Chapter I

INTRODUCTION

Games and sports, as a part of human education has always existed in the human society. Before the dawn of civilization and culture, physical exercise was very important aspect of human existence. In the primitive society, "the necessity for survival" motivated man to keep himself more physically fit and strong enough in comparison to stronger forces of nature.¹

The time when sports were nothing more than an enjoyable recreation for individual is irrevocably past. The phenomenon of sports to-day intervenes in almost all fields of human endeavour and very often it even has a central position. Sport, thus, has experienced an enormous extension quantatively as well as qualitatively with many

positive but also some negative aspects.\textsuperscript{2}

Nov-a-days, sport has become a part and essential of life. Millions of fans follow different sports events all over the world with an enthusiasm bordering on devotion. Many people participate in sports and games for fun, happiness, pleasure, for health and fitness. Increased participation in sports has resulted in competition which has become an important element of modern life. Competition provides the means by which one can show one's worth successfully.\textsuperscript{3, 4}

All countries try to show their supremacy over others by success in the international sport competitions. Each and every country develops

\begin{itemize}
\item \textsuperscript{2} Jasraj Singh, "Investigation of Selected Physiological, Psychological, Anthropometric Variables and Functional Assessment as Prediction of Tennis Performance" (Unpublished Doctoral Thesis, Jiwaji University, Gwalior, 1987).
\end{itemize}
its own innovations and techniques, tactics and strategies for exhibiting top level performance so as to emerge winners and champions of sports.

In the perspective of sports stratification soccer was previously considered as a game played by lower class people. Upper class people were reluctant to play soccer perhaps for frequent body-contact and rough tackling which are invariably involved in this game. But now the situation is completely changed.

Of all events in human history, the one to attract the largest audience was not a great political occasion, nor a special celebration of some complex achievement in the arts and sciences, but a simple ball game— a soccer match. On a day in June, 1978 it is claimed that more than a thousand million people turned up in the world cup final between Argentina and Holland. This means something like one-quarter of the entire world population stopped whatever they were doing and focussed their attention on a
small patch of grass in South America where 22 bright clad figures were kicking a ball with a frenzy of effort and concentration. 5

Soccer has become a very popular game in the world. Almost all of the nations play the game both for enjoyment and competition. Modern soccer is very fast by its nature. The spectators and the players enjoy the game of soccer with a great amount of merriment. It is a game of constant action and requires continuous adaptation to changing situations by the team as a whole as well as by the individual players. Although it is a team game, there is ample room for players to display their brilliance through individual performance with the ball as well as through team play involving improvisation and tactical knowledge.

It is a game that sends people all over

the world in to frenzy, creates National and International heroes too like Pele the great, Socrates, Zico, Bebeto, Romario of Brazil, Johan Cruief, Gullit, Busten, Richard of Holland, Diego Maradona, Gychochia, Batistuta of Argentina, Lothar Mathews, Ruddy Vohler, Klinsman of West Germany, Valdano, Asprilla of Colombia, Frank Borousi, Baggio of Italy and so many others. As a result there is a constantly increasing demand for more knowledge and better training means to coach the game. Sports scientists, Coaches and Physical Education Teachers are charged with the responsibility of training and teaching their players soccer techniques and tactics, to develop teams who perform at the maximum level of effectiveness. 6

It is apparently one of the ancient sports and it is the direct ancestor of American football, Canadian football, Rugby and several others similar sports. Soccer can be traced back directly

to eleventh century A.D. in England.

This is a sport in which largest number of players and a great number of clubs are registered. Millions and millions of people enjoy this game all over the world. As in other countries, in India also this sport has attracted millions of people and stands above all. The reason is, it is considered as the sport of ordinary people and it can be understood by each and every one owing to its simple and easily understanding rules.

Indian soccer is now on the downhill in the international arena in relation to the soccer played about four decades back (early fifties) in India. If we read the pages of history of Indian soccer, it is quite evident that India occupied a very covetable position in world soccer at that time.

1948, the year when some unknown Indian soccer players moved westward beyond the Suez to London to take part, in the olympic games a
thrill, a dream, an aspiration of all sportsmen came true for Indian soccer players. In 1951, in Delhi further glory was attached to Indian soccer when they rose to the peak of their height and won the Asian Gold.

Gone are those days when Indian soccer had its height and health, name and fame to talk about. The constant deterioration in Indian soccer is still mystery. The miserable failures of Indian soccer in grooming up of youngsters and the negligence in cultivating required level of physical fitness, modern means and methods of training and knowledge of its changing nature to uplift the total performances. 7

The game of soccer requires tremendous physical fitness, as the duration of the game is ninety minutes in which basic movements such as kicking, running, jumping, throwing, dodging, etc. are involved. Endurance plays a vital role

in order to play continuously for ninety minutes. Strength is also essential for powerful kicking, tackling, throwing, heading and so on. For dribbling frequent and rapid change of body directions i.e., agility is an essential element. Flexibility plays a major role for reducing the chances of injury as well as perfection of skills. Speed, coordination, reaction time and balance are also important for exhibiting the modern skillful soccer performances.

"Soccer is a game which call for strenuous, continuous thrilling action and therefore, appeals to the youth the world over. The skills involved in the game are simple, natural and yet are highly stimulating and satisfying to any one who participates in the game." The skill includes kicking, running, jumping, throwing, dodging and so on. 

Participation in soccer is both enjoyable

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and beneficial. To play the game well one must develop physical stamina and excellent neuromuscular coordination, intellectual alertness and the ability to make adjustment to rapidly changing situations, emotional control, gentlemenly conduct and social graces that promote interpersonal relationship.\(^9\)

In the recent years greater stress has been laid on the quality rather than the quantity of training. The sports scientists and experts of sports want their sportsmen to extract maximum achievement from their training procedure without causing too much strain on them. This is possible only if coaches and teachers of physical education apply the most economical manner for enhancing the performance of athletes.\(^{10}\)


\(^{10}\) Asha H. Patel, "The Effect of Varied Frequencies of Speed Training on Sprinting Speed" (Unpublished Master's Thesis, Jiwaji University, March, 1980).
With the constant demand for "high sports performance" the concept of soccer today has been changed." The concept of "Total Soccer" applies skill development, technical development, development of all important motor components and physiological parameters which are closely associated and contributes to performance in soccer. Not only the technical, physiological and physical development, the sport scientists are also making efforts to develop the intellectual ability of soccer players.

The existing literature in the field of soccer shows that endurance, speed, agility, maximum leg strength, upper body strength, leg power, muscular endurance, flexibility, coordination and reaction time— are important
pre-requisites for efficient soccer performance whereas excess body fat proves to be hindrance.\textsuperscript{14}

The research findings show that high level of technique perfection alone can not produce success in competitive sports. Most


\textsuperscript{12} Subhas Chandra Bandyopadhyay, "Relationship of Selected Anthropometric, Physical Fitness and Motor Abilities to Soccer Skill, Performance" (Unpublished Master's Thesis, Jiwaji University, April, 1982).


of games demand a higher level of speed, strength, endurance, flexibility, coordination and optimum fitness of the organism. 15

In many sports like football the skill in top performance may call for 60 kinds of mobilisation of energy. Football is for instance, an endurance activity as it is played for 45 minutes duration at a stretch in each half of a match. At the same time the play involves short sprints and powerful kicks frequently and this involves sprint and explosive activities. Then an athlete may require aerobic training or anaerobic training, and most often, 60 kinds of training in different proportion depending upon sports for which he is being trained to play high competitive level. 16


A football player needs "speed" to reach the ball quickly and to pierce through the defence. On the other hand, the defender needs speed of recovery to guard his goal and even the goalkeeper needs speed of movement to control the ball as quickly as possible.

Specially in one to one situation, speed is the most important factor to decide who will beat whom in the struggle for possession of the ball.

The requirement of speed in soccer is beyond question. The tempo of a soccer game is set not only by how fast individual players run but how quickly they move the ball around to one another as well as up and down the field. How quickly they manage to control the ball and overtake an opponent without any waste of time. Thus, all the techniques and skill training an individual undergoes can benefit his speed. Therefore, it is needless to elaborate the requirement of speed training for better soccer performance further.
Strength deserves considerable attention for soccer players. Players need to produce power when kicking a ball, throwing the ball for a long distance or taking a powerful shooting at the goal, while accelerating quickly or jumping. Soccer players can and must work for improving their strength and power to play more effectively. 17

In soccer it is vital that the players would have endurance. It is useless to dominate a match in the beginning because the players with superior skill may lose it as in the long run they become exhausted and can no longer perform well. A lack of endurance results in fatigue which diminishes several elements of good performance such as timing, coordination, reaction time, general alertness and concentration. Since increased endurance delays the onset of fatigue, it therefore improves the overall

17 Beim, Principles of Modern Soccer, pp. 220-221.
performance during the match.

Agility plays a vital role in soccer because when a soccer player participates in the game of soccer, he has to change direction and movement of various parts of the body while dribbling the ball, tackling the opponent and for goal keeper to save the goal.

In respect of physical fitness the Indian players are lagging far behind in comparison to western players. It is no denying of the fact that they are naturally gifted with the climatic condition and normal physique. But eastern countries like Korea and China have proved that through continuous and scientific training those barriers can be tackled and considerable physical fitness necessary for playing soccer may be achieved.

18  Ibid., pp.194-195.
In India, football is most popularly played in West Bengal, Goa and Kerala. In West Bengal the competitive soccer is mostly played during the rainy season on resisted surface although the players are trained in winter and summer. West Bengal as a state is slightly ahead in football than other states. The Gowarneuse use to play football in almost sand surface. Playing on different resisted surfaces e.g. on dry sand, wet sand and natural turf either during training or during competition may increase the physical ability which in turn may contribute to some extent to total soccer performance.

Coaches are still in search of different methods of training for development of speed, strength, endurance and agility to increase the performance level in soccer.

Due to lack of high modern technology and sophisticated instruments in India high level of training programme is now still for behind than western countries.
Thus a query had alarmed the scholar regarding the effect of different compact surfaces and their varied resistance to speed, strength, endurance and agility of soccer players and therefore such study was undertaken.

Statement of the Problem

The purpose of the study was to compare the effects of training on Dry sand, Wet sand and on Natural turf on speed, strength, endurance and agility of soccer players.

Delimitations

1. The study was delimited to the male soccer players of Bankura Sadar Sub-division, Bankura District in West Bengal.

2. The study was further delimited to the soccer players of the senior age group (Nineteen to twenty four years) of Bankura Sadar Sub-division, Bankura District in West Bengal.
3. The study was restricted to eight weeks training by slow and fast running on Dry sand, Wet sand and on Natural turf.

4. The study was further delimited to the following physical variables -

   i) Speed
   ii) Strength (Explosive Strength)
   iii) Endurance; and
   iv) Agility.

Limitations

1. As the subjects selected for the study were all within the district town but not within a residential camp, the factors like diet, life-style, daily routine, habits etc. which might effect the result of the study were not controlled.

2. Owing to involvement of different technical persons in exercising training on different surfaces at a time, pattern of handling load might vary.
Hypothesis

It was hypothesised that no significant differences would be affected by the training of eight weeks on dry sand, wet sand and on natural turf on speed, strength, endurance, and agility of soccer players.

Definition and Explanation of Terms

Training

Sports training is a process of preparation of a sportsman, based on scientific and pedagogical principles, for higher performance.  

Slow Running

Slow running in which the speed is gradually increased from jogging to striding.

Fast Running

Fast running in which the speed is gradually increased from striding to running.

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increased from jogging to striding and finally to sprinting.

Surface

Surface means the outside of a material body or the upper boundary of the soil i.e., outward aspects of the training field.

Dry Sand

Dry sand surface means the surface full of sands in the river-bed except the portion of water flow and its adjacent wet area.

Wet Sand

Wet sand surface means the surface full of sands soaked with water in the river bed, just beside the water flow.

Natural Turf

Natural turf means the surface made of dry soil covered with grass.
Speed

Speed is the quickness with which one is able to move his body from one point to another. 21

Strength

Explosive strength was studied for the purpose of the study.

Explosive Strength

Mathews 22 has defined explosive strength as the capacity of the individual to release maximum force in the shortest period of time.

Endurance (Cardio-vascular Endurance)

Clarke 23 defines the cardio-vascular


endurance as the moderate contractions of large muscle group for relatively longer periods of time, during which maximum adjustment of the cardio-respiratory systems are necessary.

Agility

Clarke defines agility as the speed of changing position or in changing direction.

Soccer

Soccer is a football game, played by the teams of eleven players in each side and using a round football. The designation "Soccer" is derived from "Association Football is distinguished from American football, Canadian Football, Rugby and several other sports in the Federation De International Football Association. It is popularly known in India as Football.

24 Ibid., p.227.
25 New Encyclopaedia of Sports, S.V. "Soccer" by Ralph Hickok.
Soccer Players

Those who play the game soccer are called soccer players.

Significance of the Study

The result of the study will be significant in the following ways -

1. The study will indicate the effects of training load on various resisted surfaces on speed, strength, endurance and agility of soccer players.

2. It will further provide an understanding about the effective method of training programme to improve speed, strength, endurance and agility.

3. The findings of the study will assist in designing a suitable training schedule for district level soccer players.

4. It will also help the physical education teachers and coaches to improve performance of the soccer players.