has improved with the activity of Yoga (2.3) in comparison to pre-test (0.7) and other remaining activity.

Table- 41: Comparison between Session-wise of Linear Perception of Behaviour Therapy Group (Experimental Group)

Linear Perception							
Test	**P0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	8.14	9.23	9.08	9.64	3	11.7	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-41 represents the Mean value (PT1=9.23) after 4th weeks of Behavioural Therapy, (PT2=9.08) after 8th weeks and (PT2=9.64) after 12 weeks of intervention, indicates that the activities of (PT1) were gradually effective to increase Linear Perception of the children and in comparison, to pre-test (P0=8.14) indicates that the therapy has helped to determine good vision, linear perspective and visual judgement. Since the F value (11.7) was higher than table value (5.56) disproving null hypothesis along significant (p<.001). The post-hoc analysis was presented in table no. 41 (i).

TABLE 41 (i) Post-hoc Analysis of Linear Perception for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.09	11.56	9.4175	0.004
x1-x3	0.94	16.68	9.4175	0.001
x1-x4	1.5	27.07	9.4175	<.001
x2-x3	0.15	0.65	9.4175	0.43
x2-x4	0.41	1.62	9.4175	0.22
x3-x4	0.56	9.1	9.4175	0.009

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.41 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x3-x4**) are significantly different. The graphical representation of Behaviour Therapy Group in terms of Linear Perception was presented in figure no.35

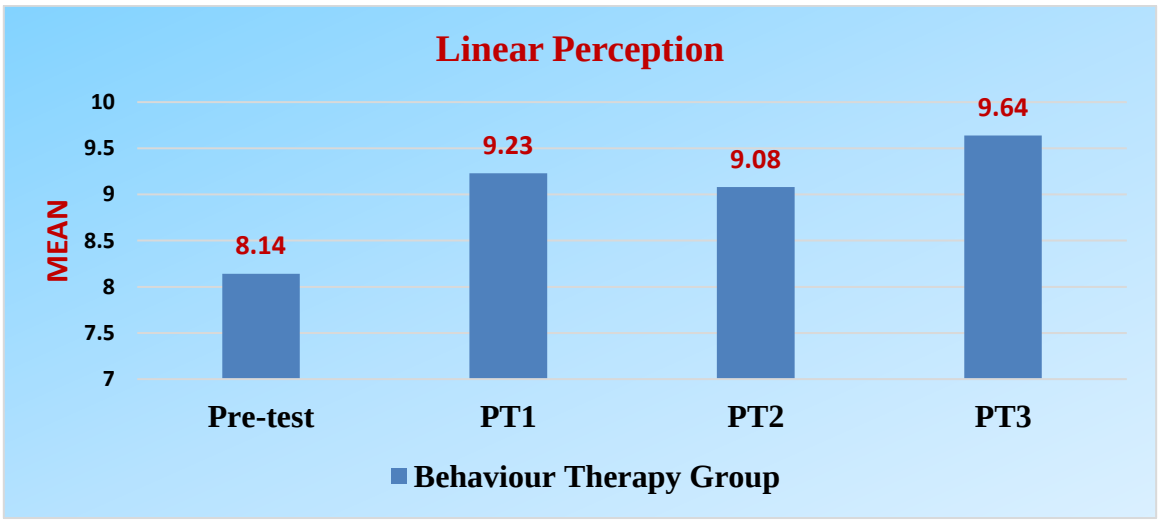


Fig no. 35 Linear Perception of Behaviour Therapy Group

In Figure 35 showed average score of Post-test (PT3=9.64) has increased with the activity of Gymnastics in comparison to pre-test (8.14) whereas (PT1=9.23) and (PT2=9.08) were found almost similar.

***Note:** For Behaviour Therapy Group (BT), the Academic Performance data was taken for pre & post-test only. Hence, session-wise (PT1, PT2, PT3) statistics was not done.

Table- 42: Comparison between Session-wise of Behavioural Problem of Behaviour Therapy Group (Experimental Group)

Behavioural Problem						
Components	**P0**	**PT1**	**PT2**	**PT3**	**F**	**p-value**
Emotional Problem	5.07	3.6	3.07	2.6	9.46	.002
Conduct Problem	3.8	3.2	3.47	2.13	3.43	.025
Hyperactivity Problem	3.6	2.2	2.2	1.6	4.42	.032
Peer-Problem	3.73	2.13	2.6	1.73	5.41	.014
Total Difficulty	16.27	11.13	11.27	8.2	12.19	<.001
Pro-Social Behaviour	8.2	9	8.2	9.6	7.05	<.001

***df=3 *N=15 *Table value=5.56 *Significance Level at 0.05**

Table-42 validated that in all the components of behavioural problems (emotional problem conduct problem, Hyperactivity problem, peer-problem, total behavioural problem and pro-social Behaviour significant difference has been found rejecting null hypothesis. Hence, it also affirmed that Behavioural Therapy exists significant session effect on subjects. The post-hoc analysis of all components was presented in table no.42 (i)- 42 (vi).

TABLE 42 (i) Post-hoc Analysis of Emotional Problem for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.47	5.1	9.4175	0.04
x1-x3	2	11.67	9.4175	0.004
x1-x4	2.47	29.21	9.4175	<.001
x2-x3	0.53	10.41	9.4175	0.006
x2-x4	1	4.2	9.4175	0.06
x3-x4	0.47	1	9.4175	0.33

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, and post-test 1 & post-test 2, (**x1-x2, x1-x3, x1-x4, x2-x3**) are significantly different.

TABLE 42 (ii) Post-hoc Analysis of Conduct Problem for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.6	0.95	9.4175	0.34
x1-x3	0.33	0.31	9.4175	0.58
x1-x4	1.67	5.43	9.4175	0.04
x2-x3	0.27	0.60	9.4175	0.45
x2-x4	1.07	3.8	9.4175	0.071
x3-x4	1.33	11.91	9.4175	0.004

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (ii) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 3 and post-test 2 & post-test 3, (**x1-x4, x3-x4**) are significantly different.

TABLE 42 (iii) Post-hoc Analysis of Hyperactivity Problem for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.4	3.69	9.4175	0.075
x1-x3	1.4	4.39	9.4175	0.05
x1-x4	2	19.09	9.4175	<.001
x2-x3	0	0	9.4175	1
x2-x4	0.6	0.86	9.4175	0.36
x3-x4	0.6	1.12	9.4175	0.30

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (iii) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 2 and pre-test & post-test 3, **(x1-x3, x1-x4)** are significantly different.

TABLE 42 (iv) Post-hoc Analysis of Peer Problem for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.6	6	9.4175	0.03
x1-x3	1.13	2.87	9.4175	0.11
x1-x4	2	10	9.4175	0.006
x2-x3	0.47	7.98	9.4175	0.01
x2-x4	0.4	0.89	9.4175	0.36
x3-x4	0.87	4.2	9.4175	0.06

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (iv) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 3, and post-test 1 & post-test 2 (**x1-x2, x1-x4, x2-x3**) are significantly different.

TABLE 42 (v) Post-hoc Analysis of Total Difficulty for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	5.13	9.17	9.4175	0.009
x1-x3	5	11.4	9.4175	0.004
x1-x4	8.07	24.27	9.4175	<.001
x2-x3	0.13	0.06	9.4175	0.803
x2-x4	2.93	5.09	9.4175	0.04
x3-x4	3.07	7.13	9.4175	0.02

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (v) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 3, and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4**) are significantly different.

TABLE 42 (vi) Post-hoc Analysis of Pro-social Behaviour for Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.8	3.33	9.4175	0.009
x1-x3	0	0	9.4175	1
x1-x4	1.4	11.56	9.4175	0.004
x2-x3	0.8	7.3	9.4175	0.02
x2-x4	0.6	3.86	9.4175	0.07
x3-x4	1.4	16.08	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.42 (vi) represents the value of the post-hoc analysis, which revealed with the ensuing pair that the means of pre-test & post-test 1, pre-test & post-test 3, post-test 1 & post-test 2, and post-test 2 & post-test 3 (**x1-x2, x1-x4, x2-x3, x3-x4**) are significantly different in

terms of pro-social behaviour. The graphical representation of Behaviour Therapy Group in terms of Behaviour Problem was presented in figure no.36

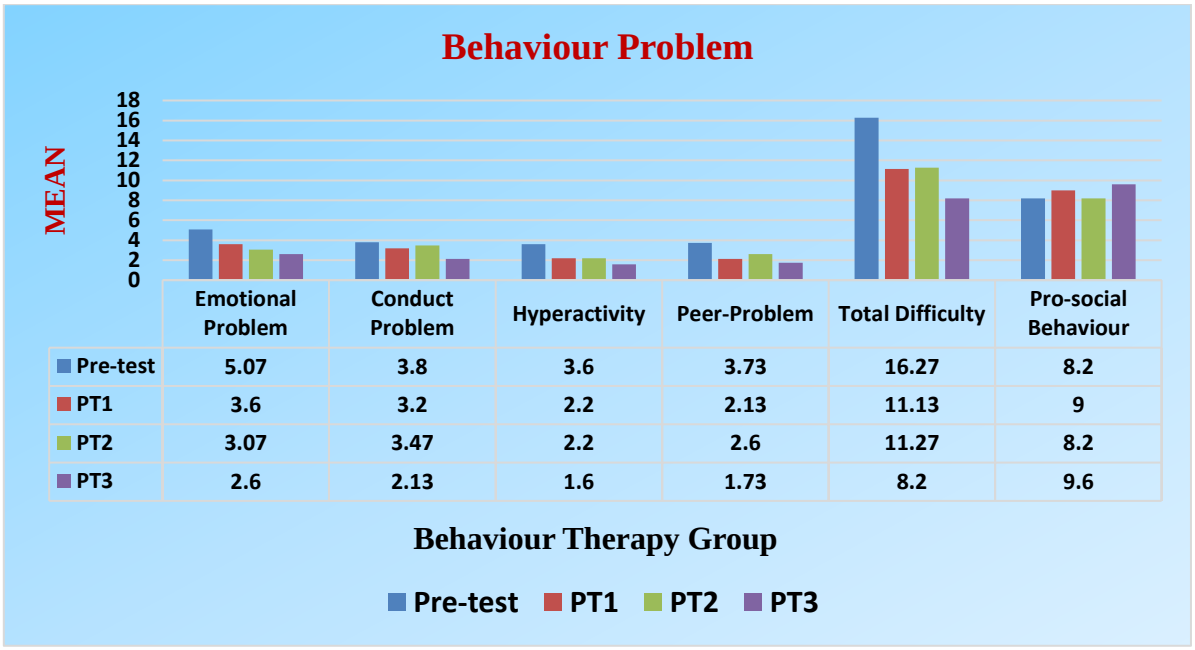


Fig no.36 Behavioural Problem of Behaviour Therapy Group

From figure 36 it showed that in terms of all behavioural problem (PT3) was found lower in comparison to the respective Pre-test, which indicates that activity has a gradual decreased effect to reduce behavioural problem with Behaviour Therapy intervention, and in terms of Pro-social behaviour Post-test (PT3=9.6) had improvement in comparison to pre-test (8.2), whereas PT1 and PT2 remain similar and stagnant.

4.4.3 PHYSICAL ACTIVITY & BEHAVIOURAL THERAPY GROUP:

In this section, comparison of session -wise effect on dependent variables with intervention of Physical Activity & Behaviour Therapy has been presented below and the p-value with the red colour designating a non-significant value.

Table- 43: Comparison between Session-wise of State Anxiety of Physical Activity & Behaviour Therapy Group (Experimental Group)

State Anxiety							
Test	**PT0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	31.33	26.6	25.4	23.67	3	21.79	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-51 represents the average value of pre-test (P0=31.33), and post-test after 4th week (PT1=26.2), after 8th week (PT2=25.4) and after 12th week (PT3=23.67) indicates gradual change in state anxiety and in comparison, to pre-test the intervention was very effective for children in state anxiety. Since the F value (21.79) was over table value (5.56) rejecting null hypothesis along significant (p<.001). The post-hoc analysis pair wise has been presented in table no. 43 (i).

TABLE 43 (i) Post-hoc Analysis of State Anxiety for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	4.7333	16.99	9.4175	<.001
x1-x3	5.9333	30.94	9.4175	<.001
x1-x4	7.6667	33.60	9.4175	<.001
x2-x3	1.2	2.3	9.4175	0.15
x2-x4	2.9333	17.22	9.4175	<.001
x3-x4	1.7333	4.89	9.4175	0.04

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.43 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 3 and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)** were highly significant. The graphical representation of Physical Activity and Behaviour Therapy Group in terms of State Anxiety was presented in figure no.37

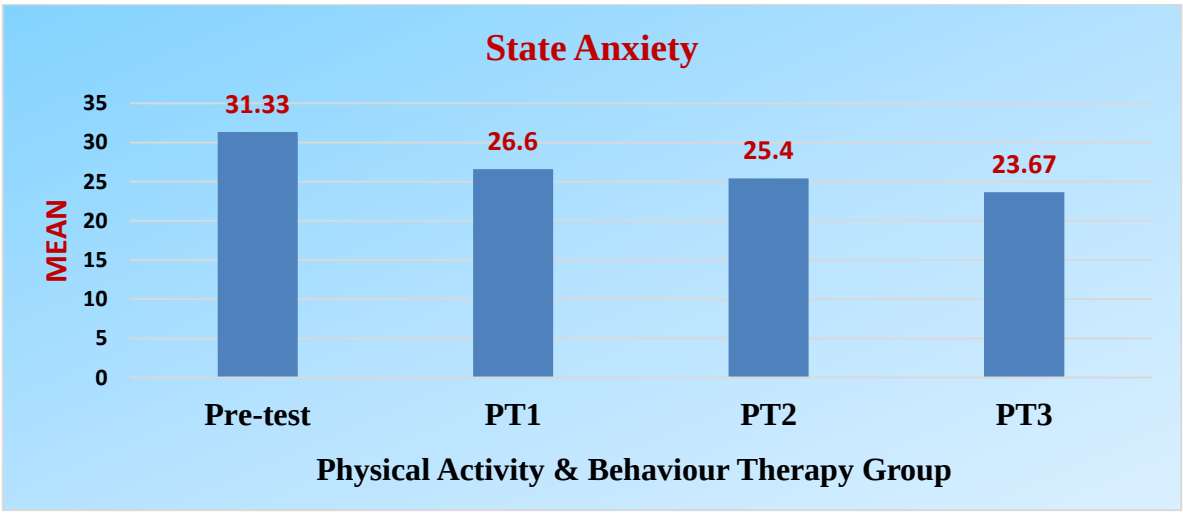


Fig no. 37 State Anxiety of Physical Activity & Behaviour Therapy Group

In Figure 37 displayed average score of Post-test (PT3=23.67) was reduced with the activities of intervention, whereas (PT1=26.6) and (PT2=25.4) were found almost similar and greater change has been found in PT1 with the activity of yoga in comparison to pre-test (31.33).

Table- 44: Comparison between Session-wise of Trait Anxiety of Physical Activity & Behaviour Therapy Group (Experimental Group)

Trait Anxiety							
Test	**PT0**	**PT1**	**PT2**	**PT3**	**Df**	**F**	**p-value**
Mean	38.33	31.6	29.27	24.07	3	37.62	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-44 represents the mean value of pre-test (P0=38.33), and post-test (PT3=24.07) after 12 weeks of combined intervention, indicate the gradual improvement in trait anxiety and in comparison, to pre-test the intervention was very effective for children in trait anxiety. Since the F value (37.62) higher than table value (5.56) disproving null hypothesis along significant (p<.001). The post-hoc analysis present the pair-wise difference in table no. 44 (i).

TABLE 44 (i) Post-hoc Analysis of Trait Anxiety for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	6.73	13.70	9.4175	<.001
x1-x3	9.07	28.26	9.4175	<.001
x1-x4	14.27	92.73	9.4175	<.001
x2-x3	2.33	6.3	9.4175	0.02
x2-x4	7.53	55.24	9.4175	<.001
x3-x4	5.2	31.13	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.44 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 3, post-test 1 & post-test 2, post-test 2 & post-test 3 **(x1-x2, x1-x3, x1-x4, x2-x3, x2-x4, x3-x4)** are highly significant. The graphical representation of Physical Activity and Behaviour Therapy Group in terms of Trait Anxiety was presented in figure no.38

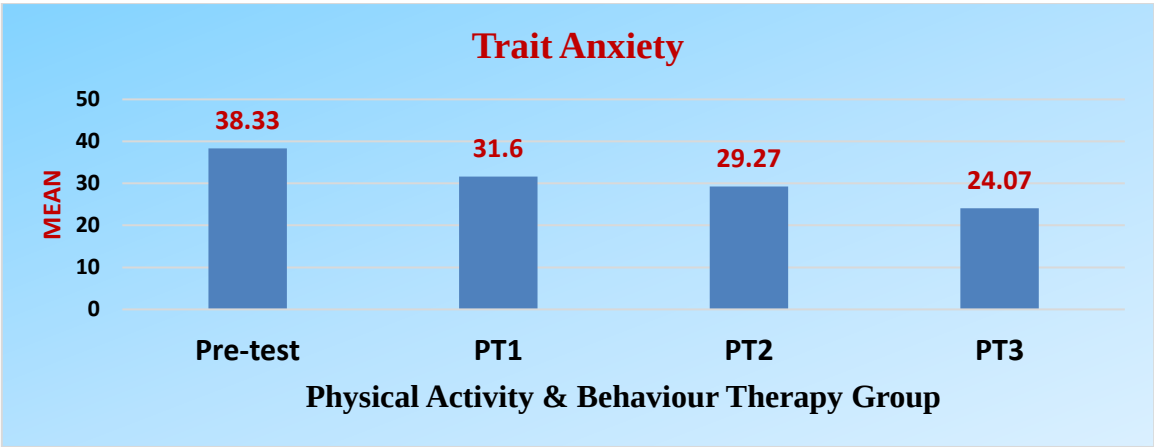


Fig no.38 Trait Anxiety of Physical Activity & Behaviour Therapy Group

In Figure 38 displayed the average of Post-test (PT3=24.07) was lesser with the activities of intervention, whereas (PT1=31.6) and (PT2=29.27) were found almost similar and greater change has been found in PT1 with the activity of yoga in comparison to pre-test (38.33).

Table- 45: Comparison between Session-wise of Memory Span of Physical Activity & Behaviour Therapy Group (Experimental Group)

Memory Span							
Test	**PT0**	**PT1**	**PT2**	**PT3**	**df**	**F**	**p-value**
Mean	1.53	1.57	2.6	2.63	3	12.99	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-45 represents the Mean of pre-test (P0=1.53), and post-test (PT3=2.63), indicates that in comparison to pre-test there is increased and effective improvement in terms of memory span.in children. Since F value (12.99) higher than table value (5.56) rejecting null hypothesis along significant (p<.001). The post-hoc analysis present the pair-wise difference in table no 45 (i).

TABLE 45 (i) Post-hoc Analysis of Memory Span for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.033	0.030	9.4175	0.86
x1-x3	1.067	22.90	9.4175	<.001
x1-x4	1.1	35.79	9.4175	<.001
x2-x3	1.03	13.01	9.4175	0.002
x2-x4	1.07	22.90	9.4175	<.001
x3-x4	0.033	0.011	9.4175	0.917

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.45 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 2, post-test 2 & post-test 3 **(x1-x3, x1-x4, x2-x3, x2-x4)** were highly significant. The graphical representation of Physical Activity and Behaviour Therapy Group in terms of Memory Span was presented in figure no.39

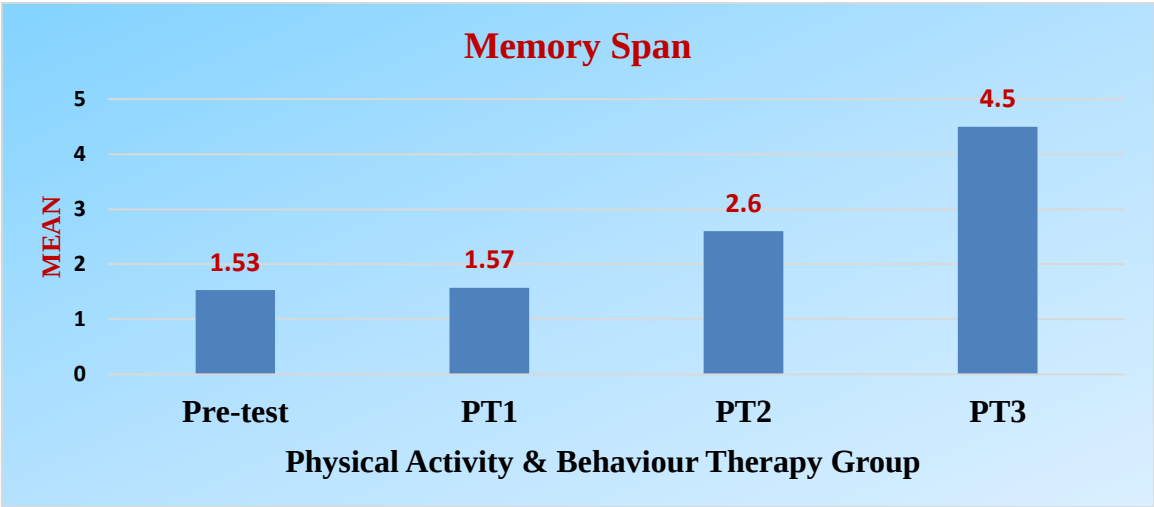


Fig no.39 Memory Span of Physical Activity & Behaviour Therapy Group

In Figure 39 showed average score of Post-test (PT3=4.5) was improved with the activities of intervention in comparison to pre-test (31.33), which indicates that memory span had gradually improved a lot combined activity.

Table-46: Comparison between Session-wise of Linera Perception of Physical Activity & Behaviour Therapy Group (Experimental Group)

Linear Perception							
Test	**PT0**	**PT1**	**PT2**	**PT4**	**df**	**F**	**p-value**
Mean	8.03	8.72	9.5	9.62	3	15.89	<.001

***N=15 *Table value=5.56 *Significance Level at 0.05**

Table-46 represents the Mean of pre-test (P0=8.03), and post-test (PT3=9.62), indicates that in comparison to pre-test there is increased and effective improvement in terms of linear perception. The F value (15.89) was higher than table value (5.56) rejecting null hypothesis along significant (p<.001). The post-hoc analysis present the pair-wise difference in table no. 46 (i).

TABLE 46 (i) Post-hoc Analysis of Linear Perception for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	0.69	6.47	9.4175	0.02
x1-x3	1.47	36.22	9.4175	<.001
x1-x4	1.59	44.39	9.4175	<.001
x2-x3	0.78	5.87	9.4175	0.03
x2-x4	0.89	8.82	9.4175	0.01
x3-x4	0.12	0.45	9.4175	0.51

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.46 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of means of pre-test & post-test 1, pre-test & post-test 2, pre-test & post-test 3, post-test 1 & post-test 2, and post-test 1 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x3, x2-x4)** are highly significant. The graphical representation of Physical Activity and Behaviour Therapy Group in terms of Linear Perception was presented in figure no.40

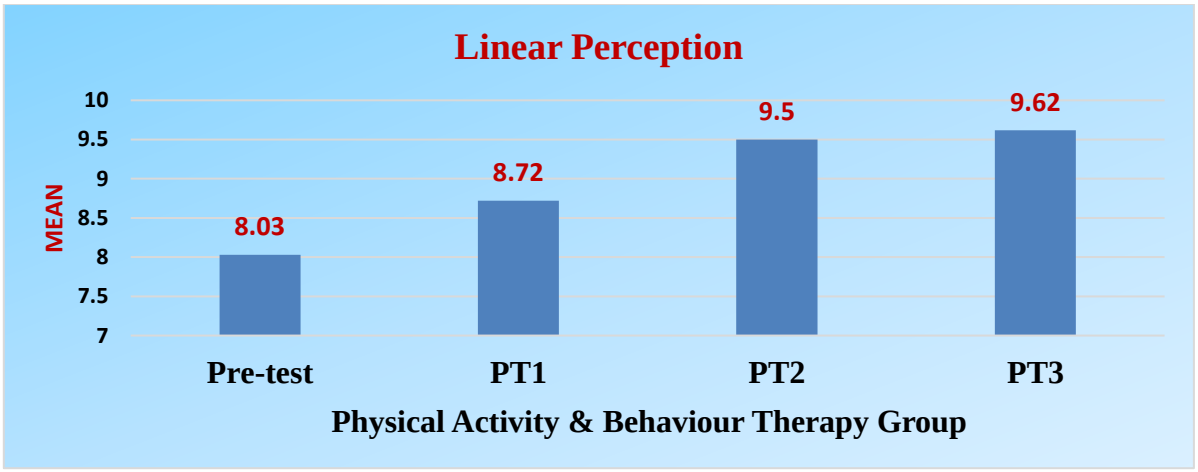


Fig no.40 Linear Perception of Physical Activity & Behaviour Therapy Group

In Figure 40 presented average score of Post-test (PT3=9.62) was improved, more effective and greater change has been found in PT3 in comparison to pre-test (8.03)

***Note:** For Physical Activity & Behaviour Therapy Group (PABT), the Academic Performance data was taken for pre & post-test only. Hence, session-wise (PT1, PT2, PT3) statistics was not done.

Table- 47: Comparison between Session-wise of Behavioural Problem of Physical Activity & Behaviour Therapy Group (Experimental Group)

Behavioural Problem						
Components	**P0**	**PT1**	**PT2**	**PT3**	**F**	**p-value**
Emotional Problem	5.53	2.73	2.2	0.33	48.74	<.001
Conduct Problem	3.93	2.4	1.27	0.33	27.26	<.001
Hyperactivity Problem	3.27	1.73	1.4	0.27	15.68	<.001
Peer-Problem	3.47	2.13	1.6	0.37	8.76	<.001
Total Difficulty	16.27	9	6.53	1.8	85.42	<.001
Pro-Social Behaviour	7.13	8.93	9.4	9.53	12.38	<.001

***df=3 *N=15 *Table value=5.56 *Significance Level at 0.05**

Table-47 present the different components of behavioural problems between pre-test and post-tests. As the p-value of all behavioural problems was lesser than significance level. Hence the null hypothesis is rejected. So, it affirmed that Behavioural Therapy exists significant session effect on children with behavioural problem. The post-hoc analysis present the pair-wise difference from table no. 47 (i)- 47 (vi).

TABLE 47 (i) Post-hoc Analysis of Emotional Problem for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	2.8	30.26	9.4175	<.001
x1-x3	3.33	47.29	9.4175	<.001
x1-x4	5.2	175.26	9.4175	<.001
x2-x3	0.533	1.37	9.4175	.262
x2-x4	2.4	30.55	9.4175	<.001
x3-x4	1.87	37.08	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (i) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 3, post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)** are highly significant in terms of emotional problem.

TABLE 47 (ii) Post-hoc Analysis of Conduct Problem for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.53	13.08	9.4175	<.001
x1-x3	2.67	23.58	9.4175	<.001
x1-x4	3.6	59.68	9.4175	<.001
x2-x3	1.33	8.5	9.4175	0.01
x2-x4	2.07	27.23	9.4175	<.001
x3-x4	0.93	16.73	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (ii) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 3, post-test 2 & post-test 3, and post-test 1 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x2-x3, x3-x4)** are highly significant.

TABLE 47 (iii) Post-hoc Analysis of Hyperactivity Problem for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.53	8.55	9.4175	0.01
x1-x3	1.87	16.73	9.4175	<.001
x1-x4	3	55.58	9.4175	<.001
x2-x3	0.33	0.45	9.4175	0.51
x2-x4	1.47	15.19	9.4175	<.001
x3-x4	1.13	9.07	9.4175	0.009

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (iii) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of pre-test & post-test 1, pre-test & post-test 2, means of pre-test

& post-test 3, means of post-test 1 & post-test 3, and post-test 2 & post-test 3 (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)** are highly significant.

TABLE 47 (iv) Post-hoc Analysis of Peer Problem for Physical Activity & Behaviour Therapy Group

Pair	Difference	F	Critical Mean	p-value
x1-x2	1.33	3.6	9.4175	0.078
x1-x3	1.87	14.14	9.4175	<.001
x1-x4	2.6	19.28	9.4175	<.001
x2-x3	0.533	1.88	9.4175	0.19
x2-x4	1.27	5.7	9.4175	0.03
x3-x4	0.733	4.19	9.4175	0.06

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (iv) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 2, means of pre-test & post-test 3 and post-test 1 & post-test 3 **(x1-x3, x1-x4, x2-x4)** are significant.

TABLE 47 (v) Post-hoc Analysis of Total Difficulty for Physical Activity & Behaviour Therapy Group

Total Difficulty				
Pair	**Difference**	**F**	**Critical Mean**	**p-value**
x1-x2	7.27	37.85	9.4175	<.001
x1-x3	9.73	156.74	9.4175	<.001
x1-x4	14.47	338.77	9.4175	<.001
x2-x3	2.47	6.33	9.4175	0.03
x2-x4	7.2	54.87	9.4175	<.001
x3-x4	4.73	37.66	9.4175	<.001

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (v) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3, means of post-test 1 & post-test 3, post-test 1 & post-test 2, and post-test 2 & post-test 3 are highly significant **(x1-x2, x1-x3, x1-x4, x2-x4, x2-x3, x3-x4)**.

TABLE 47 (vi) Post-hoc Analysis of Pro-social Behaviour for Physical Activity & Behaviour Therapy Group

Pro-social Behaviour				
Pair	**Difference**	**F**	**Critical Mean**	**p-value**
x1-x2	1.8	15.32	9.4175	<.001
x1-x3	2.27	16.61	9.4175	<.001
x1-x4	2.4	13.81	9.4175	<.001
x2-x3	0.47	2.91	9.4175	0.11
x2-x4	0.6	2.74	9.4175	0.12
x3-x4	0.133	0.38	9.4175	0.55

x1=pre-test, **x2**= post-test 1, **x3**= post-test 2, **x4**= post-test 3

Table no.47 (vi) represents the value of the post-hoc analysis, which revealed with the ensuing pairs that the means of Pre-test & post-test 1, means of pre-test & post-test 2, means of pre-test & post-test 3 **(x1-x2, x1-x3, x1-x4)** are highly significant. The graphical representation of Physical Activity and Behaviour Therapy Group in terms of Behaviour Problem was presented in figure no.41

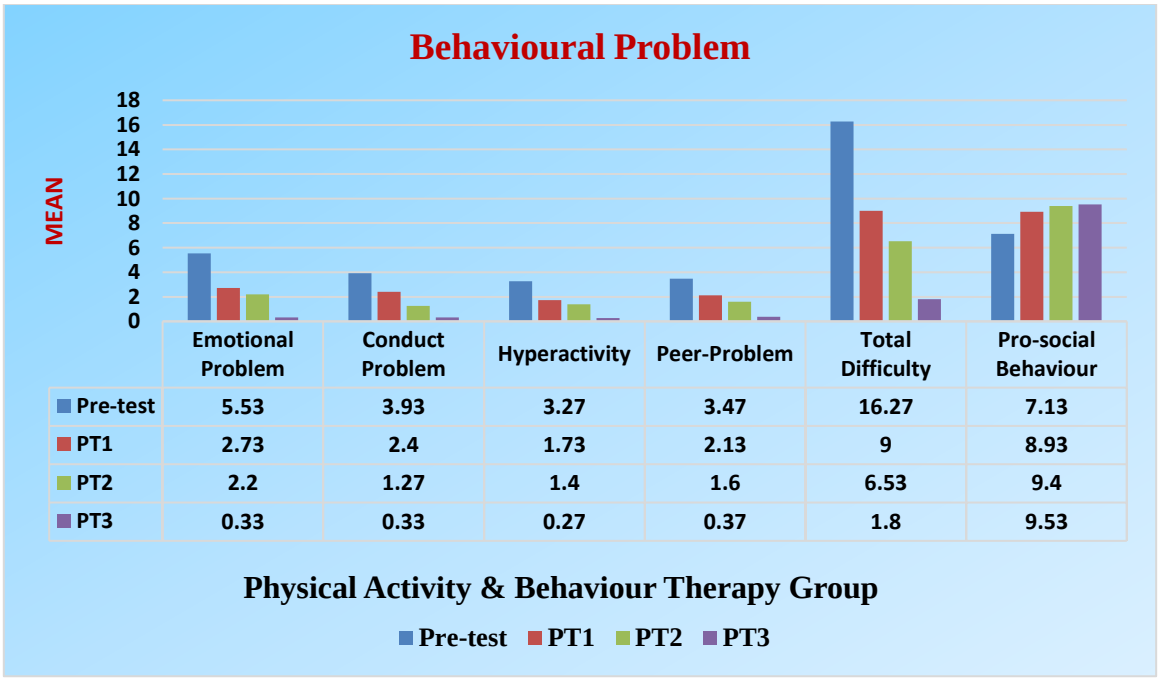


Fig no.41 Behavioural Problem of Physical Activity & Behaviour Therapy Group

In Figure 41 showed the mean score of all behavioural problem indicates that Post-test 3 was found very effective in comparison to PT1 and PT2. Moreover, gradual change has been found from pre-test conditions. In terms of Pro-social Behaviour, the improvement was gradual.

4.5 Presentation of Post-Test Data against Different Variables of Control Group & Experimental Group to see the difference among groups:

In this section, comparison of post-test among the four group has been presented and the p-value with the red colour designating a non-significant value.

Table- 48: Comparison of Post-test of State Anxiety for Control & Experimental Group

STATE ANXIETY						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	33.07	28.93	31.6	23.67	11.00	<.001
SD	5.85	4.25	5.8	2.79		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 48. the mean of post-test signifies that the three different interventions of experimental groups have been very effective, but combined group (PABT) was better than other experimental group in terms of State Anxiety found significant (p<.001), since the F value (11.00) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no.48 (i).

TABLE 48 (i) Tukey HSD Analysis of State Anxiety for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	4.13	4.6707	0.10
x1-x3	1.47	4.6707	0.84
x1-x4	9.4	4.6707	<.001
x2-x3	2.67	4.6707	0.43
x2-x4	5.27	4.6707	0.02
x3-x4	7.93	4.6707	<.001

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table 48 (i) the post-hoc analysis revealed that means of means of Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are highly significant **(x1-x4, x2-x4, x3-x4)**. The graphical representation of State Anxiety for Control Group and Experimental Groups are presented in figure no.42

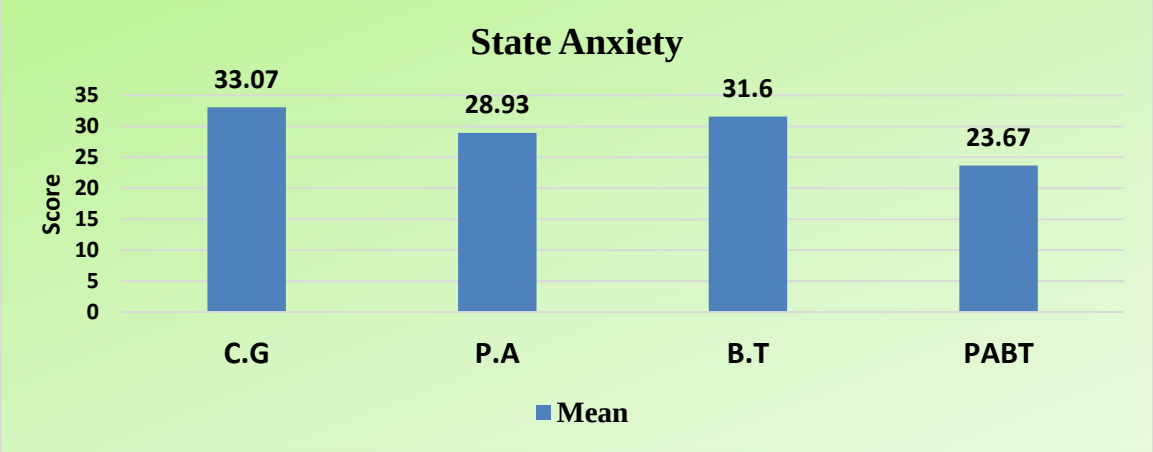


Fig no.42 Post-Test of State Anxiety of Control Group and Experimental Groups

From Figure 42, displayed average score of State Anxiety of control group was higher (33.07) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=23.67) showed reduced state anxiety compared to other groups.

Table- 49: Comparison of Post-test of Trait Anxiety for Control & Experimental Group

TRAIT ANXIETY						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	38.07	32.33	33.73	24.07	23.26	0.01
SD	5.84	4.34	5.59	2.05		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 49, revealed that the mean of post-test signifies that the three different interventions of experimental groups have been highly effective in terms of Trait Anxiety and Combined group (PABT) was better than other experimental groups. found significant (p=.01), since the F value (23.26) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no. 49 (i).

TABLE 49 (i) Tukey HSD Analysis of T-Anxiety for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	5.73	4.5463	<.001
x1-x3	4.33	4.5463	0.06
x1-x4	14	4.5463	<.001
x2-x3	1.4	4.5463	0.85
x2-x4	8.27	4.5463	<.001
x3-x4	9.67	4.5463	<.001

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table 49 (i) the Tukey analysis revealed means of Control group & P.A group, means of Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are highly significant (**x1-x2, x1-x4, x2-x4, x3-x4)**. The graphical representation of Trait Anxiety for Control Group and Experimental Groups are presented in figure no.43.

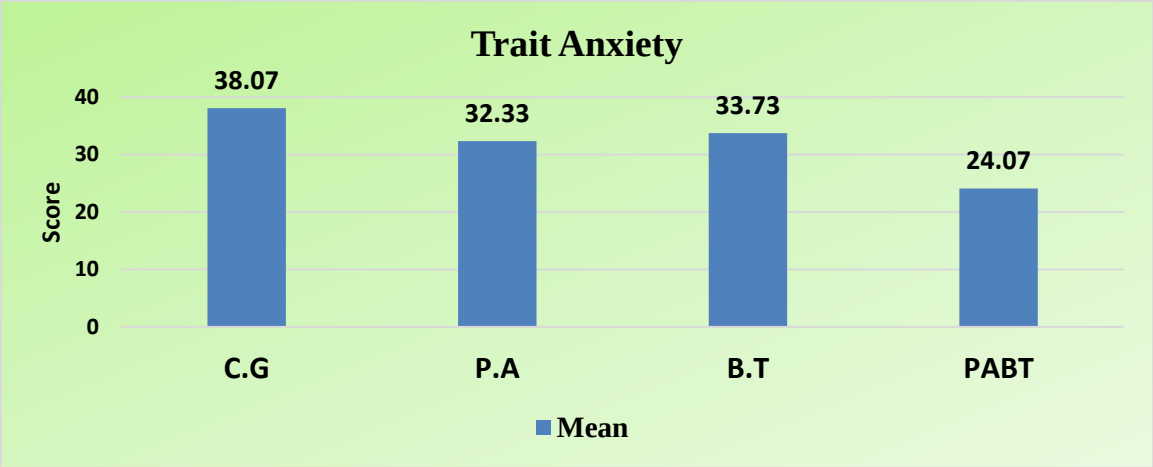


Fig no.43 Post-Test of Trait Anxiety of Control Group and Experimental Groups

From Figure 43, displayed mean score of Trait Anxiety of control group was little higher (38.07) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=24.07) showed reduced behaviour problem compared to other groups.

Table- 50: Comparison of Post-test of Memory Span for Control & Experimental Group

MEMORY SPAN						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	1.7	2.17	1.73	2.63	2.93	0.04
SD	0.68	0.90	1.03	1.26		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 50, revealed that the mean of post-test signifies that the combined interventions (PABT=2.63) of experimental group have been highly effective compared to under control group in terms of memory span. found significant (p<.001). The post-hoc analysis of pairs has been presented in table no. 50 (i).

TABLE 50 (i) Tukey HSD Analysis of Memory Span for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	0.47	0.9573	0.57
x1-x3	0.033	0.9573	0.99
x1-x4	0.93	0.9573	0.058
x2-x3	0.43	0.9573	0.63
x2-x4	0.47	0.9573	0.57
x3-x4	0.9	0.9573	0.07

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 50 (i) revealed means of Control group & P.A.B.T group (**x1-x4)** was significant, with slight difference to significance level in pair of (x3-x4). The graphical representation of Memory Span for Control Group and Experimental Groups are presented in figure no.44

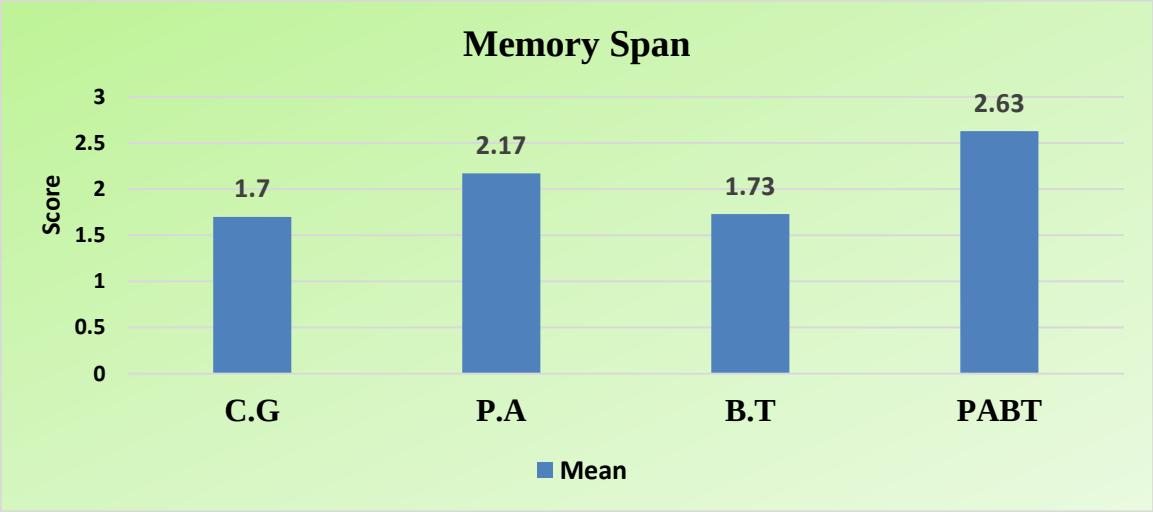


Fig no. 44 Post Test of Memory Span of Control Group and Experimental Groups

From Figure 44, showed that the mean score of Memory Span of combined group (PABT=2.63) and P.A group was higher in comparison to control group and B.T group which indicates that combined intervention and Behaviour Therapy has better effect on Memory Span of the children.

Table-51: Comparison of Post-test of Linear Perception for Control & Experimental Group

LINEAR PERCEPTION						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	8.45	9.57	9.64	9.62	11.3	<.001
SD	0.74	0.61	0.80	0.50		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 51, revealed that the mean of post-test signifies that the three interventions of experimental groups have been highly effective in terms of linear perception. found significant (p<.001), since the F value (11.3) higher than table value (4.13) disproving null hypothesis. Analysis of pairs group has been presented in table no. 51 (i).

TABLE 51 (i) Tukey HSD Analysis of Linear Perception for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	1.12	0.6476	<.001
x1-x3	1.19	0.6476	<.001
x1-x4	1.17	0.6476	<.001
x2-x3	0.077	0.6476	0.99
x2-x4	0.053	0.6476	0.99
x3-x4	0.024	0.6476	0.99

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table 51 (i) It showed that means of Control group & P.A group, Control group & B.T group, Control group & P.A.B.T group (**x1-x2, x1-x3, x1-x4)** are highly significant. The bar illustration of Linear Perception for Control Group and Experimental Groups are presented in figure no.45

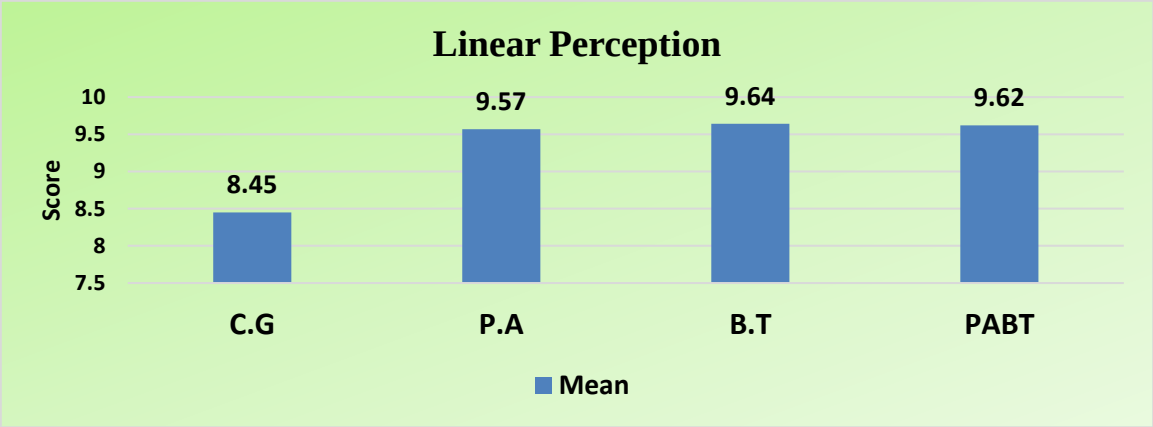


Fig no.45 Post Test of Linear Perception of Control and Experimental Groups

From Figure 45, showed that the mean score of Linear Perception of Experimental Groups was very effective and higher in comparison to control group also the Behaviour Therapy (9.64) has better effect on Linear Perception of the children.

Table- 52: Comparison of Post-test of Academic Performance for Control & Experimental Group

ACADEMIC PERFORMANCE						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	259.8	268.53	207.67	246.87	0.94	0.43
SD	107.15	117.74	100.58	104.28		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 52, revealed that means of means of Control and Experimental groups were not significant as no difference was observed among four groups. found significant (p<.001), since the F value (0.94) lower than table value (4.13) accepting null hypothesis. The post-hoc analysis of pairs has been presented in table no. 52 (i).

TABLE 52 (i) Tukey HSD Analysis of Academic Performance for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	8.73	104.0618	0.99
x1-x3	52.13	104.0618	0.55
x1-x4	12.93	104.0618	0.99
x2-x3	60.87	104.0618	0.42
x2-x4	21.67	104.0618	0.94
x3-x4	39.2	104.0618	0.75

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 52 (i) It indicated that there was no difference found among groups. Moreover, the p-value were greater than the significance level, hence it was not significant in terms of Academic Performance. The graphical representation of Academic Performance for Control Group and Experimental Groups are presented in figure no.46

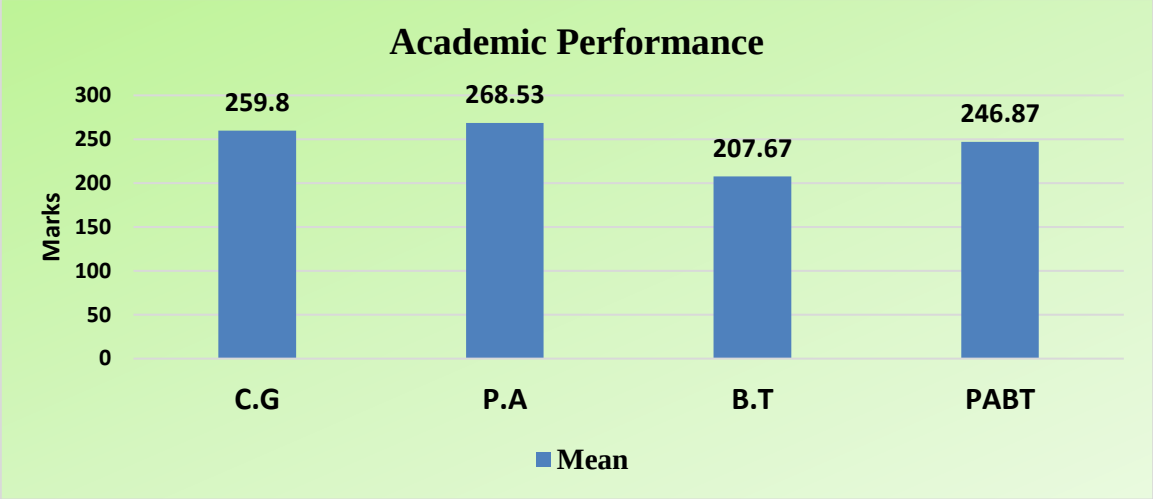


Fig no.46 Post Test of Academic Performance of Control and Experimental Groups

From Figure 46, revealed that the mean score among Control Group & Experimental Groups have not enough difference. Moreover, it is further stated that Physical Activity group are better than other groups.

Table- 53: Comparison of Post-test of Emotional Problem for Control & Experimental Group

EMOTIONAL PROBLEM						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	4.27	1.93	2.6	0.33	18.15	0.01
SD	2.28	1.33	1.12	0.72		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table 53, Significant difference has been found in post-test and the mean of post-test signifies that the three different interventions for experimental groups have been very effective in terms of Emotional Problem. But combined group (PABT=0.33) was better than other experimental groups found significant ($p<.001$), since the F value (18.15) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no. 53 (i).

TABLE 53 (i) Tukey HSD Analysis of Emotional Problem for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	2.33	1.4318	<.001
x1-x3	1.67	1.4318	0.02
x1-x4	3.93	1.4318	<.001
x2-x3	0.67	1.4318	0.61
x2-x4	1.6	1.4318	0.02
x3-x4	2.27	1.4318	<.001

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 53 (i) the post-hoc analysis revealed the means of Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are highly significantly different (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)**. The graphical representation of Emotional Problem for Control Group and Experimental Groups are presented in figure no.47

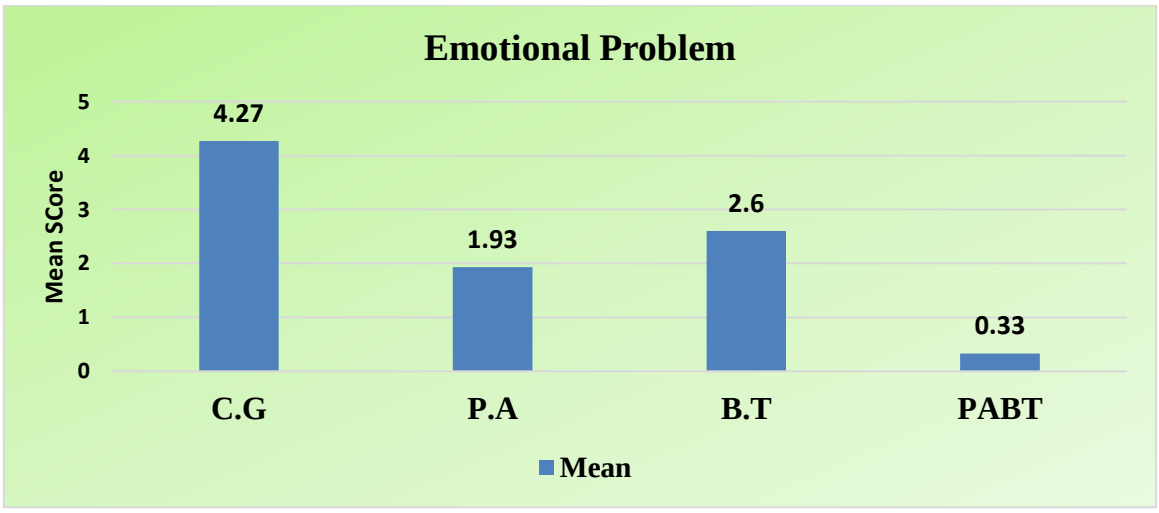


Fig no.47 Post-Test of Emotional Problem of Control Group and Experimental Groups

From Figure 47, displayed average score of emotional problems of group under control was very high (4.27) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=0.33) showed reduced emotional problem compared to other groups.

Table- 54: Comparison of Post-test of Conduct Problem for Control & Experimental Group

CONDUCT PROBLEM						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	5.67	2.2	2.13	0.33	37.70	0.05
SD	1.76	1.21	1.68	0.72		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table no. 54 Significant difference has been found in post-test. Hence the mean of post-test signifies that the three different interventions of experimental groups have been highly effective in terms of Conduct Problem. But combined group (PABT=0.33) was better than other experimental groups found significant (p<.001), since the F value (37.70) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no. 54 (i).

TABLE 54 (i) Tukey HSD Analysis of Conduct Problem for Control and Experimental Group

Pair	**Difference**	**Critical Mean**	**p-value**
x1-x2	3.47	1.36	<.001
x1-x3	3.53	1.36	<.001
x1-x4	5.33	1.36	<.001
x2-x3	0.067	1.36	0.99
x2-x4	1.87	1.36	0.003
x3-x4	1.8	1.36	0.005

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 54 (i) the post-hoc analysis revealed the means of Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are highly significantly different (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4**). The graphical representation of Conduct Problem for Control Group and Experimental Groups are presented in figure no.48

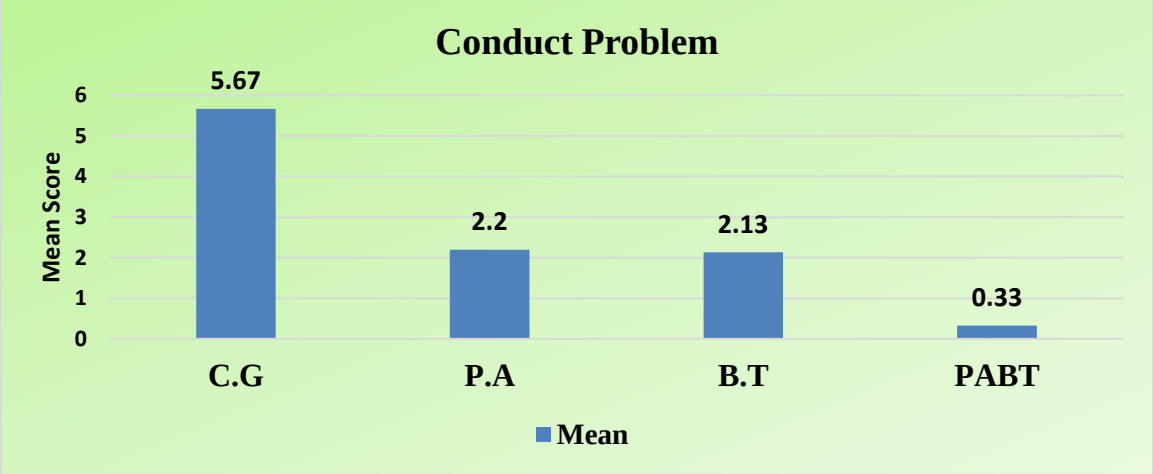


Fig no.48 Post-Test of Conduct Problem of Control Group and Experimental Groups

From Figure 48 displayed average score of Conduct Problems of control group was very high (5.67) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=0.33) showed reduced conduct problem compared to other groups.

Table- 55: Comparison of Post-test of Hyperactivity Problem for Control & Experimental Group

HYPERACTIVITY PROBLEM						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	4.87	2.87	1.6	0.27	36.57	0.01
SD	1.68	1.46	0.99	0.59		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table no. 55 Significant difference has been found in post-hoc test. Hence the mean of post-test signifies that the three different interventions of experimental groups have been highly effective in terms of Hyperactivity Problem. But combined group (PABT=0.27) was better than other experimental groups found significant (p=.01), since the F value (36.57) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no. 55 (i).

TABLE 55 (i) Tukey HSD Analysis of Hyperactivity Problem for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	2	1.212	<.001
x1-x3	3.27	1.212	<.001
x1-x4	4.6	1.212	<.001
x2-x3	1.27	1.212	0.04
x2-x4	2.6	1.212	<.001
x3-x4	1.33	1.212	0.03

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 55 (i) It revealed that means of Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are highly significant from each other (**x1-x2, x1-x3, x1-x4, x2-x3, x2-x4, x3-x4)**. The graphical representation of Hyperactivity Problem for Control Group and Experimental Groups are presented in figure no.49

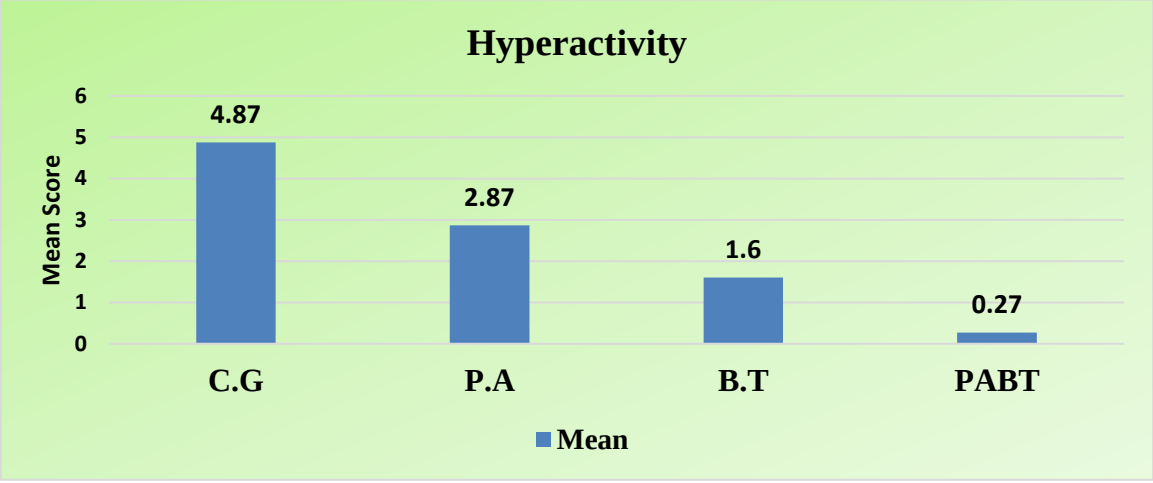


Fig no.49 Post-Test of Hyperactivity Problem of Control and Experimental Groups

From Figure 49, showed mean score of Hyperactivity Problems was very high in (C.G =4.87) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B.T =0.27) showed reduced hyperactivity problem compared to other groups.

Table- 56: Comparison of Post-test of Peer Problem for Control & Experimental Group

PEER PROBLEM						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	4.33	1.67	1.73	0.87	14.54	0.01
SD	1.76	1.54	1.67	1.06		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table no. 56 Significant difference has been found in post-test. Hence the mean of post-test signifies that the three different interventions of experimental groups have been highly effective in terms of Peer Problem in comparison to control group. But combined group (PABT=0.87) was better than other experimental groups found significant (p=.01), since the F value (14.54) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no. 56 (i).

TABLE 56 (i) Tukey HSD Analysis of Peer Problem for Control and Experimental Group

Pair	**Difference**	**Critical Mean**	**p-value**
x1-x2	2.67	1.4807	<.001
x1-x3	2.6	1.4807	<.001
x1-x4	3.47	1.4807	<.001
x2-x3	0.067	1.4807	0.99
x2-x4	0.8	1.4807	0.48
x3-x4	0.87	1.4807	0.42

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 56 (i) the post-hoc analysis revealed that the means of Control group & P.A group, means of Control group & B.T group, and Control group & P.A.B.T group, were highly significant (**x1-x2, x1-x3, x1-x4)**. The graphical representation of Peer-Problem for Control Group and Experimental Groups are presented in figure no.50.

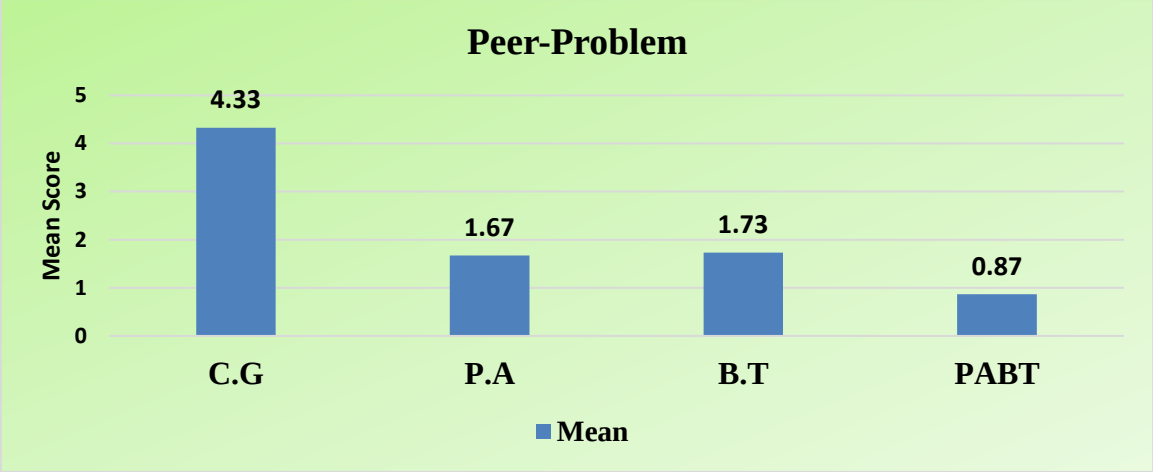


Fig no.50 Post-Test of Peer-Problem of Control and Experimental Groups

From Figure 50, displayed average score of Peer-Problems was very high (CG=4.33) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=0.87) showed reduced peer-problem compared to other groups.

Table- 57: Comparison of Post-test of Behavioural Problem for Control & Experimental Group

BEHAVIOURAL PROBLEM (Total Difficulty)						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	18.67	8.67	8.2	1.8	63.75	<.001
SD	3.33	3.79	3.95	2.14		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table no. 57 Significant difference has been found in post-test. Hence the mean of post-test signifies that the three different interventions of experimental groups have been effective compared to group under in the Total Difficulty problems of subjects. Moreover, the combined group (PABT=1.8) was far better effective, found significant (p<.001), since the F value (63.75) higher than table value (4.13) disproving null hypothesis. The post-hoc analysis of pairs has been presented in table no.57 (i).

TABLE 57 (i) Tukey HSD Analysis of Behavioural Problem for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	10	3.2673	<.001
x1-x3	10.47	3.2673	<.001
x1-x4	16.87	3.2673	<.001
x2-x3	0.47	3.2673	0.98
x2-x4	6.87	3.2673	<.001
x3-x4	6.4	3.2673	<.001

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 57 (i) It revealed that the means of Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & P.A. B.T group, and means of B.T group & P.A.B.T group are highly significant from each other (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)**. The graphical representation of Behavioural Problem for Control Group and Experimental Groups are presented in figure no.51.

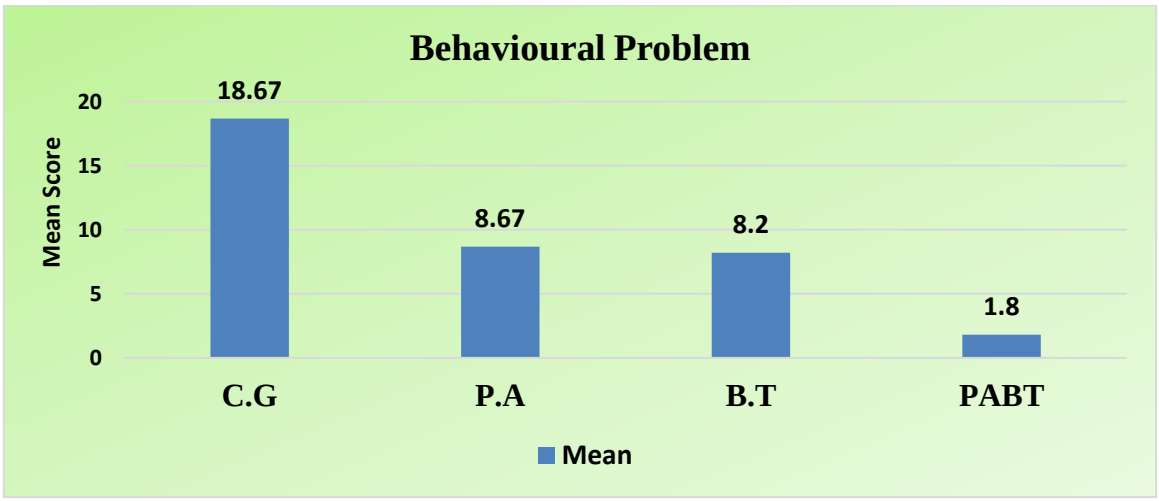


Fig no.51 Post-Test of Behavioural Problem of Control and Experimental Groups

From Figure 51 displayed average score of Behaviour Problems (Total Difficulty) of control group was very high (18.67) in comparison to experimental groups, whereas the mean score of combined groups (P.A.B. T=1.8) showed reduced behaviour problem compared to other groups.

Table- 58: Comparison of Post-test of Pro-social Behaviour for Control & Experimental Group

PRO-SOCIAL BEHAVIOUR						
Test	**Con. Group**	**P.A Group**	**B.T Group**	**P.A.B.T Group**	**F**	**p-value**
Mean	8.67	9.27	9.6	9.53	2.12	0.1
SD	1.45	1.28	0.74	0.92		

***Df=3, 56 *Table value=4.13 * Significance Level-0.05**

In table no. 58 indicates no substantial difference among groups. But difference of mean group under control and treatment group indicated effective expansion in arising the pro-social behaviour of children which signifies behaviour change is possible in children with behaviour problems. found significant (p<.001), since the F value (2.12) lesser than table value (4.13) accepting null hypothesis. Moreover, the means of all the three intervention indicates positive and societal growth in the behaviour of children. The post-hoc analysis of pairs has been presented in table no. 58 (i).

TABLE 58 (i) Tukey HSD Analysis of Pro-social Behaviour for Control and Experimental Group

Pair	Difference	Critical Mean	p-value
x1-x2	0.6	1.0933	0.47
x1-x3	0.93	1.0933	0.12
x1-x4	0.87	1.0933	0.17
x2-x3	0.33	1.0933	0.85
x2-x4	0.27	1.0933	0.92
x3-x4	0.067	1.0933	0.99

x1=Control Group, **x2**= PA Group, **x3**= BT Group, **x4**= PABT Group

From table no. 58 (i) showed no significant difference among the pairs of four groups in terms of Pro-social Behaviour. The graphical representation of Pro-social Behaviour for Control Group and Experimental Groups are presented in figure no.52

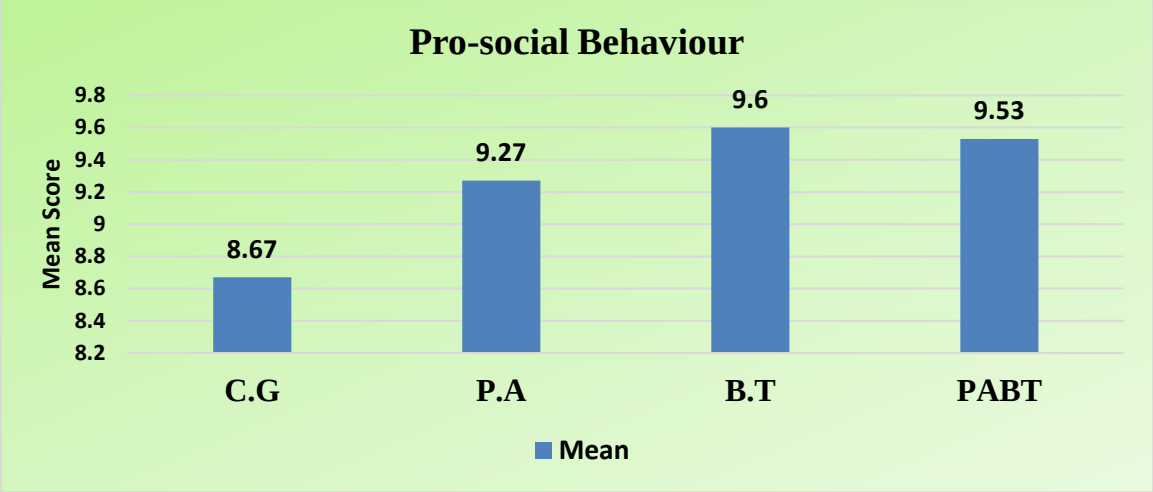


Fig no. 52 Post-Test of Pro-social Behaviour of Control and Experimental Groups

From Figure 52, displayed average score of Pro-social Behaviour of group under control and treatment groups were almost similar hence no difference was observed. Also, improvement was found in treatment groups.

4.6 RESULTS: On the basis of results found in the present research are as follows: -

1. State Anxiety:

Analysis indicated from **(table no.8)** of homogeneity test that before intervention the pre-data was equally distributed among control and experimental groups. The post-test **(table no. 48)** showed that combined group (PABTG) was more effective in dealing with state anxiety of children. Moreover, the post-hoc analysis revealed that the means of Control group & PABT group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group are significantly different **(x1-x4, x2-x4, x3-x4)**, which signifies that the three interventions had been effective in terms of state anxiety.

2. Trait Anxiety:

The result revealed that before intervention the result was not significant among groups and after intervention it showed highly significant difference among groups and gradual improvement has been found in experimental groups. The Tukey HSD analysis revealed that means of Control group & P.A group, means of Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group **(x1-x2, x1-x4, x2-x4, x3-x4)** are very effective.

3. Memory Span:

It was found from **(table no. 8)** of homogeneity test that before intervention the pre-data was not significant and equally distributed among control and experimental groups. The post-test **(table no. 50)** showed that combined group (PABTG) was more effective in dealing with memory span of children. The Tukey HSD analysis revealed significant difference in control and P.A.B.T group (**x1-x4).** Also, the mean difference among group session-wise showed improved result in experimental groups than control group.

4. Linear Perception:

Investigation specified from **(table no. 8)** of homogeneity test that before intervention the pre-data was equally distributed among control and experimental groups. The post-test **(table no. 51)** showed that Behaviour Therapy group (BTG) was more effective in dealing with linear perception of children. Session-wise analysis of experimental groups also revealed gradual change each week with positive effect. Moreover, the post-hoc analysis revealed that means of control group and experimental groups (Control Gr. & P.A Gr, means of Control Gr & B.T Gr and means of Control Gr & P.A.B.T Gr) were highly significant **(x1-x2, x1-x3, x1-x4)**.

5. Academic Performance:

It was initiate from **(table no. 8)** that before intervention the pre-data was equally distributed among control and experimental groups, after intervention the result was not significant among groups. But difference in average of group under control and investigational group found to be effective. If the intervention will continue further, it may have greater effect. Moreover, Physical Activity group was better **(table no.52)** than other groups in terms of academic performance.

6. Emotional Problem & Conduct Problem:

It was also testified that before intervention the result was not significant among groups and after post-intervention **(table no. 53 & 54)** it showed that four groups differ significantly as revealed through F value. The means of control group and experimental groups and means of all experimental groups among each other were highly significant.

The post-hoc analysis revealed that Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group **(x1-x2, x1-x3, x1-x4, x2-x4, x3-x4)** were highly significant. Hence the means of post-test signifies that the three different interventions of experimental groups have been highly effective in terms of Emotional & Conduct Problem.

7. Hyperactivity Problem:

The result revealed that before intervention the result was not significant among groups and after post-intervention **(table no. 55)** it showed that four groups differ significantly in Hyperactivity problem as revealed through F value. The post-hoc analysis revealed that the means of all six pairs - Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & B.T group, means of P.A group & P.A.B.T group and means of B.T group & P.A.B.T group **(x1-x2, x1-x3, x1-x4, x2-x3, x2-x4, x3-x4)** are significantly different, Hence, it signifies that control group and experimental groups and within all experimental groups were highly significant from each other.

8. Peer-Problem:

It was investigated that before intervention the result was not significant among groups and after intervention **(table no. 56)** it showed that four groups differ significantly in Peer-Problem as revealed through F value. Post-hoc analysis revealed that the means of control and experimental groups -Control group & P.A group, means of Control group & B.T group, and Control group & P.A.B.T group **(x1-x2, x1-x3, x1-x4)** were highly significant.

9. Behaviour Problem (Total Difficulty):

The result examined that before intervention the result was not significant among groups and after intervention **(table no. 57)** it showed that four groups differ significantly as revealed through F value. The post-hoc analysis showed that the means of control and experimental groups - Control group & P.A group, means of Control group & B.T group, Control group & P.A.B.T group, means of P.A group & P.A.B.T group, and means of B.T group & P.A.B.T group are highly significant from each other. So, the five pairs were different (**x1-x2, x1-x3, x1-x4, x2-x4, x3-x4**) from each other. Hence the mean of post-test signifies that the three different interventions of experimental groups have been highly effective to group under control in the terms of Total Difficulty.

10. Pro-social Behaviour:

It was evaluated from **(table no. 8)** of homogeneity test that before intervention the pre-data was equally distributed and no significant difference have been found among groups. After intervention no significant difference have found among groups. But difference in average between group under control and investigational group specify treatment have been effective in arising the pro-social behaviour of children which signifies behaviour change is possible in children with behaviour problems.

4.7 TESTING OF HYPOTHESES:

Present study was based on four hypotheses. The hypotheses have been tested in following segment. Results revealed that:

H_0-1: Here the null hypotheses, except H_0d, was rejected and alternative hypotheses was accepted. There was substantial outcome of Physical Activity intervention on Memory Span, Linear Perception, State Anxiety, Trait Anxiety and Behavioural Problems. Here null hypothesis for H_0d was accepted as here no substantial effect of Physical Activity in Academic Performance.

H_0-2: Here null hypotheses, except H_0d, was rejected besides alternate hypothesis was accepted. There was prominent effect of Behavioural Therapy intervention on Memory Span, Linear Perception, State Anxiety, Trait Anxiety and Behavioural Problems. Here null hypothesis for H_0d was accepted as there was no noteworthy outcome of Behavioural Therapy in Academic Performance.

H_0-3: Here null hypotheses, except H_0d, was rejected besides alternate hypothesis was accepted. There was a prominent joint effect of Physical Activity and Behavioural Therapy on Memory Span, Linear Perception, State Anxiety, Trait Anxiety and Behavioural Problems. Here null hypothesis H_0d was accepted as there was no substantial joint effect of Physical Activity & Behavioural Therapy in Academic Performance.

H_0-4: Here null hypotheses H_0a, H_0b, H_0c, H_0e(i), H_0e(ii), H_0e(iii), H_0e(iv), H_0e(v) were rejected and alternative hypothesis was accepted. There is significant difference among four groups (Physical activity group, Behavioural Therapy group, Physical Activity and Behavioural Therapy Group and Control Group Group) on Memory Span, Linear Perception,

State-Trait Anxiety, Emotional Problem, Conduct Problem, Hyperactivity Problem, Peer-Problem and Behavioural Problems (Total Difficulty). Here null hypotheses H_0d, H_0f are accepted as there was no significant difference between the therapeutic intervention among four groups (Physical activity group, Behavioural Therapy group, Physical Activity and Behavioural Therapy Group and Control Group Group) in Academic Performance and Pro-social Behaviour.

4.8 DISCUSSION OF RESULTS:

1. Discussion regarding State Anxiety:

It showed that participation in physical activity & behavioural therapy as a combined intervention highly improves the state anxiety of children with behavioural problems than any other intervention program.

Considering all the interventions, it can be said that in comparison to the control group, the three interventions are very effective and reduced in terms of State Anxiety as well as gradual change has been seen session wise. However, in the control group, no change was observed in children. Similar study of **Atilay Birtürk, et al. (2015)**, **Chandra Nanthakumar, (2017)** which revealed modules of plan change the aspects in the dismissal of frame of mind and attribute of students.

This may due to the fact that in physical activities where children surpass many activities which improves controlling ability, leadership, coping ability to stressful situations and the behavioural therapy techniques which help children to calm, heal, put efforts of empathy, sharing, honesty and understanding with others played significant effect on students and relevant for the present study to showcase effective modules.

It can also be said that an insecure attachment lead children experience unpredictability, unresponsiveness or may develop behavioural problem associate with anxiety, hence the modules and activities used in the study were very helpful.

2. Discussion regarding Trait Anxiety:

It revealed that all the three interventions (physical activity, behavioural therapy technique and combined physical activity & behavioural therapy) were very effective in comparison to

control group. Whereas the combine interventions were highly effective than physical activity and behavioural therapy in terms of Trait Anxiety.

Session-wise analysis of experimental groups also revealed gradual change each week indicates that the overall intervention is found very effective to reach at optimal condition in 12 weeks of intervention improving trait anxiety.

This may due to the fact that 12 weeks of participation in intervention improves the sense of well-being, habit of listening, social acceptance, helps to change dimension and inspire to behave in a better way.

3. Discussion regarding Memory Span:

It showed that participation in physical activity & behavioural therapy as a combined intervention (PABT) highly improves the memory span of children than any other intervention program. Also, the three interventions were very effective as compared to control group. Session wise difference among interventions indicates continuous rise in the effect of intervention.

This may be due to the fact that this module program has made children to pay attention, recall tasks, and be reasoning which directly affect their memory and help them to be almost correct.

4. Discussion regarding Linear Perception:

It showed that all the three interventions (physical activity, behavioural therapy, combined physical activity & behavioural therapy) were effective to improve linear perception of the children in comparison to control group.

It also reveals from the study that physical activity (P.A) intervention is slightly more effective than other two intervention (B.T & P.A.B.T) comparison to the control group in terms of linear perception. Due to no treatment in control group, it was revealed decreasing effect in linear perception of the children, and the mean value indicated negative value.

Session-wise analysis of experimental groups also revealed gradual change each week which indicates that the overall interventions is found very effective.

The physical activity was more effective, may be due to the fact that children continuously engaged in various activities with yoga, recreational activities and gymnastics for continuous 12 weeks where children surpassed activities which require precision, keen perception, set goal, coordination, concentration, motor skills to complete task. However, in linear perception, visual analysis capturing and processing helps to interpret and develop cognitive process. Hence, physical activity intervention was highly improvising the cognitive approach of a child.

5. Discussion regarding Academic Performance:

It revealed no difference among groups after intervention. Similar result has been reported by **Jessica Giesige (2018)**. It was also found that difference in means among all four groups indicates that experimental groups are better than control group which indicates that if the intervention will continue for more than 12 weeks then it may improve academic performance in comparison to non-treatment group. Moreover, the emphasis will be given on the joint intervention of Physical activity and Behaviour Therapy (though not significant, p value-0.07) has a good effect on academic performance. So, it can be said that joint effect of Physical Activity and Behaviour Therapy can improve academic performance as per mean **(table no. 52)** if the joint intervention can be continued.

6. Discussion regarding Emotional Problem:

It showed that all the three interventions (physical activity, behavioural therapy, combined physical activity & behavioural therapy) were very effective in terms of emotional problem of children in comparison to control group. It also reveals that combined intervention of P.A.B.T showed best result among all interventions. Study on positive emotion by **Jiayu Li, (2022**), **Srimannarayana Rao Kothuri, (2016)** also revealed improvement.

It also reveals from the study that after joint effect of Physical activity and Behaviour therapy intervention, Physical activity intervention was more effective than Behavioural Therapy techniques in terms of emotional problem.

The interventions were effective, may be due to the fact that practice of regular exercises, participation in therapy practices regulates emotion. Students learn and understand more about emotions from participating in various activities.

7. Discussion regarding Conduct Problem:

It revealed that all the three interventions (Physical Activity, Behavioural Therapy, combined Physical Activity & Behavioural Therapy) were very effective to improve conduct problem in students. The outcome of combined activity intervention showed very effective improvement in the problems of conduct in children. Similar result was found in **Halla Ali Abd EL-Hie, (2022)**.

It can be also quantified that experimental groups P.A.B.T intervention was far better and drastic change has been observed with reduced conduct problem in comparison to P.A and B.T group. when no treatment imparted, the conduct problem has indicated to rise in control group which indicate that if the conduct problems did not manage or not detected early then child will have increase rate of conduct problems.

Engaging in physical activities and therapy helps children to address anxiety in school and home setting, promoting problem of conduct, flexible thinking, social skills, and emotional exploration. Moreover, the strategy for transitions and management includes routines, responsibilities approach with activities of cooperation, sharing qualities, & discipline help to improve and control the problem of conduct in children.

8. Discussion regarding Hyperactivity Problem:

It was evaluated that all the three interventions have been very effective in terms of the hyperactivity problem. Result also revealed that each intervention (P.A, B.T, P.A.B.T) was different from each other and each was highly effective in managing the hyperactivity problem of children.

All the six pairs were highly significant and the intervention was properly adapted by the children. Moreover, among the intervention combined activity of PABT was best suited for children with hyperactivity problem and after combined activity, the techniques of behavioural therapy were effective in dealing with the above said problem in comparison to physical activity group because with active participation empathy, calmness is required to limit the problems of hyperactivity.

It also showed that the children of control group reveal increased hyperactivity problems due to no treatment which means that physical activity and behavioural therapy techniques play a very important role in controlling the hyperactivity problem in children.

It can also be said that activities help control symptoms of hyperactivity. Moving body can make children more motivated for mental tasks, increase brain power, gives energy when children receive instructions, directions establish healthy habits, follow routines, they can build relationships strong and maintain friendship. Moreover, the transfer of energy from hyperactivity to activities of set goal require energy expenditure completely help children to set goal in life.

9. Discussion regarding Peer Problem:

The discussion regarding peer problem reveals that all the three interventions (P.A, B.T, P.A.B.T) was very effective in comparison to control group. It also indicates that PABT was highly effective and best suited intervention to the subjects.

It also showed from the study that children of control group had a rise in peer problem when no treatment was given; it indicates that the interventions played a significant role in reducing the peer-problem in children.

The reason behind the success of interventions on the subjects may be due to the fact that children receive physical, mental, and social benefits from playing. Activities sets high level of peer support and quality friendship associated with enjoyment, commitment, intrinsic motivation which helped to manage and shapes peer-problem among children.

10. Discussion regarding Total Difficulty (Behavioural Problem):

It showed that all the three interventions have been very effective in terms of total difficulty of students with behavioural problem. It also indicates that among all interventions, combined activity of P.A.B.T deals best with the overall behaviour problem of the children and after that behavioural therapy technique (B.T) helped to manage the problems. Similar findings have been found in **Nida Zahid, et al., (2023**).

It also revealed that control group had an increased in the total problem over the period without any intervention which indicates that if children were not managed or not early detected then it is possible that the overall behaviour of the children will be affected or may

get worsen over the time. Research also suggests that when problem was not detected then behavioural problem changes to behavioural disorders and other comorbidity, where more difficulties occurred.

Session-wise analysis of intervention with combined activity of P.A.B.T and B.T continues to improve by reducing the overall problems whereas control group reveals continues rise in the total difficulty of the child, this will have adverse effect on every aspect of problems behaviour, hence monitoring and proper intervention is necessary.

It is clear from the present study that participating in various activities, modules program can have impact on the cognitive skills, attitudes, and behaviour of the child which include enhanced perception, memory, affection, performance and improve classroom behaviour. Moreover, the consistent efforts, mindfulness techniques used in the activities to taught children how to behave and deal with behavioural issues.

The modules, strategies used provided a joyful environment, minimizes distractions, focus on assisting children rather than only disciplining, help by demonstrating things, prepare model to make children understand with positive reinforcement to practice desired and appropriate behaviour as well as involve children to find solutions to difficulties and taking good choices for themselves and for others.

11. Discussion regarding Pro-social Behaviour:

It revealed no difference among any groups after intervention, but the difference in means of intervention groups indicates program pro-social behaviour which signifies behaviour change is possible in children with behavioural issues. Hence the positive & societal growth can happen, if the intervention continues for more than 12 weeks.

Session-wise interventions indicates that the intervention groups gradually change after each post-test but control group indicates mix result with rise and drop which indicates unpredictability and unreliable when no treatment is given in terms of pro-social behaviour of children.

CHAPTER- V

SUMMARY CONCLUSION & RECOMMENDATION

5.1 Summary

5.2 Conclusion

5.3 Recommendation

5.4 Suggestions for the Upcoming Studies

5.5 Contribution in Social and Academic Field

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter provides a summary of the research study, outlines the key conclusions from each chapter, and identifies potential future research directions based on practical applications.

5.1. SUMMARY

Chapter 1 introduced the concept of behavioural problems, its effect and related issue among school students. A child's behaviour problems are those behaviours that cause or are expected to cause problems in their socialization process, academic achievement, and cognitive (learning) activities, among other areas of their life. The curriculum and discipline in the classroom are so impacted and hindered. Every child exhibits some sort of behavioural issue at one point in time, or at multiple points throughout their development. The effects of participation in activities for children and young people are directly linked to good health and engagement serves togetherness, with long term secondary effects; an active lifestyle at adolescence raises more active lifestyle as a grown-up. Therapeutic interventions are an attempt to enhance the wellbeing of someone who is either in need of aid but refusing it or is unable to ask for or accept assistance. This can be done by individuals, educators, parents, or organizations, depending on the situation, and educators may lead or steer the interventions. In some cases, an intervention takes the form of a confrontation or meeting between a person who is engaged in destructive behaviour and is resistant to help concerned friends or family members inculcating the therapies that can be used in practices are Physical Activity and Behaviour Therapy Techniques.

Chapter 2 allocated through assessment of works that was connected with study. Many researches, studies are published in different national and international journals, books, websites, newspapers, conferences, workshops, and discussion with many subject experts, psychologists, and counsellors helped the researcher to be acquainted with the behavioural problems of the children. The review revealed that improvement in disruptive behaviour and other comorbidity in children various disorder with serious problems like aggression, etc. But no such appropriate research was done on general school students who even don’t understand how their habits harm themselves and others. Intervention with physical activity and

behavioural therapy for children with behavioural problem or other issues like state-trait anxiety, linear perception, memory span and academic performance was distinguished from other intervention. The instruments for measuring behavioural problem and other were explored. Very few researchers have worked that fit healing these problems and other comorbidity with different modules of physical activity or combined effect of physical activity and behavioural therapy technique. The foundation for the present research focused on country's real worth, the children and the challenges faced by parents, teachers and for the children themselves. Given the issues of above said expected problems of behaviour and other problems which were affected through it, deficient experts of particular activities, ideas of time management, identification and measuring tools, intervention programme for children in schools. The gaps also motivated the researcher to see the difference and found essential to investigate effect of therapeutic intervention on children with behavioural problems, hence problem stated as **"EFFECT OF SELECTED THERAPEUTIC INTERVENTION ON SCHOOL GOING CHILDREN WITH BEHAVIOURAL PROBLEM"**

Chapter 3 evaluated the study design, sampling strategy, data collection, sample description, research instruments, and, lastly, the statistical analysis procedure were all described. The study started with a total of 500 students for survey study and to set norms of the Hindi questionnaire. So, to see the prevalence of behaviour problem among students, result showed that boys were more prone to behaviour problem than girls. Hence, a multiple-group experimental study was designed using the purposive sampling technique on 60 children screened with behavioural problem aged between 11^{+} to 13^{+} years from a Hindi medium government school, Howrah, West Bengal (India), who were randomly assigned into four groups. The study was completed in four stages, first prior permission was taken, meeting was held with the parents of selected samples and preparation of schedule was started. Secondly pre-test data was taken, thirdly intervention started, fourthly post-test data was collected with standardized tools. All the subjects were divided into four equal groups (strata) based on their age, behavioural problem symptoms etc. These groups were furthered named as control group (C.G), physical activity group (P.A), behavioural therapy group (B.T) and physical activity-behavioural therapy group (P.A.B.T). The intervention was imparted to intervention group and no training imparted to group under control. The intervention was given two days a week with the help of an Asst. teacher, ICT, a BPED student and under the supervision of counsellors in the presence of researcher for the duration of 12 weeks. The statistical analysis approach included descriptive analysis, Independent T-test, Repeated

Measure ANOVA, One-way ANOVA with the result of Mauchly's test, Tukey's HSD by using Bonferroni. The data analysis was done using Statistics Kingdom App (online).

Chapter 4 allocated with regard to data analysis of outcome of physical activity besides behavioural therapy on behavioural and other problems of school children. The obtained data has been evaluated using descriptive statistics, parametric statistics and post-hoc analysis. The present research study has been quantifiable, which had explored the result by comparison and session-wise evaluation. Results were based on the effect of intervention on dependent variables, and also results from non-treatment group. The researcher has made all possible calculations, the reasons for variance among groups, pairs combination etc. All the intervention has been effective in managing and dealing with the problems. But combined intervention of physical activity-behavioural therapy techniques stands out really very well and highly significant in handling the children with behavioural problems and other problems too.

5.2 CONCLUSIONS:

On the foundation of the analysis of research study ensuing conclusions were made.

i. This study concludes that it is possible to improve the behavioural problem, and other domains of the children with suitable intervention modules.
ii. Physical activity modules and behavioural therapy, and techniques are very effective to deal with anxiety, linear perception, emotional, problem of conduct, and other types of behavioural problem.
iii. Behaviour are core features of every child and individual, but when not managed creates hindrance in the development and future of the children.
iv. It is also a known fact that children are at great risk when are exposed to other types of violence and delinquent behaviour, when they experience mal-treatment, harsh, inconsistent parenting, or when their parents have mental health conditions like depression or other disorder. Hence, future policymakers and the nation makers must take responsibility to channelize information, facts carefully.
v. It is significant to explore this area in an effort to minimize its negative impact. In detail scenario, the researcher examined the effect of selected activities like yoga, recreational activities, gymnastics and behavioural therapy techniques for improvement in children.

vi. The conclusion of the present study reveals significant difference in investigational and group under control on dependent parameters of behaviour. The research concluded that physical activities and therapies not only exercise and training but it improves, boosts the body and mind and helps to work effectively.

5.3 RECOMMENDATIONS

In the enlightenment of former study in addition to the conclusion of the present research, the important recommendations were:

1. Behavioural Problems always associated with children and it becomes hurdle, if not corrected or managed at appropriate time. Hence, the present study is recommended to teachers, psychiatrists, counsellors as well parents to focus and establish social factor and other factor of behaviour change and use scale for the screening of said behaviour.

2. It is recommended to government school, semi government and other school to organizing counselling session, workshops, and seminars regarding managing and handling behaviour and rectify at earlier stage.

3. It recommends to understanding the urgency in case of each child and shows how simple activities can benefit their child.

4. Planned structured activity definitely showcases personality to flourish with right mind set.

5. It is further recommended to all such schools, to make the said programmed mandatory and adopt in their school curriculum to deal with clear cases.

6. It is further suggested to implement this intervention program on students of both genders.

7. The study would be more fruitful for the future researchers to carry out more effective research in the respect field.

5.4 SUGGESTIONS FOR THE FUTURE STUDIES

In view of outcomes the investigator has few suggested opinions for future study.

1. Present study has been restricted to boy's school going children, so the similar research can be carried out on girl's students or both boys and girls comparing them both.

2. As selected therapeutic modules of activities were applied in the current research, the possibility of the study can be extended by incorporating combination of other therapeutic exercise, other categories of sports, and other techniques of therapy.

3. More psychological variables can be included in the future study.

4. As behavioural problems were confined in current work; the scope of research can be extended towards another comorbidity.

5. The study was conducted on the 11^{+} to 13^{+} years of age group. The same study is recommended to be conducted on the different high and low age group asses by another checklist or other inventory.

6. The present study confined to self-report analysis the scope of the study can be added and incorporated with parents, teacher assessment basis also.

7. Present study showed findings on the total difficulty level with other problem also been studied. The same study is recommended to be conducted on specific problems of behavioural analysis.

5.5 CONTRIBUTION IN SOCIAL AND ACADEMIC FIELD

1. I have come across very few studies in respect to behavioural problems and few focused on the prevalence of behavioural problems and few therapeutics aspects were incorporated. But the present study helps to establish various aspects and also tries to develop an intervention module of behaviour change which have societal growth for children. This intervention module can be used to provide training to children and can be incorporated into their educational system.

2. The present study provides a guideline to teachers, parents and educators. It will help them to rectify behaviour problem at early stage. It reveals an understanding of urgency in case of each child and how these activities can benefit their child.

3. The present study will safeguard the future of the children from involving in bad habits and moulds them into positive environment of academic field and channelize their cognitive and affective domain into a better platform.

4. The improvement from the intervention lay strong bonding among children, their parents and this will continue and pass on as chain system to socialize and this may also restrict children from having any delinquent behaviour in future.

5. The present study allowed children to practice and understand new techniques, activities through team discussion and group work, this way children can listen to respond and consider their peers thoughts and enhance their understanding in academic fields.

6. Through understanding other's emotion, one learns to consider their perspectives. Further, all activities are very important for socialization. By recognizing emotional expressions and understanding the causes behind emotions, these individuals can interact with others skilfully. Ultimately, it may have a very significant impact on their socialization, communication and on overall development.

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APPENDICES

PERSONAL DATA SHEET

Name	Age	Add	No. of Members	Edu.	Religion	No. of Siblings	Staying with Parents	Edu. of Father	Edu. of Mother

STRENGTHS & DIFFICULTIES QUESTIONNAIRE (SDQ)

Instructions: For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you **over the last six months.**

	Strengths and Difficulties Questionnaire	Not True	Somewhat True	Certainly True
1.	I try to be nice to other people. I care about their feelings	O	O	O
2.	I am restless, I cannot stay still for long	O	O	O
3.	I get a lot of headaches, stomach-aches, or sickness	O	O	O
4.	I usually share with others, for example CDs, games, food	O	O	O
5.	I get very angry and often lose my temper	O	O	O
6.	I would rather be alone than with people of my age	O	O	O
7.	I usually do as I am told	O	O	O
8.	I worry a lot	O	O	O
9.	I am helpful if someone is hurt, upset or feeling ill	O	O	O
10.	I am constantly fidgeting or squirming	O	O	O
11.	I have one good friend or more	O	O	O
12.	I fight a lot. I can make other people do what I want	O	O	O
13.	I am often unhappy, depressed or tearful	O	O	O
14.	Other people my age generally like me	O	O	O
15.	I am easily distracted, I find it difficult to concentrate	O	O	O
16.	I am nervous in new situations. I easily lose confidence	O	O	O
17.	I am kind to younger children	O	O	O
18.	I am often accused of lying or cheating	O	O	O
19.	Other children or young people pick on me or bully me	O	O	O
20.	I often volunteer to help others (parents, teachers, children)	O	O	O
21.	I think before I do things	O	O	O
22.	I take things that are not mine from home, school or elsewhere	O	O	O
23.	I get along better with adults than with people my own age	O	O	O
24.	I have many fears, I am easily scared	O	O	O
25.	I finish the work I'm doing. My attention is good	O	O	O

SDQ (S) 11-17 SELF–REPORT MEASURE

STATE-TRAIT ANXIETY INVENTORY FOR CHILDREN (STAIC)

HOW-I-FEEL QUESTIONNAIRE

Developed by C.D. Spielberger, C.D. Edwards, J. Montuori, and R. Lushene

STAIC Form C-1

Name:_____Age:_____Date:_____

DIRECTIONS: A number of statements which boys and girls use to describe themselves are given below. Read each statement carefully and decide how you feel *right now.* Then put an X in the box in front of the word or phrase which best describes how you feel. There are no right or wrong answers. Don't spend too much time on any one statement. Remember, find the word or phrase which best describes how you feel right now, *at this very moment.*

1. I feel	❑ very calm	❑ calm	❑ not calm
2. I feel	❑ very upset	❑ upset	❑ not upset
3. I feel	❑ very pleasant	❑ pleasant	❑ not pleasant
4. I feel	❑ very nervous	❑ nervous	❑ not nervous
5. I feel	❑ very jittery	❑ jittery	❑ not jittery
6. I feel	❑ very rested	❑ rested	❑ not rested
7. I feel	❑ very scared	❑ scared	❑ not scared
8. I feel	❑ very relaxed	❑ relaxed	❑ not relaxed
9. I feel	❑ very worried	❑ worried	❑ not worried
10. I feel	❑ very satisfied	❑ satisfied	❑ not satisfied
11. I feel.....	❑ very frightened	❑ frightened	❑ not frightened
12. I feel.....	❑ very happy	❑ happy	❑ not happy
13. I feel.....	❑ very sure	❑ sure	❑ not sure
14. I feel.....	❑ very good	❑ good	❑ not good
15. I feel.....	❑ very troubled	❑ troubled	❑ not troubled
16. I feel	❑ very bothered	❑ bothered	❑ not bothered
17. I feel	❑ very nice	❑ nice	❑ not nice
18. I feel	❑ very terrified	❑ terrified	❑ not terrified
19. I feel	❑ very mixed-up	❑ mixed-up	❑ not mixed-up
20. I feel	❑ very cheerful	❑ cheerful	❑ not cheerful

HOW-I-FEEL QUESTIONNAIRE

STAIC Form C-2

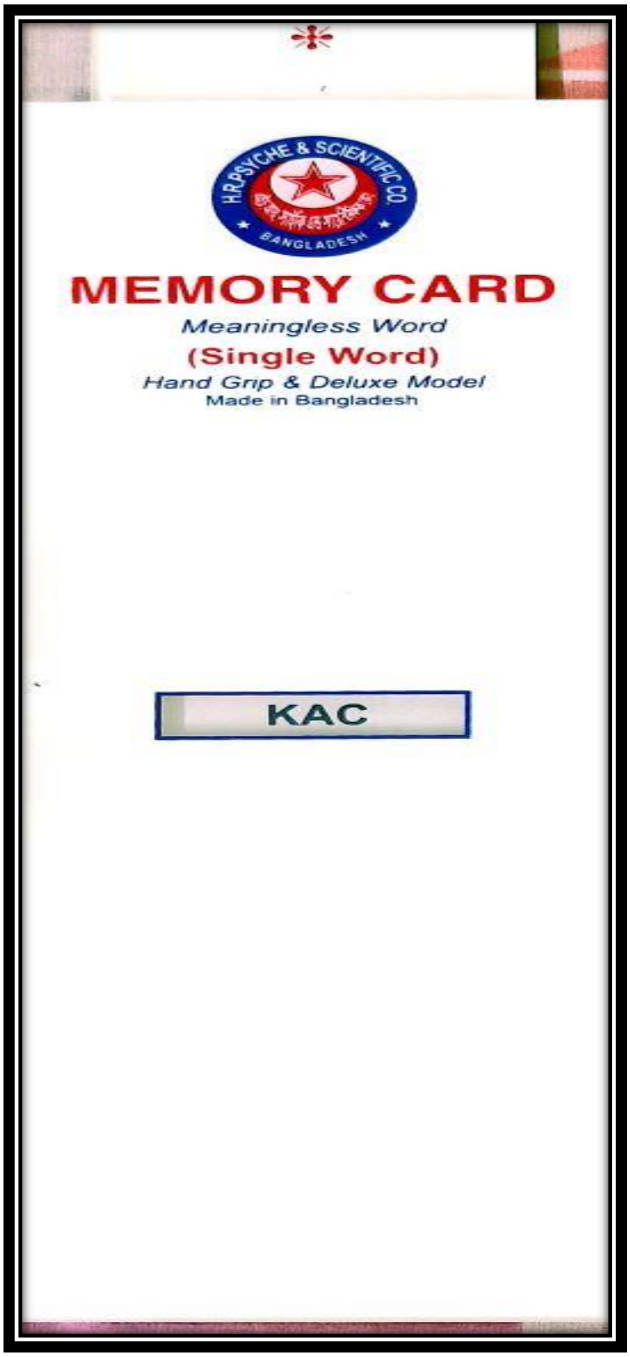
Name:_____Age:_____Date:_____

DIRECTIONS: A number of statements which boys and girls use to describe themselves are given below. Read each statement carefully and decide if it is *hardly-ever,* or *sometimes*, or *often* true for you. Then for each statement, put an X in the box in front of the word that seems to describe you best. There are no right or wrong answers. Don't spend too much time on any one statement. Remember, choose the word which seems to describe how you usually feel.

1. I worry about making mistakes ..... ❑ hardly-ever ❑ sometimes ❑ often
2. I feel like crying ..... ❑ hardly-ever ❑ sometimes ❑ often
3. I feel unhappy ..... ❑ hardly-ever ❑ sometimes ❑ often
4. I have trouble making up my mind ..... ❑ hardly-ever ❑ sometimes ❑ often
5. It is difficult for me to face my problems ..... ❑ hardly-ever ❑ sometimes ❑ often
6. I worry too much ..... ❑ hardly-ever ❑ sometimes ❑ often
7. I get upset at home ..... ❑ hardly-ever ❑ sometimes ❑ often
8. I am shy ..... ❑ hardly-ever ❑ sometimes ❑ often
9. I feel troubled ..... ❑ hardly-ever ❑ sometimes ❑ often
10. Unimportant thoughts run through my mind and bother me..... ❑ hardly-ever ❑ sometimes ❑ often
11. I worry about school..... ❑ hardly-ever ❑ sometimes ❑ often
12. I have trouble deciding what to do..... ❑ hardly-ever ❑ sometimes ❑ often
13. I notice my heart beats fast..... ❑ hardly-ever ❑ sometimes ❑ often
14. I am secretly afraid..... ❑ hardly-ever ❑ sometimes ❑ often
15. I worry about my parents..... ❑ hardly-ever ❑ sometimes ❑ often
16. My hands get sweaty..... ❑ hardly-ever ❑ sometimes ❑ often
17. I worry about things that may happen ..... ❑ hardly-ever ❑ sometimes ❑ often
18. It is hard for me to fall asleep at night ..... ❑ hardly-ever ❑ sometimes ❑ often
19. I get a funny feeling in my stomach..... ❑ hardly-ever ❑ sometimes ❑ often
20. I worry about what others think of me ..... ❑ hardly-ever ❑ sometimes ❑ often

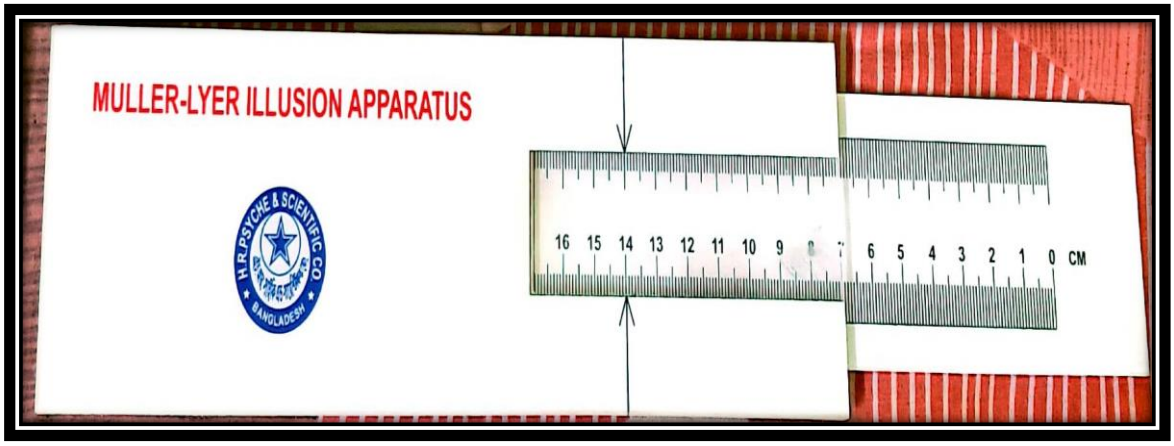
TOOL

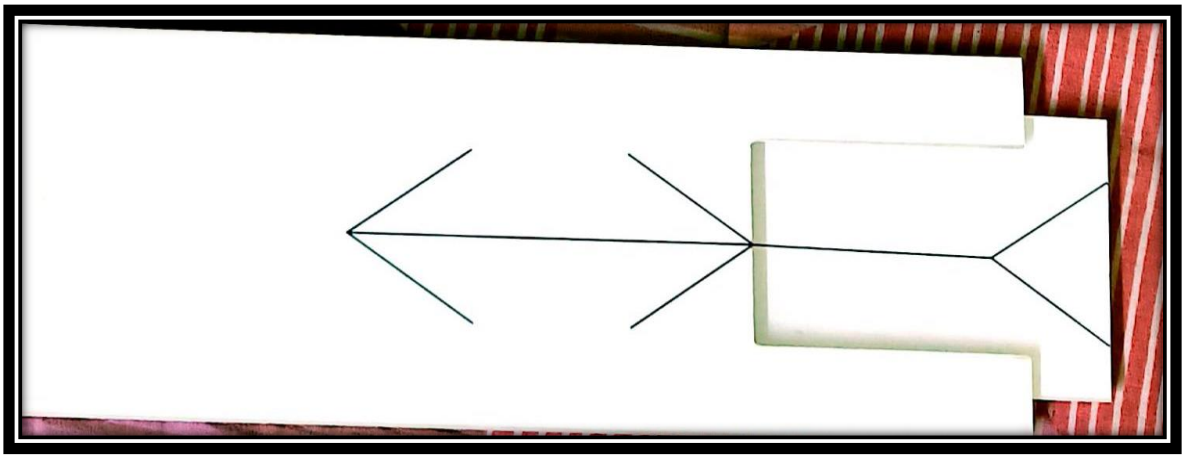
Nonsense Syllables for Memory Span

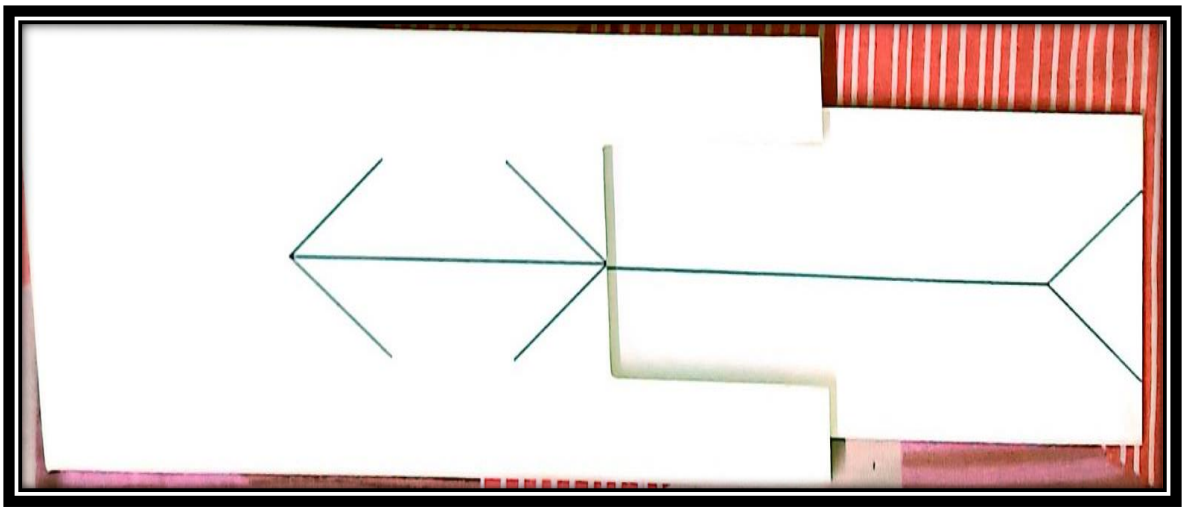


TOOL

Muller-Lyer Illusion Apparatus







PICTURES

PHYSICAL ACTIVITY GROUP

Pic-1: Toe Hold

Pic-2 Shuttle Run

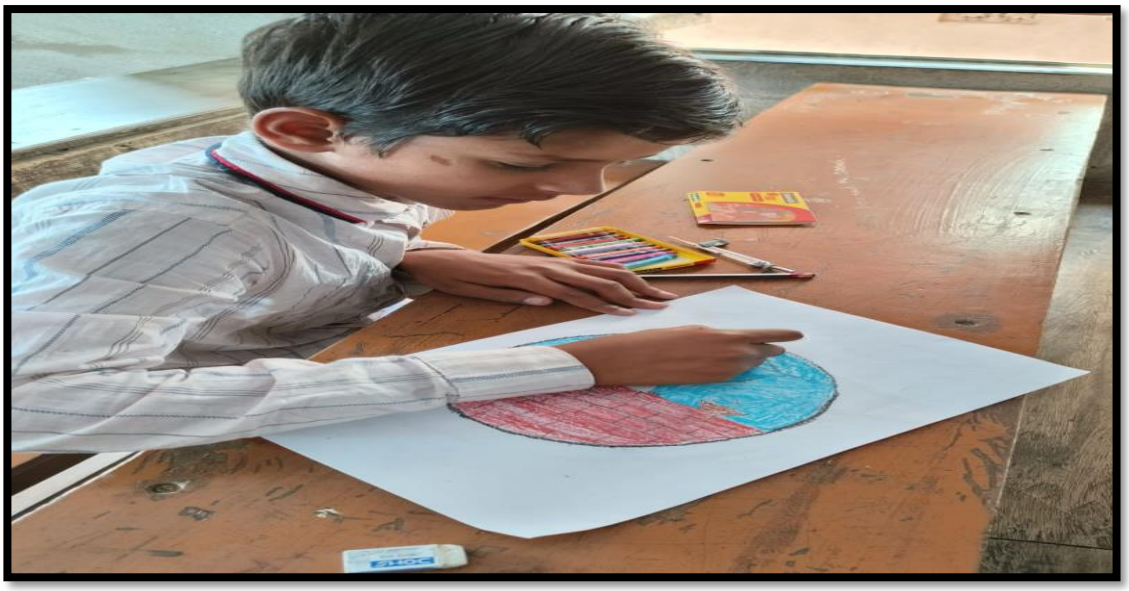
Pic-3: Practising Patriotic Song

Pic-4: Yogasana

BEHAVIOUR THERAPY GROUP

Pic-5: Collage Making in Group

Pic-6: Group Counselling



Pic-7: Activity with Positive Appraisal

Pic-8: Parents Counselling

Pic- 9: Recreational Game

Pic- 10: Yogasana

Pic-11: Recreational Activity (Blowing of Balloon)

Pic-12: Practising Patriotic Song

Pic-13: Role Play (Classroom)

Pic-14: Dumb Sharaz (Act Name-Wash your hands before eating)

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Date 21/06/2023

TO WHOM IT MAY CONCERN

This is to certify that **Miss Punam Shaw,** Research Scholar of Department of Physical Education, Jadavpur University has successfully completed her three months intervention training program on boy's students for research purpose from our school.

During the period of intervention, she was very sincere, analytical and hard working.

I wish her all the best for her future work.

21/06/2023
A PANDEY (KRI.)
T.I.C./Secretary
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To,

The Headmaster

Shalimar Hindi High School

P.O- B.Garden

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Howrah

Sub- **Request for Conducting Survey**

Respected Sir,

With due respect, I Punam Shaw, a research scholar of Department of Physical Education at Jadavpur University Kolkata, would like to request you for allowing me to conduct a survey, which could help us to gain knowledge about student's behavior and interest, for Ph.D research study.

I shall be highly obliged for your kind support.

Thanking you.

Yours Sincerely

Punam Shaw
19/09/22

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