CHAPTER - I

INTRODUCTION
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1.1. EDUCATION

A serious student of education is essentially concerned with the practice of education. It must however, be remembered that practice pre-supposses certain amount of theory. It has been rightly said that ever the most practical and as a matter of fact educationist has some kind of a theory of education. A practical educator like Tagore or Gandhi, Rousseau or Devey would arrange and classify his theoretical ideas where as another (and there is a large majority of them) might leave behind a disjoined crowd of his ideas.

Education, as we have seen, is bound up with human race. Its boundaries are as wide as those of life. Its implications are rich and varied. Just as it is difficult to squeeze life in a few words, in the same way it is difficult to give a single meaning of definition of education. Before we arrive at a comprehensive (though not all inclusive) definition of education, let us understand the term.

- in its derivative sense
- as understood by Indian thinkers
- as understood by Western thinkers.

"Importance of Education"

1. An essential human virtue.
2. A necessity for society.
3. Important for integration of separate entities.

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According to E.S. Lowrance, Plato's contribution to education lay in his belief that the needs of knowledge exist in every human soul and that the function of the teacher is to help the learner to discover the truth himself.²

Thus 'education' is leading out what is within man. It is by means of education that the latest potentialities of man are made patent. Thus we see that in general there are two meanings given to the word 'education'. One meaning lays emphasis on the training and teaching and the other on the 'leading forth' or enabling the individual to develop according to his potentialities.

It is the second meaning that is now accepted widely, because education is for all life and it is vitally related to our way of living and experiencing. We receive education in the school of life and the experience is our best teacher.³

Education as a social science has assumed importance in modern time because it not only helps in understanding the status quo but also can serve the state and society by its power to change human behavior. As we know, education at the individual level tries to make patent what is latent. In other words, the function of education is to develop all the powers of an individual.

Education aims at the physical, mental, emotional, social and moral development of an individual. But when we try to know weather the moral

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development of a person has been satisfactory we have to examine it in a social contest.  

a. Education is a process. Any one act or single experience does not by itself make up education. Education is neither a more serial aggregate of facts. It has an intrinsic continuity.

b. Education is an integrating process. The function of education is to create integrated human beings. Only such human beings are intelligent and capable of solving individual and collective problems.

c. Education helps to discover lasting values. It helps us to break down national and social barriers.

d. Education is a life long process. It includes all influences which act upon individual during his passage from the cradle to the grave.

Education is an essential human virtue. Without it, man is a splendid slave, a reasoning savage. It is to humanize him. Man becomes ‘man’ through education. He is what education makes him. Man is an animal both from his passions and his reason. Education fashions and models him for society. There are generally two aspects of human life. One is biological and the other is social or cultural or spiritual.

1.2. OBJECTIVES OF EDUCATION

The objective of education is the development of a child as a whole. It was stated that the objectives of education were health, command of fundamental processes, worthy home membership, vocation, citizenship, worthy

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4 Ibid., p.31.
use of leisure time and ethical character this was put in other words to state that the objective of education was human relationship, civic responsibility, economic efficiency and self realization. Education is for the perfection of the individual and betterment of the society. The success of any educational programme was judged from the extent of fulfillment of these objectives. The same objectives can be achieved by physical education programmes in schools as well as out of the educational institutions.5

Education contributes to the development, advancement and perpetuation of the nations culture. "Educational institutions play primary role in the development of the human resources of society schools, colleges and universities effective institutions that this society has for the achievement of intellectual skill, knowledge, understanding and appreciation necessary to make wise decisions, good judgements and logical analysis of problems".6

The modern aims of education are:

- To prepare the young to enter the world of work and earn a living.
- To develop the wholesome personality.
- To actualize the potentialities, talents and capacities of the child.
- To contribute to the social harmony (good citizenship training).
- To help the individual to enjoy life.
- To develop a desirable or good philosophy of life.
- To promote individual excellence.
- To create scientific spirit in the minds of the young.

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1.3. PHYSICAL EDUCATION

Physical education include play, exercise games, sports, athletics, leisure and recreation. Exercise refers to exertion of muscles, limbs etc for health's sake. Play means bodily exertion with a view to amusement. Games connotes physical exertion for amusement of competition governed by definite rules. Sports means all these physical activities done for diversion amusement pleasure of success.  

Physical education is an essential part of an ideal educational systems. For even a highest and complete education of the mind is not enough with out the education of the body. But this aspects of education has been overlooked in many developing countries of the world including India.

Physical education is that sum of those experiences which come to the individual through movement.

Physical education is that field of education which deals with big muscle activities and their related responses.

"Physical Education" an integral part of the total education process, is a field of endeavor that has as its aim at the improvement of human performance through the medium of physical activities that has been selected with a view to realizing this out come.

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9 Ibid.

Contemporary society's needs and trends influence the education of its citizens. The education of the individual may be described as taking place in three learning domains; cognitive, effective and psychomotor. Physical education contributes social needs, trends and forces which influences the objectives of education also affect the role of physical education process. Recent years have been marked by calls for educational reform specifically revitalization and strengthening of the educational process.

The nature of educational reforms that are being implemented may have far reaching consequences on the conduct of physical educational programmes in our schools and colleges.\textsuperscript{11}

1.4. OBJECTIVES OF PHYSICAL EDUCATION

The worth of physical education can be obvious from the examination of the objectives and their fulfillment. Physical education achieves hygienic, remedial, educative and recreative objectives. It improves health, remedies illness and injury, increases knowledge about the movement of the body and an increase in fun and enjoyment and reduction of tension. In the beginning of present century, physical education programmes in addition to organic assumed psychomotor and intellectual character.\textsuperscript{12}

In 1965, the American Association for health, physical education and recreation stated five main objectives of physical education.

1. To help children more in a skillful and effective manner in all selected activities in which they engage, in the physical education program, and also in those situations that they will experience during their lifetime.


\textsuperscript{12} Sharma, \textit{Op.Cit.}, p.11.
2. To develop an understanding and appreciation of movement in children and youth so that their lives will become more meaningful, purposive and productive.

3. To develop an understanding and appreciation of certain scientific principles concerned with movement that relates to such factors as time, space, force and mass energy relationships.

4. To develop through the medium of games and sports better interpersonal relationships.

5. To develop the various organic systems of the body so they will respond in a healthful way to the increased demands placed on them.

Physical education lays stress on the development and improvement of movement skills and game skills. Games, aquatic sports, dance etc. all require skill in movement. These can be acquired by walking, running or jumping etc. either all alone or in groups or using apparatus. Certain skills can be developed by practicing with bats, rackets, balls, ropes and hoopes. Some skills as eye hand co-ordination to hit or catch a ball are important. Such skills have to be developed independently.

There are many elements of character which can be developed by physical education. The attitudes, values and our appreciations, individual and social can be changed and brought to a higher pitch. It can teach fair play, sportsmanship, courtesy and self-confidence.

This can bring life of an individual to higher level. As a group, qualities of decision making, communication and leadership are developed. Qualities of self - control, self expression and the equanimity of spirit with which we win or defeat should be improved.13

The aim of physical education is development of effective citizenship and social efficiency. The object of physical education is to help in the production and maintenance of health in body and mind. The aims of physical education are not different from those of education. The subject teacher is merely contended with discussing the theory and imparting knowledge whereas the physical education teacher makes a ceaseless and untiring effort to achieve these aims of education through muscular activities.

The objectives of physical education are often more specific than the goal, or aim.

In 1934, the American physical education associations committee on objectives listed physical fitness, mental health and efficiently, social moral character, emotional expression and control and appreciations as the desired objectives. In 1950, these were restated by profession to develop useful skills, to conduct oneself in socially useful ways and to enjoy wholesome recreation.

In 1965, the American Association for health, physical education and recreation (AAHPR) stated five major objectives as follows.

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To develop an understanding and appreciations of movement in children and youth so that their lives become more meaningful purposive and productive.

To develop an understanding and appreciations of certain scientific principles concerned with movement that relates to such factors as time, force and mass energy relationships.

To develop through the medium of games sports better interpersonal relationships.
As the primary aim of this thesis will be to increase physical fitness and performance in athletics it become necessary to explain physical fitness and the physical fitness variables.

1.5. PHYSICAL FITNESS

The state of being fit or “in condition” is of primary concern to any nation or people. The vigour of the individual depends upon his fitness for the task at hand and basic to any task is fitness for living itself. To the athlete, the concept of training and fitness is a familiar one. Any athlete knows that in order to be good at his sports, he must undertake training in skills, attitudes, and physical well being. For those who have few athletic aspirations, fitness is just as essential, although the ways it is acquired are not as clearly marked out as is the athletes programme. Fitness for life is such a broad concept that the inclinations is to break in to distinguishable parts “Fitness for what?” - implying that life has many specific fitness aspects. Obviously, fitness for the clerk of the court is different from fitness for the bricklayer. Yet each must maintain the functional integrity which will enable him to go beyond his job limitations.14

Physical fitness refers to practical performance of exercise that calls forth a experiences. Physical fitness beams soundness of body, a condition which its function are duly and efficient by discharged.

Physical fitness encourages and benefits body mobility, strength etcetera. There are a number of ways and means to attain physical fitness such as walking, running, cycling, swimming playing exercise etcetera.

For a good performance in any sports or athletic event achievement of high standard of fitness is basic requirements. The fitness must be gained through conditioning programme.

Fitness is that state which characterise the degree to which a person is able to function efficiently. To lead a happy and successful life, people have to develop the physical fitness because for the proper functioning of the body and systems it is necessary. Physical fitness is very important in sports and games. The level of fitness in different in person and necessity of the fitness components are different in each games.

Fitness is that state which characterize the degree to which a person is able to function efficiently. Fitness is an individual matter. It implies the ability of each person to live most effectively within the potentialities in him.15

The purpose of the physical fitness is to create a consciousness and enthusiasm amongst the people and to stimulate that interest for physical welfare which will help them to have a better and more healthful living. The physical fitness is also expected to assess factors such as speed, strength, endurance, power and agility which go to make a person physically efficient.16

It is the responsibility of every country to promote to physical fitness of its citizens because physical fitness is the basic requirement for most of the tasks to be undertaken by an individual in his daily life. If a person's body is under developed or grows soft or inactive and if he fails to develop physical powers, that is undermining his capacity for thought and for work, which are of vital importance to one's life and society in a welfare state.

Studies have documented a sedentary life style as a risk factor for major degenerative diseases. National health statistics indicate that a high percentage of visits to physicians are for vogue complaints such as chronic fatigue. In many cases, the cause of fatigue is the lack of regular physical exercise.


1.6. IMPORTANCE OF PHYSICAL FITNESS

Regular participation in exercise schedule, improve all the important physical and motor fitness components namely strength, speed, endurance, flexibility, co-ordination abilities etcetera.

Physical fitness is one's richest possession, it cannot be purchased. It has to be earned through a daily routine of physical exercise.

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Fitness is needed for every game and sport is no exemption promise it.

Physical fitness makes one feel mentally sharper, physically comfortable and move with out body and better able to cope with the demands that every day life makes upon us.

"Increased physical fitness not only improves health but improves performance at work. Hundred of American companies have backed this idea financially by employing full time directors of fitness for their work".17

The benefits of physical fitness are numerous. The person who is physically fit has greater amount of strength energy and stamina and improved

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sense of will being, better protection from injury because strong well-developed muscles safeguard bones, internal organs and joints and keep moving parts limber and improved cardio respiratory function.\textsuperscript{18}

Regular vigorous physical activity through life significantly reduces the risk of disability and premature death from stroke and heart disease. It can also effectively alter many of the important risk factors for cardiovascular disease by lowering body weight and total serum cholesterol levels, raising HDL “good” cholesterol and promoting the maintenance of normal blood pressure\textsuperscript{19}.

“A fit nation is an asset and weak nation a liability”.

If a country desires to excel in the field of games and sports the only short cuts to make the people fitness conscious and encourage them to regularly participate in physical fitness programmes in order to raise their fitness status.

1.7. VARIABLES CHOSEN FOR THE STUDY

The very purpose of this study was to find out the effect of physical education programme on the physical fitness and athletic performance of school children, so it becomes necessary to mention the physical fitness variables and their importance besides performance in athletics.

The physical fitness variable chosen for the study are speed, power, agility, flexibility, endurance, abdominal strength and shoulder strength.


\textsuperscript{19} Hockey, \textit{Loc. Cit.}, p.2.
1.7.1. Speed

Speed may be explained as "the capacity of the individual to perform successive of the same pattern of faster rate."^{20}

Speed is the performance pre-request to do motor actions under given conditions (movement task, external factors, individual pre-required) in minimum time. Speed is a determining factor in the explosive sports such as sprint jumps and most field sports.^{21}

Speed is a conditional ability. It has a complex nature and depends on a considerable extent on the central nervous system. The high role of coordinative process in a speed performance the importance of speed has to be done with specific means and methods. Speed ability should not be equated with mechanical speed which is equal to the distance covered per unit of time. Speed ability primarily signifies the ability to execute motor movements with high speed. Speed is one with a movement or successive movement of some kind may be performed. Speed is an important component of the physical fitness.

According to Fisher^{22} speed has a different forms.
1. Speed of movement of body segments.
2. Running acceleration speed.

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Speed is an innate ability which can be improved through practice and training. Speed is a prized quality in many sports. Speed performances appear in different form in various sports. Singh\(^{23}\) was of the view that there are five types of speed abilities namely reaction ability, movement speed, acceleration ability, locomotor ability and speed endurance.

1.7.2. Importance of Speed

Fastest man can be determined by his performance in 50 mts dash. Speed is a conditional ability. It has a complex nature as it depends to a considerable extend the central nervous system. Speed ability should not be equated with mechanical speed, which is equal to the distance per unit of time. In several sports actions no distance is covered at all. Speed ability primarily signified the ability to exact motor movements with high speed, these movements may be cyclic in nature.\(^{24}\)

Speed is measured in metres per second. Speed is a determining factor in the explosive sports; speed is very essential in track and field events and for all sports activities.

Speed is one the most important physical fitness component which is highly essential for many physical activities. Strength is highly related to speed, generally in team events. Speed is a valuable factor in game like Hockey, Football, Handball and athletics.

1.7.3. Power

Power is the capacity of an individual to bring into play maximum muscle contraction at fastest rate of speed.\(^{25}\)


Power is the measure of total amount of work that the muscle performs in a unit of time.\textsuperscript{26}

Power may be defined as the capacity of an individual to bring in to play maximum muscle contraction at the fastest rate of speed.\textsuperscript{27}

Power is the combination of strength with explosiveness maximum muscular force, related at maximum speed.\textsuperscript{28}

Power is the rate of accomplishing work. It is defined in terms of speed at which you can produce force. A powerful individual can make muscular exertion very fast.

Power is the combination of strength with explosiveness (speed) maximum muscular force, released at maximum speed.\textsuperscript{29}

1.7.4. Importance of Power

Power is another variables chosen for the study performance in standing broad jump reveals the explosive power of an individual. Need of power in standing broad jump is highly essential in relation to the energy used in jumping, sprinting, kicking etcetera. The strengthening exercise like push ups, weight training, running up hill at speed will need explosive power.

\textsuperscript{26} Guyton and Hall, \textit{Testbook of Medical Physiology} (A Prision Indian Edn 9th Edn; Britain: A Prision Indian Education, 1996), p.1060.


The power factor is a characteristic of superior athlete. Speed and force are combined in athletic performance for high standard for excellence. The standing broad jump is most commonly used to measure leg power. Taking in to consideration of the above facts, power was selected as a variable for the study.

To a longjumper in athletics power is absolutely essential. Without adequate power a long jumper cannot be able to each more distance. So power is a necessary factor in sports specially in athletics.

1.7.5. Agility

Agility is one of the important motor characteristics which plays a decisive role in any physical performance.

Johnson and Nelson defined agility as 'The physical ability which enables an individual to rapidly change body position and direction in precise manner'.

Field hockey which has resemblance to football also demands a high degree of agility among the hockey players.

Mathews defines agility is the ability of the body or parts of the body to change direction rapidly and accurately.31

Agility is the ability to master new movements quickly and regear motor activity quickly in correspondence with the requirements of the changing


situation. The main way to develop agility is to master various new motor skills. Exercises connected with instant reaction to the sudden changes in a situation are used to develop ability as an agility to quickly react motor activity. Agility is measured by 1) the difficulty of the assignments coordination 2) physician of its performance 3) the time required for its performance in particular the time required for mastering the necessary level of precision.

1.7.6. Importance of Agility

Agility is very important in all abilities involving quick changes in position of the body and its parts. Fast start and step, quick change in directions are fundamental to fast performance, particularly all outdoor games such as Hockey, Basketball, Tennis, Shuttle Badminton, Kho-kho, Football and Gymnastics. These games require running ability agility etc. Agility plays very important role in all the physical activities where efficient foot work and quick change in body position are required. Agility is more effective when it is combined with the high level of strength, power, endurance and speed.

Fast starts and stops and quick changes in direction requires agility.

Agility is a necessary pre - requisite for all physical exercises requiring the participation of the whole body and the interplay of all the groups of muscles.

Agility plays a significant role in the training of technique and in competition. The aim in training skills is to bring the athlete closer to the ideal form of the sequence of movement.\(^\text{32}\)

1.7.7. Flexibility

It is the range of movement at joint or joint complexes.\(^\text{33}\)


Flexibility is the ability to execute movements with greater amplitude. Flexibility is neither a conditional ability nor co-ordinate ability.34

According to Yuhasz35 “Flexibility is the range of joint motion, that is, the degree of movement that can be achieved at the various body joints”.

“Good flexibility can be attained in a relatively short time. In most instance it is lost quickly unless the athlete maintain are given of stretching exercise”.36

1.7.8. Importance of Flexibility

Flexibility is one of the important components of physical fitness. Performances in sit ups test reveals the flexibility of an individual. The basis to proficiency in motor movement is flexibility.

It concerns degree of movement and it limits the degree to which the body or body parts can bend or twist by means of flexion and extension of muscles. The degree of movement depends on the flexibility and extensibility of the muscles and ligaments serounding the particular joint. A high level of flexibility fosters a saving in energy during vigorous movement because of the better mechanical adjustment.

Flexibility has important inter relationship with other performance factors. Flexibility is a necessary pre - requisite for maximal development of movement


force and speed. Greater range of movements enables the muscles to develop more force. Flexibility allows movements with minimum of muscle tension and internal resistance. Flexibility is indispensable for prevention of injuries. Flexibility is another important factor in athletics.

Individuals who have good flexibility can move easily and general movement is not limited. Poor flexibility often hinders movement because of the body stiffness.

1.7.9. Endurance

Hardayal\textsuperscript{37} defines "Endurance is the ability to do sports movements, with desired quality and speed, under condition of fatigue.

Endurance is defined as the capacity to exert force of as the ability to do work against resistance.

"Endurance is the ability to resist fatigue.\textsuperscript{38} The resistance ability to fatigue".

Endurance enables the heart, blood vessels and lungs to catch oxygen and take it to the muscles and to do as effortlessly as possible.\textsuperscript{39}

Endurance is primarily determined by energy liberation processes. The ability of the human body to maintain a level of energy production forms the physiological basis of endurance. Endurance is directly or indirectly of high

\textsuperscript{37} Hardayal Singh, Op.Cit., p.130.

\textsuperscript{38} \textit{Ibid.}

importance in all sports. It relates to doing work for a long time. It relates to working under fatigue conditions. It involves a large number of muscles. It involves work efficiency.

1.7.10. Importance of Endurance

Endurance is a very important ability in sports. In sports, endurance ensures optimum speed of motor actions. The ability to maintain pace on tempo of an exercise or during a competition is impossible without the requisite level of endurance. Endurance training results in the functioning of various organs and systems of the human body. Endurance activities have been found to be of high value for maintaining good organic health. Endurance is the product of all psycho and physical organs and systems. No other motor ability depends so much on the working capacity to complete psycho-physical apparatus of human as endurance.

Endurance training results in the improvement of functioning of various organs and systems of the human body. Endurance activities have been found to be of high value for maintenance of good organic health.

1.7.11. Abdominal Strength

Another variable selected for the study is abdominal strength. The abdominal muscles and oblique muscles that flex and mid section exercise involve hip flexion, that is not really a functional of the mid section muscles. Hip flexion is actually performed by the quadriceps and the underlying psoyas and pectorious muscles. Because traditional sit ups involve both trunk flexion and hip flexion, the abdominal are the prime mover muscle group for the first phase of the movement. The hip flexors are responsible for the second phase of the movement while there is nothing wrong with exercise that combine trunk flexion and hip flexion, specialized movements will be presented for those people who prefer to train the mid section muscles independently.40

The tightened abdominal muscles help to produce a streamlined appearance.

A situp is basically an exercise for the lower back but it also brings abdominal muscles, into action. Since it is difficult to isolate these muscles with a particular movement sitting up is commonly used to strengthen the abdominal wall.

1.7.12. Importance of Abdominal Strength

The abdominal strength is very much useful in the field of sports and games. When an individual possesses a high degree of abdominal strength one will be able to perform better any type of activity. Those who engage in any physical activity should possess a very good abdominal strength as they are fully engaged in the fields in various types of activities and to perform certain levels they need to possess the abdominal strength.

The abdominal strength helps to maintain the body posture. Lifting a load or moving an inanimate or animate object essentially depends on the abdominal muscular strength.

1.7.13. Shoulder Strength and Importance of Shoulder Strength

Strength is a conditional ability that is, it depends largely on the energy liberation processes in the muscles. Strength is also perhaps the most important motor ability in sports as it is a direct product of muscle contractions. All movements in sports are caused by muscle contractions and therefore, strength is a part and parcel of all motor abilities, technical skills and technical actions. Strength and strength training therefore, assume high importance for achieving good performance in all sports.

Strength is the ability to overcome resistance or to act against resistance. Strength should not be considered a product of only muscular contractions. It is, in fact, a product of voluntary muscle contractions caused by the neuro-muscular system.
In sports, depending on the nature of the movements the strength abilities can appear in complex form.

The weight lifting and throws the strength required is a combination of maximum strength and explosive strength. This combination is also known as power. In volleyball explosive strength appears in combination with strength endurance and is popularly referred to as power endurance.

1.8. SPORTS

The word sport is derived from the two words ‘dis’ and ‘portera’ meaning ‘carrying away from works’. Basically sports are individual activities born out of natural urge for movement. But now a days there is a tendency to include in it the team games which requires some complex organization serious and combined practice between various members of them sports are part and parcel of human as well as animal life.

Palvich⁴¹ states sports has many sides. It has been described as a phenomenon, which demands complete relaxation and full efforts, it provides physical education yet, rehabilitates.

It can be a caused diversion or a complete fulfillment, it shapes man and shaped by man, what ever else it is, sports is a ‘thing’ of remarkable power.

1.9. IMPORTANCE OF SPORTS

"Sports and games every day is the best way to a tension free life. Sports are in every expanding avenue of human life. From very simple beginning it has developed in to a highly organised activity of human society.

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Sports now a days has assumed a major influence in the world and in every day life, reflects society, particularly with regard to the character on human and institutional relations and the ideological foundations nationalizing of over increasing numbers of people throughout the world.

Every society of the world has sports and games of their own traditional and culture because sports is the way of life. Sports are our cultural heritage.

Social values, beliefs and ideologies are expressed through sports and games and are propagated to provide through the society.42

Sports serves vital social and cultural functions, the importance of which can hardly be exaggerated. The contribution of sports towards overall welfare of the human society may be capsuled in the following points. Sports helps in the all round development of human body and it provides ample and healthy means for recreation and relaxations of human mind and body. Sports are effective for rehabilitation and social adjustment for injured, sick and handicapped. Sports provides opportunities for social interactions there by fostering peace and understanding among different people, nations, vices, religions etc., Sports also performs preventive and curative functions for several diseases and ailments inflicting human body and mind. "Sports provides healthy and socially acceptable opportunities for the people and nations".

1.10. ATHLETICS

Athletics is a collective name of physical exercise and games requiring skill and activity. Athletics is the basic sport for all and so it has assumed great importance in recent years.

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Athletic events are classified into two namely track event and field events. The track events include short distance run sprint, middle distance run, long distance run, hurdling, race walking and steeple chase. The field events include jumping events (such as long jump, triple jump, pole vault and high jump) and throwing events called Javelin throw, hammer throw, putting the shot and hurling the disc.

1.11. IMPORTANCE OF ATHLETICS

The physical educationist, coaches and sports scientist of today are becoming more aware of the scientific information related to the athletes potential proficiency in sports. Research in nutrition, psychology, bio chemistry and physics have contributed much to the performance level of athletes in various competitive sports of today. In recent years the sports scientists have taken interest in the analysis of human movement in various sports activities making use of the laws of physics.

The scientific minded youth of today are ready to accept the truths of mechanics and certainly the subject as applied to track and field which is considerable interest to young people.

The constantly improving level of competition performance in all track and field disciplines is proof of the conscious endeavours being made in many countries. Particularly at Olympic Games.

From these come the initiative to improve the training process through scientific knowledge so that the athletes potential can be exploited move rationally and more effectively. 

As the study aims to find out the improvement in selected performance in athletics, it becomes necessary to explain the importance of selected events in athletics.

1.12. 100 METRES AND ITS IMPORTANCE

100 metres ran is the ability of the individual to successive movements of the same kind in the shortest period of time. Sprinting 100 metres can be understood as the ability of the individual at the maximum speed possible.44

One hundred metres performance is the indicator of the speed of an individual. The fastest athlete can be a good performance in hundred metres performance.

Speed is the ability of an individual to perform successive movements of the same pattern at a fast rate, or even one single movement while speed would appear to be an innate quality. It can be improved by practice of the co-ordinated movements and by learning proper techniques. The 100 mts event is the simplest of all the standard running events. It is basically confined to a less area. Hence no need to mark a full curved 200 mts or 400 mts tracks.

1.13. SHOT PUT AND ITS IMPORTANCE

Shot put is an event which reveals the capacity of the individual to bring in to play a maximum muscle contraction at the fastest rate of speed.45


The shot put is the simplest of all the throws. It is basically a linear action confined to a small area. There are no aero dynamic factors involved.\textsuperscript{46} The modern technique of throwing is relatively new, being invented by Perry O. Brien in the early 1950’s. Technical aspects of the throw have been constantly refined and perfected. Shot put event is the indicator of Arm strength, shoulder strength and the angle of projection.

1.14. LONG JUMP AND ITS IMPORTANCE

The aim of long jump event is to take off on the take off board and to land in sand pit gaining the maximum distance.\textsuperscript{47}

The long jump is one of the most simple and natural events in track and field. Despite its apparent simplicity, a great deal of skill and conditioning is required to run full speed down a run way, consistently hit an eight inch board, and take off and land. For this reason it is imperative that the coach and athlete treat the long jump as a technique skill that can be improved only through proper training and conditioning.

Performance in long jump reveals the explosive power of an individual. Need of power in long jump is highly essential in relation to the energy used in jumping, sprinting, kicking etcetera. The strengthening exercise like press ups weight training, running uphill at speed etcetera will improve explosive power.


The explosive power measurement is expressed in terms of the distance through which the body or an object is propelled through space. The long jump includes projecting into the air. The main propulsive force comes from the legs in long jump. Leg explosive power is most important for field events such as long jump and triple jump.

1.15. PURPOSE OF THE STUDY

Very little research has been done to find out whether there is any improvement in the physical fitness and performance in athletics of the high school children by implementing physical education programme. Those done in this area are inconclusive and this motivated the researcher to pursue the study. The researcher being the physical education teacher, an athlete and athletic coach of Tamil Nadu athletic team wants to contribute something in this field and hence the scholar has taken up this study.

The study was intended to find out whether there was any improvement in physical fitness of the high school boys by implementing physical education programme.

Also to find out whether there was any improvement in the performance of athletics of the high school boys of implementing physical education programme.

1.16. STATEMENT OF THE PROBLEM

The purpose of the study was to implement the physical education programmes and to find the influence of physical education programme on physical fitness and performance in athletics in Tamil Nadu state.
1.17. HYPOTHESES

The following hypothesis points were formulated.

1. It was hypothesised that there may be significant improvement periodically in physical fitness variables by implementing physical education programme among high school boys in Tamil Nadu.

2. It was also hypothesised that the performance in athletics may be improved periodically by implementing physical education programme among high school boys in Tamil Nadu.

1.18. SIGNIFICANCE OF THE STUDY

1. Children themselves can know the standard of their physical fitness and performance in athletics, thereby one can take possible steps to enhance their use.

2. The results of the study would be of great significance because it may provide opportunity to the physical education teachers to assess the changes in the physical fitness due to implementing physical education as a subject.

3. The findings of the study would be useful in designing and administering physical fitness programme using physical education training.

4. The results of the study would be helpful to the physical education teachers in designing sound physical education programmes to improve physical fitness variables of the individuals concerned.

5. The results of the study would concentrate to the body of knowledge in the specialised area of physical fitness through physical education training.
6. This study would further motivate for further research of related variables.

7. This study would also enable to find out the effects of physical education programme on the physical fitness and athletic events.

8. This study also would help to find out whether physical education programme have greater effect on the physical fitness and athletic events of high school boys.

9. This study may be helpful to government administrators to introduce physical education as a compulsory subject for high school students.

1.19. DELIMITATIONS

1. This study was conducted only on high school children in Tamil Nadu.

2. Only boys (male students) were selected for this study.

3. The age of the subjects under the study was between twelve and fourteen years.

4. The study was delimited to only physical fitness and performance in athletics of high school children in Tamil Nadu state.

5. Seven physical fitness variables alone were selected for the purpose of the study:
   1. Speed
   2. Power
   3. Agility
   4. Flexibility
   5. Endurance
   6. Abdomen Strength and
   7. Shoulder Strength
6. Three athletic variables alone were selected for the study.
   1. 100 metres sprint
   2. Long jump
   3. Shot put

7. The training was given only for a period of six months.

1.20. LIMITATIONS

The study have the following limitations.

1. The factors like food habits, diet and other factors which may have an influence on the results of the study were not taken into account and they were considered as limitations.

2. Special motivational technique were not used during the collection of data. Hence the difference that may occur in performance due to lack of motivation would be recognised as limitation.

3. The day to day activities were not controlled. But practice were given for all the subjects.

4. The passive variation such as temperature, air, atmospheric pressure, food habits, daily routine etcetera, during the testing period cannot be controlled. As these passive variations may have on effect on the results of the study, they would be considered as limitations.

5. The subjects selected were high school boys only and as such uniformity in their diet, routine work, life style, etcetera could not be considered.
1.21. DEFINITION OF THE TERMS

1.21.1. Physical Fitness

According to Bucher, "physical fitness is the ability of an individual to live a full and balanced life. It involves physical, mental, emotional, social and spiritual factors and the capacity for this wholesome expression."48

1.21.2. Speed

Speed is the ability of the individual to make successive movements of the same kind in the shortest period of time.49

Speed is the capacity of the individual to perform successive movements of the same pattern at a fast rate.50

1.21.3. Power

Power is the combination of strength with explosiveness (speed) maximum muscular force, released at maximum speed.51


51 Heyeldine, Loc.Cit., p.4.
1.21.4. Agility

Agility is generally defined as the ability to change direction quickly and effectively while moving as early as possible at full speed.\(^{52}\)

1.21.5. Endurance

Endurance is the ability to do sports movements, with the desired quality and speed, under condition of fatigue.\(^ {53}\)

1.21.6. Flexibility

Flexibility is the ability to execute movements with greater amplitude. Flexibility is neither a conditional ability nor co-ordinate ability.\(^ {54}\)

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