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 a 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 times when sports were nothing more than an enjoyable recreation for individual is irrevocably past. The phenomenon of sports today intervenes in almost all fields of human endeavour and very often it even has a central position. Sports thus, has experienced an enormous extension quantitatively as well as qualitatively, with many positive but also some negative aspects.²

The historical perception of the term "Tribe" derived from a Latin root. The Middle English term 'tribuz', meaning the three divisions into which the early Romans were grouped, come to evolve

into the modern English 'tribe'. With the Romans, the 'tribe' was a political division while the Greeks seemed to have equated it somewhat with their 'fraternities' at times, with geographical divisions at others. In Irish history however the term meant families or communities of persons having the same surname. In certain other areas of the western world and certain periods of history, it stood for a division of territory allotted to a family or community. Today with the anthropologists and sociologists of western origin the term means, according to the latest edition of the Oxford Dictionary, "a race of people; now applied especially to a primary aggregate of people in a primitive or barbarous condition, under a headman or chief."

The purest of the tribal groups possesses the following characteristics:

1. They live away from the civilised world in the most inaccessible part of both forest and hills.
2. They belong either of the three stocks-Negritos, Astroloids or Mongoloids.
3. They speak in the same tribal dialect.
4. They profess a primitive religion known as Animism in which the worship of ghosts and spirits is the most important element.

5. They follow primitive occupations such as gleaming, hunting and gathering of the forest products.

6. They are largely carnivorous of flesh or meat eaters.

7. They live either naked or semi-naked using tree barks and leaves for clothing.

8. They have nomadic habits and a love for drink and dance.³

There are various tribal groups e.g. the Santal, the Bhumij, the Sabar, the Munda, the Kol etc. who live in almost same atmospheric, environmental condition and earn their living by their hard works throughout the life.

The research scholar is eager to throw some light about specific aspects of Santal, Bhumij and Sabar tribal among the various tribal groups which are directly related with the study.

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The Santal

The Santal, one of the most numerous of the tribes arrived in India soon after the Negritos. The name is given because of the similarity of racial type with Australian tribes. There is no precise information, as to when the race first came to India. It was found among the pre-historic skulls in the Tinnevelly district and from references in early Sanskrit literature to 'Nishads' where they were described as noiseless (Aanash) with dark skin colour and peculiar speech and habits, there can be no-doubt that the Proto Austroloid tribes were meant.

The 'Santals' are one of the largest of the tribal peoples of India. At the census of 1931 they numbered over two and half million. The Santals are found at intervals, sometimes in considerable masses, but more generally much scattered, in a strip of Bengal, extending for about 350 miles from the Banges to the Baitarni, bisected by the meridian of Bhagalpur or 87° east longitude, and comprising the following district - Bhagalpur, the Santal parganas, Birbhum, Bankura, Hazaribagh, Manbhum, Midnapur, Singbhum, Mayurbhanj and Balasore.
The Santals have been living in the South-West of Bengal for at least three hundred years. There is agreement among the authorities that they moved to their present sites from the more hilly districts of the Chhoto Nagpur farther West.⁴

The Santal are noticeable for a great vagueness in the chiselling of the features, a general tendency to roundness of outline where sharpness is more conducive to beauty a 'blubbery style of face, and both in male and female a greater tendency to corpulence than we meet in their cognates. Their faces are almost round; cheekbones moderately prominent, eyes full and straight, not obliquely set in the head; nose, if at all prominent, of somewhat a retousseee style, but generally broad and depressed; mouth large, and lips very full and projecting; hair straight and coarse and black.

Mr. Mann notes of them, and I concur in the remark, that their cast of countenance almost approaches the Negro type. The females, he says have small hands and feet, and are ox-eyed, and these are

characteristics which the tribes linguistically allied to them do not possess.\textsuperscript{5}

The Santals, like the Israelites, are divided into various tribes e.g. Saren, Murmu, Mandi, Kisku, Besera, Hansda, Tudu, Baski, Hembram etc.

A Santal in prosperous seasons leads a pleasant life. He is either busy with his cultivation or playing his flute, or dancing with the girls or engaged in the chase. He throws himself with ardour into the latter pursuit, and in hunting down beasts of prey he evinces great skill and powers of endurance and indomitable pluck. They have every year a great hunting festival in which thousands take part. These expeditions are organized with as much care and forethought, as if the hosts engaged in them were about to undertake a military campaign, and take place in the hot season, when the beasts have least cover to conceal themselves in. When the array of hunters reaches the ground on which operations against the wild beasts are to commence, they form a line of beaters several miles in length every man armed with a bow and arrows and a battle-axe, and accompanied by dogs, who

though ugly creatures to look at, appear, like their masters, to be endowed with a true hunting instinct. When they emerge from the woods on open spaces, the game of all kinds that are driven before them suddenly appear. Birds take wing and are beaten down with stick or shot with arrows, quadrupeds, great and small, are similarly treated and in this way deer, pig, jungle fowl, peafowl, hare are bagged; but tigers and bears on these occasions of open warfare are generally avoided.

The Bhumij

The Bhumij, the insurrection of Chhoto Nagpur and Palamau was speedily followed by disturbances in the southern portion of the Manbhum District in which the Bhumij Kols were the chief actors.

Near the boundary of Chhoto Nagpur, the term Bhumij as applied to this class is seldom used. The Kols who form the bulk of the population call themselves Mundas or, as the name is usually pronounced in Manbhum, Muras. The title Bhumij, 'the children of the soil', is given to the members of the tribe settled further east; but, generally, if asked to what class or caste they belong to, they say
'Sirdar'. In Dhalbhun the Bhumij call themselves, and are called by the Singbhum Kols, 'Matkum'.

The Bhumij are, no doubt, the original inhabitants of Dhalbhun, Barabhum, Patkum, Bagmundi, and still form the bulk of the population in those and adjoining estates. They may be described roughly as being chiefly located in the country between the Kasai and Subarnarekha rivers. They had formerly large settlements to the north of the former river, but they were dislodged by Aryans, who as Hindus of the Kurmi caste now occupy their old village sites. The Bhumij have no traditions of their own origin, generally asserting that they were produced where they are found, but some who dwell in the vicinity of old Jain temples declare that the founders of the temples preceded them, though they can tell us nothing of those founders, nor of the architects of the ruined and deserted Hindu temples existing as additional marks of a prior occupation of the country by a more civilized people.

The Bhumij of the jungle Mahals were once, under the nickname 'Chuar', the terror of the surrounding districts and their various outbreaks were called 'Chuaris'. On several occasions since they came
under the British rule, they have shown how readily a Chuari may be improvised on very slight provocation.

The Bhumij live in commodious, well-built houses, and have about them all the comforts to which the better class of cultivators in Bengal are accustomed. Those who live quite amongst the Bengalees have retained very few of their ancient customs; none perhaps, except the great national amusement, they gay meetings for dance and song both at their villages and at 'Yatras', which are characteristic of all Kols.

In appearance they are inferior to the Hos of Singbhum and to the best of the Mundas of Chhoto Nagpur. They are short of stature but strongly built, and like the Santals rather inclined to fleshiness. In complexion they are variable, like the Mundas ranging from a dark chocolate to a light brown colour, they observe many of the Hindu festivals but retain their sacred groves in which they still sacrifice to the old Gods. They have generally left of eating cows flesh in which their unreformed brethren in Singbhum and Chhoto Nagpur indulge, but eat fowls.
The Bhumij have, in a great degree, lost the simplicity and truthfulness of character for which their cognates are generally distinguished. They have acquired from the Bengalee Hindus the propensity to lie, but they have not the same assurance or powers of invention, and their lies are so transparent, that they are easily detected.⁶

The Sabar

The Sabar community has been well mentioned in the different Indian holy books. They were scattered in different regions of India from the age of the Ramayana. The name 'Sabari' has well been mentioned in the Ramayana. During the Vanabas Ramchandra, Sita and Lakshman were satisfied to eat some fruits at the cottage of Sabari.

In another Epic "The Mahabharata" it was found in the story of 'Ekalabya' who was a 'Nishad'. As he belonged to a low caste Dronacharya, the 'Astraguru' of the Kurus and Pandavas refused him to train the art of applying weapons. Besides these it was found the allusion of 'Kalketu and Fullara' in the 'Chandimangal' Kavya.

⁶ Ibid., pp.173-177.
From such above mentioned sources it may assert that Sabar (Kheria) is a special primitive community dwelling in the forest. Like Santals, Munda and Hos these are the aborigines belonging to the Austrian race of people. There are lots of similarities in their social rites and customs.⁷

In 1871 the British Government declared the Sabar as a criminal tribe. They had been ill treated, neglected and tortured in many different ways by police, administration and the same trend has been continuing till to day. In the fifties Govt. of India declared these people as 'liberated community'.⁸

The Sabaras have still retained their character, simplicity, social customs of the ancient tribes. They live in the places far away from other tribes and communities. They have hard working spirit, patience and enduring power and simplicity. They live mostly in the southern forest regions of Chhoto Nagpur.⁹

There is a beautiful aspects in the character of the Sabaras. The Sabar tribe has its own features. They are very simple and soft hearted but they are very strong and stout. They always try to keep themselves

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⁹ Gopiballav Lal Singdeo. 'Sabar Parichit'. 'Bartika' 3 (July-August): 22.
away from the civilized people and their societies. In fact they hardly believe the civilized people. But they have no unsocial tendency.\textsuperscript{10}

The Sabaras are called 'Kherias' who are the inhabitants of Manbhum areas infested by Shal, Palas and Mahua trees. They still bear the traces of ancient forests and wild life. This tribe can easily claim antique values. They are wild in appearance and nature and their neighbour is forest. They still think of their close association with forest and wild life. The Sabar community is distinctly an ancient tribal community of India.\textsuperscript{11}

These people like to live in a solitary wild environment, far from the human habitation. The so called societies and social rules cannot bind them. They keep themselves away from those places where social people live under mutual, co-operation and understanding. The Sabaras choose lonely places, rivers, stream and forest. It is strange to think that they are limited within themselves. They do not think what is happening in and abroad the country. They also have not become habituated to agricultural works. They cannot live in the same place

\textsuperscript{10} Ibid., p.24.  
\textsuperscript{11} Ibid., p.21.
for long. So they can easily leave a land. In fact they have no land and no attraction of land also.

The Sabaras are physically very strong and stout and their complexion is gray and black. Their skin is as gray that of the wild elephants. They never use oil on their skins. So their body emits a foul smell. They are generally 5'-6' in height with round head, flat and bright eyes and agile looks. At night they have stronger power of vision. There lips are flat, shoulders are muscular and their hand are long and strong. They have flat fingers, wide chests with full of muscles and the belly parallel with their bodies. Their toes are very strong and equal. Seeing their appearances it seems that they have enormous physical strength. ¹²

There are no hard and fast rules in the life style of the Sabaras. In fact the Sabaras cannot carry out the rules and customs as laid down by the society. They always want to earn their livelihood independently i.e. by hunting, collecting fuel woods and forest resources and so on. They collect paddy by digging soil in the paddy fields. Such paddies are collected and stored by the rates. They earn their livelihood also by fishing in the rivers and channels. Snakes,
frogs, tortoise, crabs, snails etc. are their favourite food items. Besides some of their favourite dishes are fruits, tender leaves and roots of trees, fungus etc.

Educationally this community is very backward. Less than 2% people are literate. But they can sing (not in a formal way) and tell interesting stories among themselves. They have no separate language but their style or manner of speaking is special.\textsuperscript{13}

In India some gross differences in physical, physiological and cultural areas are observed between tribal and non tribal people. Further in India various tribal communities are in different stages of development but they are still backward in comparison to those who are so called civilized people. These tribals are aborigines of our country. They have been studied from a number of angles. The active life with a lot of physical activities to earn their daily bread and butter is contributory to their physical development. The genetical potentiality in performing vigorous physical activity can be useful to excel in certain sports and games.

It is a matter of common knowledge that tribal people are brought up in the top of open natural space and outdoor setting of

\textsuperscript{13} Mahasweta Devi, \textit{Bartika} 3 (July-August, 1996).
vigorous life. Because of this conducive environment their physical capabilities in running, jumping, throwing and such other natural activities are tremendously developed.

Structure decides function and function decides structure'.

Through the process of hard labour the tribals of our country usually keep themselves busy in order to earn their livelihood. Such functional aspects designed their special structure which is befitting for attaining such type of work successfully. These functional aspects based on the specific structure and physical and motor fitness components which are also considered to be pre-requisite factors for successful sports performance.14

There are a lot of differences between tribal and non-tribals in every aspect of life i.e. customs, rituals of living etc. Therefore, it is possible that there may be greater differences in body composition, haemoglobin content, blood pressure etc. between tribal and non-tribal boys.15,16

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14 Kamlesh and Sangral, Principles and History of Physical Education, p.42.
There is a popular belief among the common people in India that tribals and non-tribals differ in their speed, strength, endurance, agility, and they should be provided with separate physical activities.

Now-a-days sports 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 fitted in competition which has become an important element of modern life. Competition provides the means by which can show one's worth by competing successfully.\(^{17,18}\)

Today it is an established fact that mind and body are inseparable and they have an integral entity. One cannot function without the aid of the other and one effects the efficiency of other. Each and every activity is done with the combined effort of mind and body.

Psychology entered physical education much earlier than it did sports. Now 'Psychological Conditioning', 'Psychological Preparation', 'Psychological Training', are the watch words in sports. No training in


the sports field is complete without reference to the psychological study and psychological training of athletes. Use of psychological knowledge to enhance the development performance and satisfaction of an athlete.

Exercise physiology is one of the vital areas, the physiological traits depend upon the race, geographical and climatic conditions of human beings. Therefore it is receiving spotlight attention all the time. The study of exercise physiology is a continuous process in bringing out a champion athlete. Their skills vary considerably according to their physiological traits unlike physical differences, physiological differences are not so apparent and consequently are not readily accepted especially when the lack needed characteristics prevent success. Understanding of the necessary characteristics required for success in a particular sports must receive major consideration both in matching athlete, with them best sports and in training an athlete for success in his chosen sport. Some physiological traits have long been associated with success in certain sport.

All countries try to show their supremacy over each other for a defeat or success in the international sports competitions. Each and every country develops its own innovations in techniques, tactics and
strategies for exhibiting top level performances so as to emerge
winners and champions of sports.

Sports scientists and expert of sports want their sportsmen to
extract maximum achievement from their training procedures 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.\textsuperscript{19}

Technology cover every aspects of life and sports is no
exception to it. Sports science has enabled modern youth to develop
physical capacities beyond anytime imagined. Sports have become
highly competitive and records are being broken with greater
rapidity.\textsuperscript{20}

As sports have developed into destination is vying with the
other to produce top class players to win laurels in international
competition, considerable research is devoted to identify factors that
will be predictive of achieving high level of skill in a given, sports
with proper coaching.\textsuperscript{21,22,23}

\textsuperscript{19} Ibid.
\textsuperscript{20} Indira Gandhi, "Messages", Abstract : International Congress of Sports Sciences (Pattula:
Netaji Subhas National Institute of Sports, November 1982).
\textsuperscript{23} Alexander Scott Harry, Competitive Sports in Schools and Colleges (New York: Harper and
Today the preparation of an athlete for achievement is a complex, dynamic state, characterized by high level of physical and psychological efficiency (physical and psychological readiness) and the degree of perfection of the necessary skills and knowledge techniques and tactical preparation. Many other factors are also brought into action in his preparation (means of rehabilitating strength after loads, special nutrition, organization of general regime in accordance with the conditions of sports activity etc.). Thus athletes training today is a multisided process of expedient use of aggregate factors (means, method and conditions) so as to influence the development of an athlete and ensure the necessary level of preparation.\textsuperscript{24}

Now let's look at India's poor performance at international sports which is well known to all. The issue has been repeatedly discussed at different forums. No doubt that we have made a good amount of effort towards this vitally significant issue to which national prestige has often been attached, but all this seems to be centred around only on a handful of athletes.

\textsuperscript{24} Ibid.
Heredity pre-disposition is estimated to be two third of the basis of top performance.  

Majority of the peoples believe that the tribal people are stronger and physically fitter than others because of their self development, healthy, atmosphere, daily hard work, genetic factors and environmental conditions.

After the Asian games held in 1982 in Delhi Ministry of Education and Culture (Sports and Games Wing) has made an attempt to spot the promising athletes and sports man from tribal people through out the country. Arrangements for rural sports competition at the district, state and national levels have also been made. Sports Authority of India (SAI) under the direct guidance of the Central Ministry of Sports and Culture has also started to coach them through the intensive residential training and coaching programme for the improvement of athletic ability and sports performance.

Therefore, with the thought of "catch them young and coach them right", the tribal sportsman should be selected at an early age. These tribal sportsman should be given right type of coaching,

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training, selecting the best method out of various training techniques along with the proper loading and adaptation which may result in remarkable improvement of performance in various games and sports in India.

It is further assumed that India can produce champion athletes in near future if due importance is given to the tribal communities of Assam, Madhya Pradesh, Manipur, Nagaland, Bihar, Orissa and West Bengal in selection of potential candidates at an early age and in imparting right type of training in unfolding their potentialities at the highest possible range. Proper attention must be laid on these tribal in searching out their respective potentialities which are highly suitable and matched for showing in a particular event.

Therefore it will be worthwhile to investigate the existence of sports potentialities of various Indian tribal who may be selected at an early age and might be systematically nurtured for full manifestation of sports potentialities through scientific training and coaching programme for upliftment of the sports performance of Indian athlete in the international arena.
Statement of the Problem

The purpose of this study was to determine the selected psycho-physiological characteristics of tribals and also to compare the selected psycho-physiological characteristics among Santal, Bhumij and Sabar Tribes.

Delimitations

1. The study was delimited to the male tribal of Eastern Region of Chhoto Nagpur at the age level between 12 to 16 years.

2. The study was further delimited to the following tribal groups - Santal, Bhumij and Sabar.

3. The study was further delimited to the following psychological and physiological variables:

i) Psychological Variables:
   a) Intelligence
   b) Self Image
   c) Self Esteem
ii) Physiological Variables:

a) Blood T.C.

b) Blood D.C.

c) Haemoglobin Content

d) Blood pressure (Diastolic and Systolic)

e) Respiratory Rate

f) Heart Rate

**Limitations**

1. Non availability of sophisticated instrument was considered as a limitation of the study.

2. Food habits, different ways of living, socio-economic condition, nature of activity of different tribal groups which were not under the control of research scholar was considered as a limitation of the study.

**Hypothesis**

It is hypothesised that there will be no significant differences in selected psycho-physiological characteristics of Santal, Bhumij and Sabar tribal groups.
Definition and Explanation of the Terms

Intelligence

Intelligence according to Wechsler in the aggregate or global capacity of an individual to act purposefully to think rationally and to deal effectively with his environment.26

Self Image

Self image means hopes and aspiration of an individual himself or herself.

Self is an indispensable concept in the description of one's personality. The 'Self Concept' is an important determinant of behaviour (Ramkumar, 1961; Offer, 1969, Purkey, 1970, Dec. 1973 etc.). What a person thinks and how does he behave is largely determined by the concept he holds about himself and his abilities both intellectual and non-intellectual. The 'Self-concept' is thought of as consisting the 'self-image', 'ideal self', and 'self-esteem'.

Self Esteem

According to Fox and Corbin\textsuperscript{27} self esteem is considered a psychological trait which is vital for emotional adjustment.

Haemoglobin

Haemoglobin is the oxygen carrying pigment of the blood, the principal protein in the erythrocyte.\textsuperscript{28}

Blood Pressure

Clarke\textsuperscript{29} mentions that the blood pressure is the pressure exerted on the walls of the arteries as the blood pumps through the body.

The driving force moves blood through the circulatory system. Systolic pressure is obtained when the blood is ejected into the arteries. Diastolic pressure is obtained when the blood drains from the arteries.

Systolic Blood Pressure

Pressure exerted by blood during the systole.

**Diastolic Blood Pressure**

Pressure exerted by blood during the diastole.

**Respiratory Rate**

Respiration is composed of two phases, inspiration and expiration. Respiration rate is the number of inhalation and exhalation of air in one minute.

**Heart Rate**

The distention of the arterial wall at the beginning of systolic ejection of blood is not confined to aorta but travels down the arteries as a wave followed by a wave of recoil. In the arteries that lie close to the body such as radial artery of the wrist, the arrival of the wave of distinction and subsequent recoil may be felt as a distinct throb. The pulse, which affords a convenient method of counting the heart rate.\(^{30}\)

For the purpose of this study heart rate was measured by palpitation of the radial artery (at the wrist).

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Tribal

A tribal is defined by Dr. River\textsuperscript{31} as a social group of a simple kind, the member of which speak a common dialect, have a single government act together for such common purpose as warfare.

Significance of the Study

Human structure in respect to physical, physiological and social aspect of various class, caste and creeds has undergone very significant changes and modification during the long span of evaluation on account of environment changes. However it is significant to note that the specific human structure along with the specific psychological and sociological set-up is meant for special task which has to perform during the life time. Structure decides function. It is based more upon heredity of the child. Whereas function decides 'form' which implies the significance of environment factors form of the body to a great extent depends upon the activity of child performing during his childhood. The field of the games and sports is such top functional area where a specific structure in respect to physical, physiological and psychological factors are highly admired. An attempt has been made to investigate such sports oriented

\\textsuperscript{31} Encyclopedia Britanica 10th ed. S.V. "Tribe" by Dr. River.
and sports matching potentialities of the Indian tribal people in this study.

1. The findings of the study may highlight the psycho-physiological characteristics of tribal, mainly Santal, Bhumij and Sabar which might have some contribution towards the successful sports performance or the performances of other aspects of human endeavour.

2. The result of the study may contribute to learn the tribal characteristics which will be helpful for the physical education teachers and coaches in selection manifestation and evaluation process of potential candidates to organise the physical education and sports programme successfully.

3. The findings of the study will also help to know which tribal group is superior in relation to psycho-physiological characteristics.