Chapter- I

INTRODUCTION

1.1 Importance of sports in Human Life

Sports and games play an important role in the development of human personality. They are no less important than food and fresh water. The developed countries like England, Germany, France and U.S.A have made games an essential part of education at the school level. It is interesting to note that there are many nurseries and training centers for games in these countries. They admit boys and girls for necessary training to become future athletes, gymnasts and sportsman.

UNICEF also recognizes the critical role of sport and physical play in children’s lives. At the most fundamental level, sport and play are a child’s right, as detailed in article 31 of the Convention on the Rights of the Child: States shall “recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.”

Added to this is the broad consensus that regular physical activity is essential for the physical, mental, psychological and social development of children and adolescents. Involvement in sport can boost children’s health, improve academic performance and help reduce crime.
UNICEF also believes that sport can be an effective programmatic tool to help achieve goals in health, education, gender equality, HIV/AIDS, child protection and child development. That is the concept of sport for development – that sport is not just an end in itself, but also an effective tool to help improve the lives of children, families and communities.

We all know, though we do not try to act upon the principle, that a body that is not daily exercised soon become weak and begins looking ugly. Games and sports give us a chance to develop our bodies and keep healthy. Even the Greeks, more than 2000 years ago, aimed at the development of “A sound mind in a sound body”.

Unhealthy diets, tobacco use and physical inactivity are the dominating factors causing these chronic diseases and now leading public health issues in most countries. Of these, physical inactivity is estimate to directly cause 1.9 million deaths globally, while also indirectly contributing to diseases and death resulting from factors including high blood pressure, high cholesterol and obesity.

Globally, over 60 % of adults do not participate in a sufficient amount of sport and physical activity, largely due to changes in lifestyle such as inactive work. Sedentary forms of recreation, like television and computers, and excessive use of ‘passive’ modes of transport. Such a sedentary lifestyle also contributes to obesity.
Sports and Physical education activity are essential for improving health and well-being. Appropriate forms of sports and physical activity can play a significant role to prevent as well as help cure many of the world’s leading non communicable diseases. Evidence shows that regular participation in physical activity programmes provides all people with a wide range of physical, social and mental health benefits. Such activity participation also interacts positively with strategies to improve diet, discourage the use of tobacco, alcohol and drug and enhance functional capacity. Consequently; physical activity is an effective method of disease prevention for the individual and, for nations, an effective way to improve health.

Education is central to achievement of all goals and sport has a natural place in education, whether the approach used is formal, non–formal or informal. In school, physical education is a key concept of a quality education and can be used for to promote schooling among young people. Outside the class room," sport is a school for life", teaching the basic values and life skills, important for holistic development. sport is also a powerful vehicle for public education.

Sport is an ideal school for life. The skill learned through play, physical education and sport are foundation to the holistic
development young people. These skills, such as cooperation and confidence, are essential for social cohesion and are carried throughout adult life. Sport also actively educates young people about the importance of certain key values, such as honesty, fair play, respect for self and others, and adherence to the rules and respect for their importance. It provides a forum for them to learn how to cope with competition, not only how to lose but also how to win.

1.2 Talent Identification - Need in Sports

"The success of any country in the international competition lies in the talent of the individual and the degree of trainedness they achieve."

(Counsilman & Counsilman)

Talent identification and its development has become an important area of research in sports. In performance sports, due to rapidly increasing participation and performance density, only person who have talent have a chance of winning a medal in an international competition. Experience has also shown that talent alone is no guarantee for winning a medal. Talent has to be coupled with hard and rigorous training spread over several years. But it is talent which ultimately determines the maximum limit to which sports performance can be improved through training.

There are many conditions necessary for success in modern sport. One of these is an inherent talent or aptitude. Early identification of talent or is one of the most important concerns in contemporary sports (Bompa, 1990; Bompa, 1985; Harre, 1982). The basic premise underlying Talent Opportunity programs is that the development of the youthful athlete can be best served if the
athlete trains in a sport of discipline for which he/she is best suited (Harre, 1982).

Two corollaries to this premise are (a) if an athlete starts at a higher level of ability or performance then he/she ultimately ends up at a higher level of performance, and (b) if you start with greater aptitude for a particular activity, then the athlete will progress faster than an athlete with a lower initial aptitude.

Unfortunately, these premises have not been conclusively proven, and may succumb to wide individual variability. However, one can pragmatically assume that requirement of five or more years of training to reach a level of proficiency in a sport (Bompa, 1990), and a rather narrow window of age that the athlete can expect peak performance (Bompa, 1990; Hadjiev, 1989; Sands & Henschen, 1992), it is important that athletic talent is discovered early, and monitored continuously to help the athlete reach high levels of performance (Bompa, 1990).

The detection and selection of talented youths for sport participation has several assumed advantages for the sports and the athlete (Bompa, 1990):

- The time required to reach a high performance is reduced.
- The amount of work required to elevate an athlete to high-level performance is reduced.
- The effectiveness of the coach’s time is enhanced by training primarily these athletes of superior ability.
- The number of athletes competing at the higher levels of the sports is increased.
The national team will have more homogeneous characteristics.

The application of the sports science to training programs can be enhanced indirectly by involving sports scientists in the selection process.

The heritability of some sport quality is high, and selecting those qualities, in advance, that are less amendable to training may ultimately enhance performance.

The Athlete can be channels to a sport where he/she has the highest probability of success.

Potential individual limiting factors to performance can be identified early and steps taken to reduce and/or eliminate them.

By identifying talent early the athlete can being the training process with enough time to prepare for the age at which he/she will a physical peak with less haste during the development process. This usually results in a more thorough and well-designed approach to

- Training, ultimately resulting in a safer and sounder approach for the athlete.

A lot of studies have been conducted which throw light on the method of selecting potent individuals in various discipline of sports.

On basis of factorial analysis, it is claimed that certain sports require predominantly such attribute of physical fitness as speed, strength, agility, cardiovascular endurance, flexibility etc. The research has proved that speed and agility are hereditary qualities,
which depend upon the morphological structure of the muscle. Most investigators in the field of physical education and sports believe that athlete are born and made. Better standards in physical fitness and sports competitions can not be established until and unless the teacher and coaches concerned with the training and development of sports potentialities and limitations of the children under their care and the external facilities that can be procurd from out side for the enfoldment of heredity qualities. Hence, racial and inheritance are very important factor which indicate the possibility or impossibility in an individual to become a good player or an athlete. 

Peak performance age in different sports disciplines is associated with the time to start sports training in a particular sport discipline and time required to develop the necessary, conditional, tactical, technical abilities and sports performance. With regard to weight, height, body size, body composition, certain dimensions are necessary for success in selected events and sports.

Kuptshimov (1983) stated that the average age for top class Olympic decathlon performances in 25.2 years and athletes will have to be trained for 10-12 years to achieve their best performances. Therefore the identification

The initial identification and selection for several sports, e.g., gymnastics, diving, swimming and figure skating, occurs between 3-8 years. Secondary Selections, i.e., retention for further specialized training, vary with sport, e.g., 9-10 years for gymnastics, figure skating and swimming, and at 10-15 years for girls and 10-17 years for boys in other sports. Potential rowers, basketball players and weight lifters are generally not selected until
after puberty. Ballet, though considered primarily as an art form, also has rigorous, selective anatomical criteria that rival those of some sports. Emphasis is on linearity and thinness. (Eastern European Selection Programs)\textsuperscript{6}

Obviously the physical, motor and behavioral requisites vary among sports. Selection is based on the assumption that the requisites for a given sport can be identified at a young age and subsequently perfected through specific training. The process of the selection is ongoing as the youngster adapts to the instructional and training programs, as well as the social and emotional demands of the special programs.

The age at which the training should be started is different indifferent sport. In gymnastics it can be at 6-7 years where as in endurance sports or strength sports it can be as late as 14-15 years. However specialists have pointed out the majority of world and Olympics in all kind of sports started systematic training between 10-12 years of age. At this age the child enters wideranging changes with regard to growth and development. However the beginning of systematic training at a particular age does not mean that a child has not been doing any sport or physical activity before that. This is particularly relevant for advanced countries because of their well established system of physical education in India it is not so hence the important of the first stage of training of a general nature assumes immense value. Due to this very reason an attempt to select children sport specifically at an age earlier than 8-10 years is not likely to achieve much success

1.3 SPORTS TALENT SEARCH IN INDIA

The Sports Authority of India (SAI), established in 1984, has undertaken specialized schemes for the identification and intensive training of talented athletes. Various other schemes for the promotion of sports throughout the country were also taken up through the Sports Authority of India (SAI) for the NSTC, SAI and SPDA schemes. Before drawing up a program of action in 1992 for the implementation of the National sports policy for the next five years and beyond, an exercise was undertaken by the Central Government to review all the ongoing schemes of the department and SAI suggested that the first and most basic step in improving our competitive standard is to identify talent in young age and then to provide specialized coaching and training facilities for them within the education system.

India has a tradition of sports and physical fitness. In recognition of the importance of sports, a separate department was set up in 1982, prior to the commencement of the 9th Asian Games. Subsequently, the first ever National Sports Policy was announced in 1984. The Ministry of Human Resource Development was set up in 1985, with the objective of integrating efforts for development of human potential in the areas of Education, Women & Child Development, Arts and culture, Youth Affairs & Sports through its constituent departments.

The Sports Authority of India (SAI) was established in 1984 as a registered society in pursuance of a Government of India
resolution. Its main objectives include the effective and optimum utilization of various sports facilities and all matters pertaining to sports promotion and sports management.

1.3 HISTORICAL BACKGROUND OF SPORTS TALENT IDENTIFICATION IN INDIA

In order to start the movement in the country, to broad based sports at grass root level, to bring sports consciousness amongst the people of various age groups, the National sports talent scheme was launched during 1985-86. The sports Authority of India in 1988 prepared a battery tests for identification of talents for National Sports Talent scheme. The soviet experts attached with Netaji Subhash National Institute of sports south centre Bangalore did some pioneering work and with the help of National Institute of sports, Patiala and Laxmibai National College of Physical Education presently (Laxmibai National Institute of Physical Education Deemed University Gwalior) a battery of tests was prepared for selection of students in 1989 NSTCS (G. Wakharkar, 1995).

The Sports Authority of India is contributing towards development of sports through its various programmes viz.

National Sports Talent Contest (NSTC) Started in 1985, this scheme attempts to identify talented school children in the age group of 9 to 12 years. Children are selected in 10 Olympic
disciplines, viz. Athletics, Basketball, Badminton, Boxing, Football, Gymnastics, Hockey, Table Tennis, Volleyball and Wrestling through a series of tests and contests held at various levels. Following selection, these children are admitted in SAI adopted schools (of which there are 58 at present) where their board, lodging and tuition fees are met by SAI. SAI also provides coaches and special infrastructure facilities to these schools, along with recurring grants for maintenance and equipment.

Special Area Games This scheme, started in 1985, aims at identifying population groups and regions where natural talent and aptitude for a particular sport exists. The scheme involves a process of identification and survey of areas and regions, special competitions to assess potential, selection of promising young boys and girls and intensive training at SAG centers, where educational and vocational training facilities are also provided.

Sports Projects Development Area (SPDA) This Scheme, started in 1988, aims at providing basic sports facilities at 78 locations throughout the country, where a comprehensive and integrated system of coaching and training is provided to talented young sportspersons in the age group of 9 to 14 years. This is aimed at providing in-house facilities to the talented youth in their own states. A maximum of three Olympic disciplines, in addition to one indigenous game, are offered for training. Three Olympic disciplines should generally include at least one of the three mother disciplines, i.e. athletics, gymnastics, swimming in each centre. Thirty out of 34 SPDA Centers have started functioning, with a total
strength of 679 sportspersons. An amount of Rs. 1.00 crore is budgeted for the construction of these Centers (met equally by the Centre and the concerned State), and all running costs are met by SAI.

The Sports Hostel Scheme Scheme was introduced to provide basic facilities in each State and National level Championships. All running costs, including equipment, training, etc. are provided by SAI. Each hostel has a sanctioned strength of 50 boys and 30 girls. 18 hostels have so far been established with 895 children.

In the year 1991-92 Army Boys Sports Companies scheme was launched this is an extension of the N.S.T.C. scheme and was approved for implementation from. SAI and Army authorities have jointly launched this Scheme to scout talented boys up to the age of 14 years from rural, semi urban and tribal areas and train them in sports.

Seventeen Boys Sports Companies for 2000 boys are to be set up during the VIII Plan at selected Regimental Centers. The boys will be put into Regimental Schools which will be affiliated to the CBSE. On attaining the age of 17 years and on completion of 10th standard, the boys will be absorbed in the Army, if they so wish. Thereby, a job is guaranteed to them. The running costs are borne by SAI. It also provides a one time grant to the Army for creation and development of sports infrastructure, purchase of essential sports equipment upto Rs. 3.00 lakh and for training
kit/aid upto Rs.1.00 lakh. Thereafter, an annual grant of Rs. 50,000/ is provided. 17 Boys Sports Companies have become functional with a total strength of 859 sportspersons.

National Coaching Scheme The National Coaching Scheme, which was first introduced in 1955, is meant to encourage people to take up coaching. The Scheme, over the years has undergone numerous changes and is now a major source for meeting the requirement of coaches by various user agencies.

Under the Scheme, coaches are made available to States/UTs for State coaching centers, district coaching and university field stations and also to national sports federations/associations. Coaches are also deployed in SAI regional centers, academic wings and in house training centers.⁹

1.4 SPORTS TALENT SEARCH IN HIMACHAL PRADESH

In Himachal Pradesh Talent search is not having long history as The Department of Youth Services & Sports was created during 1982-83. Necessity was felt to establish a new Department of Youth Services and Sports to look-after the activities of youth and sports in a proper and scientific way as the Education Deptt. With which such activities were attached, earliest could not pay adequate attention towards various youth and sports activities in the Pradesh. Keeping in view the increase number of youth and sports activities, the Government created the Department of Youth Services & Sports during 1982-83.¹⁰
The Himachal Pradesh Government is very conscious about Games and Sports. At present in state the selection of sports talent is done by the department of Youth and Sports. The talented sports person is selected to the sports hostels. These hostels are running by the financial aid of Spots Authority of India and Himachal Pradesh Department of Youth and Sports.

The boys and girls are being selected to sports hostels by battery of National Sports Talent Contest Scheme (NSTCS) as there is a wide geographical gap in the state the department is following the same battery in the whole region.

Area of the Himachal Pradesh is 55673 sq.km. The whole territory of Himachal Pradesh is mountainous with altitude varying from 350 to 6975 meteres above the mean sea level. The population of the Himachal Pradesh according to the (1991-census) is 5170877 persons in which 0.45 million person live in urban areas and 4.72 million person from rural areas. The climate of Himachal Pradesh various at different altitudes from semi-tropical to the semi-arctic. The average rainfall is 152 cms (60 inches). Snow fall occurs in the higher hills generally December and January and occasionally it may be experienced earlier or later. At altitude above 3,000 meters, the average snowfall is about three meters and last From December to March.

Topographically, Himachal territory from south to north can be divide into three zones – “the Shivaliks” or outer Himalayas, inner Himalayas or “mid mountains” and “alpine zone” or the greater Himalayas.
**The Lower Hills** The altitude of this zone ranges from 350mts or 1050fts to 1500mts or 4500fts above mean sea level. The lower hills of district Kangra, Hamirpur, Una, Bilaspur and lower parts of Mandi, Solan and Sirmaur are known as “shivalik hills”. The annual rainfall in this zone varies from 1500mm to 1800mm. In ancient times Shivalik hills were known as “Manak Parbat”. Shivalik literally means “tresses of the Shiva”.

**The Inner Himalayas** (1500mts or 4500fts to 4500mts or 13,500fts above mean sea level). In this zone fall areas like the upper areas of the tehsils of Pachhad and Renuka and Sirmaur district; Chachiot and Karsog tehsils of Mandi district; upper parts of Kangra and Palampur tehsils of Kangra district; upper Shimla hills, and upper parts of Churah tehsil of Chamba district.

There are a lot of differences between tribes in every aspect of their life such as customs, rituals, eating habits, culture and style of living which result in difference in physical potential of Inner Himalayan and lower Hilly peoples.

The people have adopted themselves to particular kind of environment. The daily routine is very strenuous. The environment factor such as climate, topography, natural resources and social set-up play a vital role in determining the physical fitness and psychological make-up of the society. The Upper Himalayan peoples are consider to be more physical fit as far as fitness is concerned, and they are spiritually healthy.
Sharma (1985) reported that high altitude children were better than low altitude children in almost all aspect of physical fitness.

The Sports department is following the same test of battery to whole state as Himachal Padesh having climating variation. So there should be a separate test of battery region wise. Therefore the researcher has decided to take this study.

1.5 High Altitude and Sports Performance

It is interesting to note that one-third of the world’s population lives an altitude above 2000 meters. During the past decade a number of studies have been done to determine the physical performance of athletes living at high altitudes (Roy, 1967)

A large area of the glove is covered with the high and rugged mountains, presenting conditions adverse to human, animal and plant life. In addition to the loneliness and cold climate of the high – altitude region, the rarified atmosphere contributes greatly to discomfort of man. At present these areas are populated up to an altitude of nearly 5000mt. Despite the adverse environmental conditions, especially the relative lack condition of oxygen; these high-altitude dwellers meet the great physical demands of their daily life with adequate functional capacity.

During the 1955 Pan American games, the 1962 world Pentathlon championships, and the 1965 “little Olympics” held in Mexico City at an elevation of 2250 mt.(7,400 ft.), athlete who lived and trained at high altitude performance better than those who had no previous altitude experience. Some post-competition episodes
of unusual exhaustion, prolonged recovery times, and general illness occurred among the contestants. When Mexico City was awarded the 1968 Olympics game, apprehension was expressed which centered on the adverse effect hypoxia of maximal physical performance. Countries without training facilities at high altitudes were particularly concerned for the optimum success of sports training at some particular altitudes, the factors of duration and intensity of training appear as important as the level of altitude at which it takes place. Success or failure of training becomes most evident in competitive events.

High altitudes natives are self sustaining, some of them living in permanent settlement as high as 5486 m in the Andes and the Himalayan mountains. Prolonged exposure of a unaclimatized person to such an altitude may cause due to hypoxia. Even if the person remains inactive the physiological challenge of event of moderately high or medium altitude becomes readily apparent during physical activity. The environment also influences the mode of doing work which differs from place to place. It is seen that generally people living in hilly areas have to face more physical work as compared to people living in the plains. Work efficiency at high altitude is much less. This is everyday life work under difficult condition itself acts as a load. Physiological changes are required for adaptation to such environment. High and low altitudes have contributed not only in the field of minerals but have also played vital role in developing human trades and features. It is general observation, for example- small and stout people are referred to as high altitudes inhabitants.
The longer we remain at some particular altitude, the better becomes our performance but it never quite reaches the values that are obtained at sea level. The improved performance during a stay at particular altitude is brought through acclimatization. The number of weeks needed to acclimatize depends on altitude i.e. for 9000ft about 7-10 days. These are only approximation; a great deal depend upon the individual. As we ascend above the sea level the barometer pressure decreases as the weight of the atmosphere becomes less. The percentage of air remains 20.93% but the number of oxygen molecules per unit molecule decreases. This means that when at an altitude, in order to receive the same number of molecules in a breath of air that we receive at sea level, we must breathe in more air.

Prior to the 1968 Olympic games in Mexico City (altitude of approximately of 7300ft or 2300mt). Scientific studies of work performance at high altitude had been concerned primarily with problems of military significance or mountaineering expeditions. In fact every large country and several of the smaller ones have undertaken investigations both at home and abroad to determine the specific effect of high altitude on sports performance. Several international symposia have recently been conducted to discuss problems related to work performance at high altitude.

Consequently, there is a livelihood difference between somatotypes, anthropometric, motor fitness and physiological variables between different populations of different altitudes (Mathews and Fox, 1976). Those who are interested in the “why” of various performances cannot omit body type information (Larson and Yocum, 1951).
1.6 INTRODUCTION OF SAI BATTERY FOR NSTCS

The SAI battery of tests prepared for identification of sports talent assess the physical and physiological fitness of children as well as comparatively assess development of motor qualities of the competing children. This battery helps to assess qualities like speed, explosive power, strength, endurance, agility, flexibility and boy coordination. Initially, identification of sports talent is done through a battery of tests at block/district level, stay and regional level followed by assessment coaching camp. The candidates securing minimum marks qualify for the next level of the selection. The identified talent at regional level is also to undergo through medical examination and scientific testing before a child is finally selected for admission to SAI Sports Centre. This battery is applied at three levels as given below.\textsuperscript{13}

The government of Himachal Pradesh has also adapted the SAI battery of tests for the identification of sports talent amongst the boys and girls between the age ranges of 8 yrs. to 14 yrs. The tests are conducted at state level. Finally the identified children are selected for admission to the sports academies under sports school. The same battery of tests is used in the present study in order to compare the sports talent of upper Himalayas and lower Himalayas areas of Himachal Pradesh.
1.7 RELEVANCE OF THE STUDY

As India being a vast country has its own unique cultural, social, geographic climatic, ethnic variations. Because of these wide diversities in terms of above factors it is impossible to identify a set of procedure for talent identification in India. Moreover, there are no clear-cut guidelines and norms for selecting talent from different parts of India.

The present study includes H.P Hilly and remote areas whose altitude varying from 350 to 6975 meters above the sea level. The climate of Himachal Pradesh various at different altitude from semi-tropical to the semi-arctic. Snowfall occurs in the higher hills. At altitude above 3,000 meters, the average snowfall is about 3 meters, and last from December to March and the majority of the parts of this area remains cut-off from the country, and it is difficult to reach in these zones. Investigator born and brought up, studied and participated in sports at different levels in Himachal Pradesh and now working as Lecture in physical Education in H.P.

Despite the different variation in geographical area, food habit and living standard in India, Sports Authority of India is following a Single set of norms for all the regions in India for talent selection in sports therefore talent identification should be done on specific norms according to the geographical and climatic conditions of that region.

Single set of norms Sports Authority of India is using because no region wise norms are available. Single set of norms fails contextual relevance. To available region wise norms lots of normative studies in India according to region are essentials, so the
real and a actual status of talent will be known. These norms can be used for preparing national norms or comparative study to draft a long terms plan of sports development. Keeping these entire factors in mind the researcher has under take this study. Thus, investigation in this direction has significant relevance.

1.8 STATEMENT OF THE PROBLEM

In this present study investigator, on the basis of scientific discussion with many experienced people, experts, coaches and review of sports literature, is of opinion that there is an imminent need to investigate the sports talent factor of Inner Himalayan and Lower hilly areas of Himachal Pradesh. Further the researcher felt a need to prepare norms of different age group for sports talent factors of Inner Himalayan and Lower Hilly and comparing it with the National norms, Hence to achieve this purpose. The problem selected by the researcher was as cited below.

“A study of sports Talent identification factors of Inner Himalayan and Lower Hilly Area School boys of Himachal Pradesh”.

1.9 OBJECTIVES OF THE STUDY

Keeping in view the need, background and purpose of the study, the investigator has listed the following major objectives.

1. To Measure the sports talent of Inner Himalayan and Lower Hilly area Boys of Himachal Pradesh.

2. To compare the sports talent of inner Himalayan area boys with lower hilly area boys of Himachal Pradesh state.
3. To prepare the age wise norms of sports talent factors for Inner Himalayan and Lower Hilly area boys.

4. To compare the age wise norms of both area boys with National norms for Indian children formulated by SAI.

1.10 ASSUMPTION

There are inherent sports talents in boys of Himachal Pradesh. Since the investigator intends to collect research data by taking talent search battery of SAI (NSTCS), it is assumed that this study will ensure validity of data based on validity of SAI test.

1.11 HYPOTHESIS

On the basis of assumption made and literature reviewed, the present investigator has formulated the following hypotheses.

**H1:** There is significant difference in the sports talent of inner Himalayan and lower hilly area’s boys.

**H2:** The inner Himalayan boys are more superior to the lower hilly area boys in motor abilities.

**H3:** There is no difference between the SAI norms and inner Himalayan and Lower Hilly boy’s norms of sports talent.
1.12 DELIMITATION OF THE STUDY

This study has large scope, but at the time it has to be completed within the limited source and time. Himalayan area is very interior and it is difficult to reach over there and collect the data. Researcher, therefore, decided to delimit study as follows.

- The geographical area of the study confined with the H.P. State only.
- The present study was delimited to inner Himalayan and Lower hilly areas boys of Himachal Pradesh State only.
- The present study was limited to the age of 12 years, 13 years and 14 years\textsuperscript{14}.
- The present study was limited to the sports talent factors, which is being used by SAI.
- The study delimited for the variables that is Motar abilities as Speed, Explosive strength, Agility, Flexibility, Muscular Strength, C.V. endurance and anthropological measurement.

1.13 LIMITATION OF THE STUDY

The researcher has recorded the shortcomings, while conducting the study. However, the researcher has made him aware of the following factors.
• Daily routine, diet of subjects, health, habits, Leisure time activities of subject were not considered.

1.14 OPERATIONAL DEFINITION OF THE TERMS

The following terms pertinent to the study are defined for the classification of succeeding discussion.

1) **Talent**
   a) A person who possesses unusual innate ability in some field or activity.

   b) A type of ability that a character may possess. Talent is largely innate and can not be taught. They can only be improved by experience or practice.

   c) A person’s natural aptitude, Mental or Physical e.g. creative, artistic, analytical etc.

2) **Sports Talent**

   Sports talent is the sum total pre-requisites (and possibilities of their development) possessed by a person, which enable him to achieve high performance in sports in future. The requisites include motor abilities technical skill, tactical efficiency, physique, personality traits, motives, and interest etc.

3) **Identification of Sports Talent**

   a) The term talent identification according to woodman (1985) is a screening of young athletes to determine those most likely to succeed in sport and directing them towards sports to which they are most suited.
b) It is a prediction apparently through good accuracy, weather or not a child has a chance of becoming Olympic Athletes as a chosen receives a chance to develop their potential and unclose are left to enjoy sports as play recreation.

4) **Sports Talent Factors**
   The factor that are being used by SAI to identify the sport talent in India which includes Speed, Explosive power, Strength, Cardio-vascular Endurance, Agility, and Flexibility\(^\text{16}\).

5) **School boys**
   The school going boys in the age (12, 13 & 14)

6) **Inner Himalayan or Mid Mountains**
   This area has the altitude from 1500 mt. or 4500 ft. to 4500 mt. or 13500 ft. above sea level\(^\text{17}\).

7) **Lower Hills or Shivaliks ranges**
   This area has the altitude from 350 mt. or 1050 ft. to 1500 mt. or 4500 ft. above sea level\(^\text{18}\).

8) **Norms**
   A norm is a scale that permits conversion of a raw score capable of comparison and interpretation. It is a standard to which an obtained score may be compared. Norms are assumed to be represented of some large population.
According to Mathews (1979) “norms is a standard to which an obtains score may be compared.

Johnson and Nelson (1982) have defined norms as “values considered to be representative of a specific population”.

9) **Percentile Norms**

The descriptive statistics, a percentile is any of the 99 values that divide the sorted data into 100 equal parts, so that each part represents 1/100th of the sample or population.

10) **Test**

Barrow and Mc Gee (1979) have defined that test as “a specific tool, procedure or technique used to elicit a response from the student in order to gain information to be used as a basis for an appraisal of quantity or quality of elements such as fitness, skill, knowledge and values”

11) **Test Battery**

“Test battery is a group of several standardized on the same population so that result on the several tests are comparable. Some time it can be loosely applied to any group of tests administered, even through not standardized on the same subject” Barrow and Mc gee, 1979.
12) **SAI Test Battery**
The battery of tests prepared by sports Authority of India in 1988 to identify the sports talent.

13) **Physical Fitness**
The ability to carry out daily tasks with vigor and alertness without undue fatigue, with ample energy to enjoy leisure time pursuits, and to meet unforeseen emergencies. By “The United States President’s Council on Physical fitness and sports”

**Cardiovascular endurance:**
It is the ability of heart, lungs and blood vessels to supply oxygen and nutrients to the muscles for sustained exercise.

**Muscular Strength:**
It is maximum force that a muscles or group can exert in a single contraction.

**Muscular endurance:**
It is the applicant of repeated muscular force against a sub maximal resistance.

14) **Motor Fitness**
Ability to perform fundamental Motor skills involving Physical fitness traits and other basic traits such as power, agility speed, and balance.
Power:  
It is the quality of a muscle to contract forcefully in the quickest possible time.

Speed:  
Speed is the ability to make rapid movements of the same type in shortest possible time.

Balance:  
It is the ability of the body to maintain equilibrium under static and dynamic conditions.

Flexibility:  
It is the ability of a muscle to perform movements with large amplitude (range of motion)

15) General Motor Ability  
Ability to perform fundamental motor skill involving all basic performance traits including coordination.

16) Motor Capacity:  
Ability to learn complex motor performance

17) Anthropometry  
It is discipline which deals with the measurement of body in which its structure and function.  
The measurement of human body with standard techniques, the science of measurement of human body and its parts.
Standing Height:
It is the straight height of the subject up to the point vertex and is generally recorded in meters nearest to the half of the centimeter.

Body weight:
It is the mass at the body, as measured by with the help at weighing machine is recorded in kilograms nearest to half of kilogram.

1.15 Significance of the Study

The present study has great significance in the field of sports and physical education (specially in the sports talent identification) of India and Himachal Pradesh in the following ways:

- The Percentile Norms of the study may be helpful to know the differences between Inner Himalayan and Lower Hilly area boys in relation to sports talent.

- Comparison of the H.P Inner Himalayan and Lower Hilly with Indian national Norms Helps the H.P Sports Authorities to prepare sports development plan and schemes.
- The result of the study may help to the sports scientist and coaches to assess, classify, understand and prepare the inner Himalayan and lower Hilly areas athletes according to their capabilities.

- Region wise sports talent norms will be available.

- This study may provide an opportunity and encouragement to sport talent in both inner Himalayan and Lower Hilly area’s students of Himachal Pradesh.

- This study may helpful to the Physical educators to prepare the appropriate physical education program as well as to understand the sport potential of their pupils.
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