Chapter-I

INTRODUCTION

1.1 BACKGROUND OF THE STUDY:

‘Today’s children are tomorrow’s citizens”

Hence it is the duty of everybody concerned to see that our future citizens are strong, healthy and have a perfect personality.

Children have to be active everyday. Physical activity stimulates growth and leads to improved physical, mental and emotional health. Medical researches have observed that highly active children are less likely to suffer from high blood pressure, diabetes, obesity and coronary heart diseases later in life.

Exercise is also known to relieve stress. Some children experience as much stress, depression and anxiety as adults do. Since exercise improves health, a fit child is more likely to be well-rested and mentally sharp. Even moderate physical activities have been shown to improve a child’s skill at arithmetic, reading and memorization.

Schools are dynamic settings for promoting health and wellness through various correlated areas such as physical education and sports. There is a growing awareness that the health and psycho-social wellbeing of young children is of paramount importance and schools can provide a
strategic means of improving children’s health, self-esteem, life skills and behaviour.

In this context Blanc and Dikson\(^1\) quote Roberts who says “Sports can affect a child’s development of self esteem and self worth.”

Children lead happier lives as a result of being actively involved in sporting activities and it has long been established that fitness and improved academic performance go hand in hand. Physical education and sports activities during the school hours reduce boredom and help keep students attentive in the class rooms.

It is well established fact that participation in physical education and sports activities is highly beneficial to one’s health and leads to improved performance by students in schools, in addition to helping them in developing many life skills.

In general, children need at least 30 minutes of vigorous activity everyday. Unfortunately today children are three to four times less active than they were 30 years ago.

As children grow elder, their lives become more sedentary. Many take to bus or driven to schools where they sit behind a desk all day. In the evening they watch TV or play computer games.

Computers may have become a necessary for today’s kids, but a study says that the Machines are producing a “generation of weaklings”\(^2\) as

\(^1\) Le Blanc and Dikson, “Straight Talk about Children and Sport”, 1\(^{st}\) Indian Edn., (New Delhi: Jain Publishers, 2001), P.3.

\(^2\) Deccan Herald, Tuesday May 24, 2011, P.12.
children swap outdoor play for screen games and the internet, reports PTI from London.

The Essex university study, based on a survey also found that as kids followed fewer traditional activities such as tree climbing, their arm strength dropped 26 percent and their grip 7 percent, the sun reported.

Children’s fitness expert Dr. Gavin Sandevock\(^3\) who led the study was quoted as saying “typically these activities boosted children’s strength making them able to lift and hold their own weight.”

Asha\(^4\) says, “Regular play is better than play stations”.

Play is one of the important aspects of childhood. But electronic wizardry is making life complicated for youngsters, leading to aggression, increased depression and emotional confusion.

These days’ children face a lot of pressure and stress due to competition and the need to excel in studies. It is important to encourage children to play, eat, study and get adequate rest for balanced growth, we should build a habit of regular exercise in our children.

There is a need for structured age appropriated physical activity for better cognitive, emotional and mental development.

According to National Association for sport and Physical education USA, pre-schoolers should be accommodated at least one hour of daily structured activity. They should also engage in unstructured physical

\(^3\) Ibid.

activity and should not be sedentary for more than one hour “Age-appropriate activities is the need of the hour.”

Participating in physical education and sports helps a child in development of all-round personality by improving the physical fitness, and physical fitness is the pre-requisite for all other fitness such as mental, emotional etc.

Fitness should be a life long process and commitment. Fitness can be achieved through participating in most enjoyable physical activity according to one’s needs and ability. Regular physical activity should be an integral component of the health of the child and adolescent. Positive exercise habits formed in the childhood can carry over into adulthood and help reduce Morbidity and Mortbility from diabetes, cardiovascular diseases and other chronic ailments- Chandra Kumar.6

1.1.1 Yoga

Yoga is one such most enjoyable activity everyone can participate.

Yoga the art and science of maintaining physical and mental wellbeing that has its origin in India, is among the most ancient yet vibrant living traditions that is getting increasingly popular today. A potent stress buster, yoga is an instrument of self-evolvement and enlightenment, through physical and mental well-being. Math-dimension it enhances the quality of

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our lives at so many levels. One aspect of yoga’s benefits is to explore the bond between health and beauty.

Yoga makes children strong, Yoga is an art, science and philosophy. It provides techniques to promote health at physical, mental, emotional and intellectual levels.

Yoga is considered as a form of ‘Mind and body medicine’.

A popular saying in Kannada ‘Yogi-Nirogi’ which means a person who practices yoga is free from diseases.

The word Yoga comes from the Sanskrit word ‘Yuj’ meaning to yoke, join or unite. This implies joining or integrating all aspects of the individual - body with mind and mind with soul - to achieve a happy, balanced and useful life, and spiritually, uniting the individual with the supreme.

In India, Yoga is considered one of the six branches of classical philosophy and is referred to throughout the Vedas - ancient Indian scriptures and amongst the oldest texts in existence. The Upanishads are also broadly philosophical treatises which postdate the Vedas and deal with the nature of the "soul" and universe.

However, the origins of yoga are believed to be much older than that, stemming from the oral traditions of Yogis, where knowledge of Yoga was handed down from Guru (spiritual teacher) to Sisya (spiritual student) all the way back to the originators of Yoga, the ‘Rishis’, who first began investigation into the nature of reality and man's inner world.
Legend has it that knowledge of Yoga was first passed by Lord Shiva to his wife Parvati and from there into the lives of men.

Six Branches of Yoga

- **Hatha Yoga** or Yoga of Postures. Hatha Yoga is perhaps the path of Yoga one most familiar with since this is the most popular branch of Yoga. This branch of Yoga uses physical poses or Asana, Breathing Techniques or Pranayama, and Meditation to achieve better health, as well as spirituality. There are many styles within this path - Iyengar, Integral, Astanga, Kripalu, and Jiva Mukti to name a few. If one wants a peaceful mind and a healthy body to go along with it, Hatha Yoga may just be the path.

- **Bhakti Yoga** or Yoga of Devotion. Bhakti Yoga is the path most followed in India. This is the path of the heart and devotion. Yogis who practice this branch sees the "One" or the Divine in everyone and everything. Bhakti Yoga teaches a person to have devotion to the "One" or to Brahma by developing a person's love and acceptance for all things.

- **Raja Yoga** or Yoga of Self-Control. Raja means "royal". This path is considered to be the King of Yoga and this may be due to the fact that most of its practitioners are members of religious and spiritual orders. Raja Yoga is based on the teachings of the Eight Limbs of Yoga found in the Yoga sutras. A Raja Yogi sees the self as central, and as such, respects to oneself and for all creation are vital to this path. They achieve self-respect by first learning to be masters of themselves. If
one wishes to learn discipline, then Raja Yoga would perfectly suit that need.

- **Jnana Yoga** or Yoga of the Mind. Jnana Yoga is the path of Yoga that basically deals with the mind, and as such, it focuses on man's intelligence. Jnana Yogis consider wisdom and intellect as important and they aim to unify the two to surpass limitations. Since they wish to gain knowledge, they are open to other philosophies and religion for they believe that an open and rational mind is crucial in knowing the spirit.

- **Karma Yoga** or Yoga of Service. Karma Yoga is the path of service. For in this path, it is believed that one’s present situation is based on his past actions. So by doing selfless service now, one is choosing a future that is free from negativity and selfishness. Karma Yogis change their attitude towards the good and in the process, change their souls, which leads to a change in their destiny.

- **Tantra Yoga** or Yoga of Rituals. Perhaps the most misunderstood of all the paths, Tantra Yoga is about using rituals to experience what is sacred.

**Yoga Sutras of Patanjali**

The varied philosophies and methodologies of Yoga itself were clearly and methodically brought together and presented by the sage Patanjali in his set of 196 aphorisms called "The Yoga Sutras," written some 2200 years ago. The Sutras bring together all the various strands of theory and practice from all sources of yoga and present them in one concise,
integrated and comprehensive text. How all the aspects inter-relate and form part of the whole body of yoga are clearly elucidated. There are 8 disciplines to yoga as presented by Patanjali (thus Astanga yoga - 8 limbed yoga) which must be practiced and refined in order to perceive the true self- the ultimate goal of Yoga:

1. **Yama** - Universal ethics: Non-violence, truthfulness, non-stealing, sexual restraint and non-acquisitiveness.

2. **Niyama** - Principles of self conduct: purity, contentment, intense dedication or austerity, study of self and scriptures and self-surrender.

3. **Asana** - practice of the postures.

4. **Pranayama** - Breath control.

5. **Pratyahara** - withdrawal and control of the senses.

6. **Dharana** - concentration.

7. **Dhyana** - meditation.

8. **Samadhi** - a state of higher consciousness where the sense of self (ego) dissolves in the object of meditation and the individual self exists in its own pure nature.

These *Sutras* were and are still considered a most profound and enlightening study of the human psyche. Patanjali shows how through the practice of Yoga, we can transform ourselves, gain mastery over the mind and emotions, overcome obstacles to our spiritual evolution and attain the goal of yoga: liberation from the bondage of worldly desires. Written in
Sanskrit, many commentaries and translations have been written over the centuries by various scholars and practitioners; each interpreting as per their era and understanding.

**Benefits of Yoga:**

- **Flexibility**: Stretching tight body in new ways will help it to become more flexible, bringing greater range of motion to muscles and joints. Over time, one can expect to gain flexibility in hamstrings, back, shoulders, and hips.

- **Strength**: Many yoga poses require us to support the weight of our own body in new ways, including balancing on one leg (such as in Tree Pose) or supporting with our arms. Some exercises require us to move slowly in and out of poses, which also increases strength.

- **Muscle tone**: As a by-product of getting stronger, one can expect to see increased muscle tone. Yoga helps shape long, lean muscles.

- **Pain Prevention**: Increased flexibility and strength can help prevent the causes of some types of back pain. Many people who suffer from back pain spend a lot of time sitting at a computer or driving a car. That can cause tightness and spinal compression, which one can begin to address with yoga. Yoga also improves alignment, which helps prevent many other types of pain.

- **Better Breathing**: Most of us breathe very shallowly into the lungs and don't give much thought to how we breathe. Yoga breathing exercises, called Pranayama, focus the attention on the breath and teach us how to better use our lungs, which benefits the entire body. Certain types of
breath can also help clear the nasal passages and even calm the central nervous system, which has both physical and mental benefits.

**Mental Benefits**

- **Mental Calmness**: Yoga asana practice is intensely physical. Concentrating so intently on what the body is doing has the effect of bringing a calmness to the mind. Yoga also introduces one to meditation techniques, such as watching how one breathes and disengagement from thoughts, which help calm the mind.

- **Stress Reduction**: Physical activity is good for relieving stress, and this is particularly true of yoga. Because of the concentration required, daily troubles, both large and small, seem to melt away during the time of doing yoga. This provides a much-needed break from stressors, as well as helping put things into perspective. The emphasis yoga places on being in the moment can also help relieve stress, as we learn not to dwell on past events or anticipate the future. One will leave a yoga class feeling less stressed than when started.

- **Body Awareness**: Doing yoga will give an increased awareness of our body. One is often called upon to make small, subtle movements to improve alignment. Over time, this will increase the level of comfort in our body. This can lead to improved posture and greater self-confidence.

- Yogic exercise develops the muscular fitness, endurance, strength and flexibility etc. Yogasanas can cure and help in preventing various diseases. Yogic practices help in regulating the breathing mechanism and increasing vital capacity.
1.1.2 Motor Ability

Think for a moment, of the numerous and varied factors such as balance, flexibility, power and co-ordination, each contributing interdependently to the perfection of the total movement. Almost like the independent notes of a musical master piece, these specific factors combine to produce a symphony of movement.

“The immediate capacity of an individual to perform in many varied stunts or athletic events is referred to as general motor ability”.

Motor ability has been viewed as a combination of factors that are basic to all movements.

Following are the motor ability factors

1. Muscular Strength
2. Muscular Endurance
3. Cardiovascular Endurance
4. Flexibility
5. Power
6. Speed
7. Agility
8. Balance
9. Reaction Time etc.

Traditionally, general motor ability has been considered as one’s level of ability in a wide range of activities. It has been thought of as an
inter-related composite of such individual traits as strength, endurance, power, speed, agility, balance, reaction time, and coordination traits underlying performance in many activities. In successful motor performances, these traits function in coordinated manner and in effective sequence to achieve an accurate and efficient movement.

1.1.3 Self Perception:

Sports Psychology which is a very young branch of science is to stimulate the interests of the physical educators and coaches through new researches and methods of developing psychological parameters. The Sports Psychology aims at predicting the behaviour of sports persons and also aims to formulate the relationship between Psychologies. The physical education programs of today are based on a vast body of knowledge supported by a number of professional disciplines including Medicine, Sports Psychology, Child Development and Education.

Self perception refers to the one’s perception of himself/herself. Self perception is the way a person explains the behaviour based on self observation.

Self perception is the understanding and knowledge we have of our own existence and how we see ourselves in relation to others and to our surroundings. In order to possess a positive or healthy self-concept we must know ourselves, love our self and be true to ourselves. Today we live in an increasingly complex and multifaceted world. In order to meet the challenges we now face, it is more important than ever to build a solid personal foundation, a foundation consisting of self knowledge, self love
and self confidence. A healthy self concept is more than having high self esteem. While high self esteem is important, the term itself can be misleading since self esteem is largely based on our feelings of self worth and encompasses our beliefs about being valuable and capable. It consists of our self image, either positive or negative, at an emotional level.

The following represents a healthy self concept:

- The ability to know ourselves, to be able to assess our strengths, weaknesses, talents and potentials.

- To ability to love and accept ourselves as we are, knowing that we can improve and develop any aspects of ourselves that we choose.

- The ability to be honest with ourselves and be true to who we are and what we value.

- The ability to take responsibility for our choices and actions.

**Self Concept:**

Self Concept is how we view our self. How we view our self, determines how we will experience life. If we see our self in a positive and healthy light, our life experiences will be positive and healthy. It does not mean that our life will be free of challenges and adversity, just that we will have a healthier approach to dealing with them. If our opinion of our self is shaky and fragile, we will find life’s challenges overwhelming and to times, insurmountable.
**Factors Affecting Self Concept:**

- Genetics and biological factors.
- Cultures, values, beliefs.
- Developmental level.
- Stressful life events and loses.
- Positive self perception will help an individual and also the society to grow in right direction. Yoga will go a long way in improving the self perception.
- Factors included in self perception are social competence, scholastic competence, social acceptance, athletic competence, physical appearance and behavioural conduct.

**Social Competence:**

Social competence refers to the social, emotional, and cognitive skills and behaviors that children need for successful social adaptation. Despite this simple definition, social competence is an elusive concept, because the skills and behaviors required for healthy social development vary with the age of the child and with the demands of particular situations.

**Scholastic Competence:**

This is purely an academic activity under school environment which includes Recitation of poems, Essay writing, Debate competition, Drawing competitions, Music competitions, Dancing competitions, Quiz competitions, Story telling competitions, Fancy dress competitions, Mono-Acting competitions, Mimicry, Pick and speech, Memory competitions, Folk dance
& Folk song competitions, competitions based on using of different musical instruments, and some of the intramural competitions like Drill & Marching, Lezium, Dumbells, Flags, Hoops, Wands and so on.

Also, these competitions will provide the platform for the students to exhibit their talents as well as their innate or inborn qualities. These competitions in the school environment help the students to develop dareness, self-confidence, leadership qualities and mannerism.

Through participating in these competitions, the students can easily overcome stress, strain complexities and frustrations.

**Social Acceptance**

This is one of the qualities to check the social behavior of the student. It shows how a child acts and react with the society, its activities with the society, its behavior and mannerism with the society, how a child mingles with the society, how it accepts the victory and defeat, how a child obey the rules and regulations or laws made in the society, how a child acts and react with the customs and traditions which are existed in the society or how a child behaves in the public gathering as well as in celebrating the festivals and rituals.

**Athletic Competence**:

This test is purely the individual’s capacity and capability in participating in the Athletic events such as running, jumping and throwing. In this test each student will take part as well as exhibit their talents in these events to justify their performance.
Physical Appearance:

This is one of the factors which help for the development of individual in their physical structure. The nature of work, type of activity, the food they take, the environment in which they live, the hereditary characters of their parents, which is influenced by the genes of their family are also other factors.

Behavioral Conduct:

How a student acts or reacts to certain situations or circumstances and their type of reactions is the behavior of an individual. This behavior is different from one person to another and from one situation to another situation.

Global Self-worth:

This is one of the important factors which gives us how a student behaves in certain situations in the society, and how he interacts with other people in the world to lead their life in a happy manner as well as helping for the solidarity of the world.

One should live in this world by supporting others or with the support of others since man is a social animal. So he should go along with the society and also act as a part of the society, respecting the rules and regulations as well as laws made in this regard.

Relationship of Physical Education and Sports to the self Perception

Physical Education and Sports as a field of experience for individuals and groups presents numerous opportunities for relieving man of his
problems such as pressures relating to the future and of making decisions under which he is constantly placed. By participating in sports the seriousness of life recedes temporarily into the background. Sports is a field of study for forms of social behavior. The individual can demonstrate and test his strength and ability here. Sport presents a comprehensive field of action in which a person can participate according to his interests. A striving for a comparison of achievement also exists in sport.

Sports also make a special contribution by teaching children to appreciate their bodies and the wonder things they can do. The joy in a child’s face when successfully hitting a ball for the first time or the inner satisfaction of mastering a complex skill is beyond description and this alone is sufficient to make sports a worthwhile pursuit. But mastery of sports skills also must contribute substantially to the development of positive self concepts. To children, skill in sports is a highly prized attribute which is often accompanied by considerable peer status. The pride of accomplishment of the associated administration from friends goes a long way towards developing the youngster’s self image of being a worthy person.

1.1.4 Academic Achievement:

The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Parents desire that their children climb the ladder of performance to as high a level as possible. This desire for a high level of achievement puts a lot of pressure on students, teachers, schools and in general, the educational
system itself. In fact, it appears as if the whole system of education revolves round the academic achievement of students, though various other outcomes are also expected from the system.

Achievement is the end-product of all educational endeavours. The main concern of all educational efforts is to see that the learner achieves.

Academic achievement is defined in different ways by different authors. It refers to any desirable learning that is observed in the students. Any behaviour that is learnt may come within the scope of achievement. Pupil achievement means the status of pupil with respect to attained skill or knowledge as compared with other pupils or with schools adopted standards.

The term academic achievement refers to the degree of success or level of attainment by pupil in the scholastic or the curricular subjects prescribed within the syllabus. In brief academic achievement is the amount of knowledge derived from learning in the classroom.

Crandall\(^7\) suggested that achievement may be viewed as behaviour directed towards the attainment of approval or the avoidance of disapproval for competence of performance in situations where standards of excellence are applied.

According to Thorndike and Hegen (1970)\(^8\) “Academic achievements are performance based to show what a pupil has already learnt to do”.

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8 Ibid.p.3
Morgan (1961)\(^9\) in his book “Introduction to Psychology” defines achievement as the “accomplishment on a test of knowledge (or) skills also a personal motive”.

The importance of academic achievement has raised several important questions for educational researchers. What factors promote achievement in students? How far do the different factors contribute towards academic achievement? Many factors are affecting the academic achievement such as pupil’s socio-economic background, intelligence, language as medium of instruction, various personality traits of students, etc.

Education is the process of developing the capacities and potentials of the individual so as to prepare that individual to be successful in a specific society or culture. From this perspective, education is serving primarily as an individual development function. Education begins at birth and continues throughout life. It is constant and on going. Schooling generally begins some where between the ages four and six when children are gathered together for the purposes of specific guidance related to skills and competencies that society deems important. In the past, once the formal primary and secondary schooling was completed the process was finished. However, in today’s information age, adults are quite often learning in informal setting throughout their working lives and even into retirement.

\(^9\) Ibid.p.3
Factors Influencing Academic Performance:

Academic achievement may be affected by various factors like intelligence, study habits, different aspects of their personality, socio economic status, etc. The desire of success is derived from individual’s concept of himself and in terms of the meaning of various incentives as they spell success and failure in the eye of others, thus a child who sees himself as top ranking, as scholars, may set as his goal the attainment of the highest grade in the class.

Academic performance is concerned with the quantity and quality of learning attained in a subject or group of subjects after a long period of instruction. Excessive stress hampers students’ performance. Improvement in academic performance and alertness has been reported in several yogic studies.

Motor Ability, Self-Perception and Academic Achievement complement each other. They are interdependent. Better Motor Ability means high level physical fitness, which helps in positive self perception and improved academic performance.

It is increasingly necessary to promote Yoga among children. The children of today are exposed to far greater stress and trying times than previous generation. Yoga will help them cope and emerge stronger and more fit – physically, mentally and emotionally.

Hence, the researcher was motivated to take up the present study. The present study examines whether there is an effect of yoga on the motor abilities, self perception and academic performance of high school students.
1.2 STATEMENT OF THE PROBLEM:

The purpose of the study was to find out the effect of selected yogasanas on selected motor abilities, self perception and academic performance.

1.3 DELIMITATIONS:

1. The study was delimited to high school boys.

2. Further it was delimited to 60 students only 30 each in control and experimental groups.

3. The study was confined to high school boys of the age group 13-15 years.

4. Only the selected Yogasanas were practiced for the duration of 12 weeks.

5. The study was delimited only to selected Motor Ability components and one psychological variable.

6. The study was delimited to untrained students only.

7. High school boys belonging to Jawahar Navodaya Vidyalaya Doddaballapur Taluk, Bangalore Rural District were the subjects.

1.4 LIMITATIONS:

1. The Researcher did not have control over the genetic factors.

2. Age and academic performance were recorded as found in the school records.
3. Whatever the answers given by the subjects in the questionnaire for finding self perception was accepted and no effort was made to find out the authenticity of the answers given by the subjects.

4. Only selected Motor Abilities and one Psychological variable was tested.

1.5 HYPOTHESES :

It was hypothesized that

1. After training in yogasanas there would be significant improvement in selected motor abilities.

2. Yoga training will have positive effect on self-perception.

3. Since yoga improves concentration and mental peace it was hypothesized that yoga training will help the subjects in improving academic performance also.

1.6 SIGNIFICANCE OF THE STUDY :

1. Government of Karnataka has included yoga as a part of compulsory physical education programme in it’s curriculum from 6th to 9th standard. This study may help the authorities in constructing/modifying yoga curriculum.

2. Practice of yoga would directly contribute to human resource development and improvement in the quality of life. Hence the study may help in promoting yoga in a big way and as a mass movement.
3. Motor abilities play a dominant role in achieving excellence in sports. The study will probe the role of selected yogasanas in improving the selected motor abilities.

4. The present study will probe the role of yogasanas in improving academic excellence and self perception.

5. The practice of yogasana helps the maximum institutions which do not have playing field in the urban and rural areas. The study may motivate such institutions to introduce yoga.

6. The study would help the sports coaches to use Yoga as a part of their Training programme.

7. The study may pave way for further research on Yoga.

1.7 DEFINITION OF THE TERMS:

Yoga

The word Yoga is derived from the Sanskrit root yuj meaning to blend, join, attach and yoke, to direct and concentrate one’s attention on, to use and apply. It also means union or communion.  

Asana

Asana is the third step of Ashtanga Yoga.

Asanas are the physical postures.

Pathanjali Maharishi\textsuperscript{11} defines asanas as “Sthira Sukham Asanam” meaning stables and comfortable phase.


\textsuperscript{11} Ibid.
Physical Fitness:

“The ability to carry out daily tasks with vigour and alertness, without undue fatigue, with ample energy to enjoy leisure time pursuits, and to meet unforeseen emergencies” Clarke\textsuperscript{12}

Motor Ability:

Motor ability has been defined as the present acquired and innate ability to perform motor skills of general or fundamental nature, exclusive of highly specialized sports or gymnastic techniques.\textsuperscript{13}

Motor Ability may be defined as “One’s innate and acquired ability to perform Motor Skills of a general and fundamental nature excluding specialized sports skills.”\textsuperscript{14}

Speed: Speed is the ability to execute motor actions under given conditions in minimum possible time. The speed ability is highly movement specific.\textsuperscript{15}

Speed may be defined as “rapidity with which successive movements of the same kind are performed”.\textsuperscript{16}


Muscular Strength:

"Muscular Strength may be defined as the maximal Muscular force or tension used in the creation or prevention of the Movement in one maximal effort of a Muscle Group" Kansal\(^{17}\)

Strength is the force that a muscle or muscle group can exert against resistance in one maximal effort."\(^{18}\)

Explosive Power:

"Ability to release maximum muscular force in the shortest period of time" - Clark\(^{19}\)

It is the ability to overcome resistance with high speed.\(^{20}\)

Fast movement and quick reactions are prized equalities in athletics. Coaches frequently praise certain players or an entire team for their quickness. In football a player who is extremely fast poses a constant threat to break away for the long run in baseball the fast runner. Causes hurried throws and adjustments in pitching and defensive strategy the full court press is a patent weapon in basketball if a team has the speed to make is effective and in track is the essence of the sport.


Flexibility:

Flexibility is the ability to move the body and its parts through a wide range of motion without undue strain to the articulations and muscle attachments.\(^\text{21}\)

According to Corbin et al\(^\text{22}\) “Flexibility is the capacity to move inside range of joint movements. The flexibility of the body movements is depends on bone structure, joint function and muscular efficiency”.

“The Range of Motion of a Joint or Group of Joints”\(^\text{23}\)

Cardiovascular Endurance:

“The body’s ability is to extract and use oxygen in a manner that permits continuous exercise, physical work, or physical activities”.\(^\text{24}\)

Self-Perception:

It relates to the way how the subject feels about himself /herself.

Self Concept:

Stifford George\(^\text{25}\) defines self concept Physical Education cannot be separated from the education of the mental & spiritual. All education goes


\(^{22}\) Charles B. Corbin, Lin Us J. Dowill, Ruth Libsey and Homer Julason, Concept in Physical Education with Laboratories and Experiment (W.M.C. Brown Company Publications, 1970).


\(^{24}\) Ibid., P.371.

on at the same time. In an era when many methods of learning involve little muscular energy, the importance is magnified.

According to Bertara M.H. Raven and Jeffrey\textsuperscript{26}, “In the very act of trying is to create a particular impression, we inevitably reveal dues about ourselves that other people pick-up, interpret and use in responding to our behavior. Their view of us, and thus our view of ourselves through them enable us to develop a concept of self, to discover what we are really like”.

According to Pani and Waravich\textsuperscript{27}, self esteem is considered as the core factor in personality and it has been the theme of several studies. Studies on self concept and body image showed an enhancement of the self concept with increasing education, age, and higher achievement.

**Academic Performance:**

Academic achievement is defined in different ways by different authors. It refers to any desirable learning that is observed in the students. Any behaviour that is learnt may come with in the scope of achievement. Pupil achievement means the status of pupil with respect to attained still or knowledge as compared with other pupils or with schools adopted standards.

Academic achievement is defined by Crow and Crow\textsuperscript{28} as the extent to which a learner is profiting from instructions in a given area of learning.

\textsuperscript{26} Bertam H. Raven and Jefrey, “Social Psychology”, (1976), P.86.


i.e., achievement is reflected by the extent to which skill and knowledge has been imparted to him.

For the purpose of the study marks obtained by the subjects at their class tests and examinations were considered.