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## **PHYSICAL FITNESS OF SPORTSMEN AND NON-SPORTSMEN**

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### **ABSTRACT**

*The rise of professionalism in sport and the human craze and quest for “winning” have transformed highly enjoyable sport into complex behavioral conundrum. Physical fitness is a term used to represent the state of fitness of the body to be able to carry out everyday activities, handle emergency situations, and to be free from illness/disease. The concept of physical fitness is included in many familiar test batteries commonly used in the schools in many cases the inclusion of fitness in such titles is most unfortunate error and one that logically could account at least in part for the current apathy of some people toward total personal fitness. Sport is one of the most enduring of all human activities. Virtually from the beginning of any written human Records, in civilizations across the world, accounts of sports and sport-related activities are found. For less than the last century sport has been studied scientifically, and sport psychology is an important part of that scientific study.*

### **INTRODUCTION**

It is an international field, holding the promise of becoming important and only to the understanding of competitive athletic abilities, but to areas of behavior that relate to many domains of human health and activity. Notwithstanding its benefits to the individual and the society at large competitive sport is a war of nerves as well a war of nerves. Since the revival of the Olympic Games in 1896, sports and games have increasingly become a war like phenomenal requiring years and years of specialized training and practice with scientific and technological inputs. The aim of physical education concern with building up to physical power through the growth and development of various systems like respiratory system digestive system in body participation in good programme of physical education promotion of bodily growth strength endurance structurally and functionally. Physical education through physical activities in the process of human behaviour the body is the basis of the function of the Muscular Strength so prevalent in our complicated modern living participation in organized physical education programmes will release these strains and tension to a greater

extent. This is not an indictment of physical fitness test batteries most of the batteries are excellent and include tests that do have some definite value but it is our feeling that many of tests in these batteries are not actually of physical fitness.

Modern science and technology and the push button system has made children to succumb to a state of physical inactivity resulting in a weaker physical entity. Physical fitness should be of fundamental importance to all human beings. Many prominent physical educators have opined to maintain a sound body from cradle to grave. The same is possible only when an individual indulges himself in a well designed physical fitness programme. There is an old saying which goes as “Exercise may not necessarily add years to your life, but will add up life to your years” which is indeed a truth.

Below performance to standardized tests especially on such items as speed and agility is not necessary indicative of poor physical fitness. If functional fitness is an individual matter than physical fitness tests are more relative than absolute and these are no such thing as reasonably healthy person who cannot improve his physical fitness level. The present study is a comparative study between sportsmen and non-sportsmen boys of school.

### **Literature Review**

Literature provides roof for the physical activity either in unorganized manner or organized manner that prevailed from the time of human evolution. Ancient Greece is considered to be the first European country to become civilized. It is also believed to be was the first nation to give serious thought and direction to implement and organized way of physical training from the childhood to its citizen.

Every nation demands to have physically, mentally and socially fit citizens and as we all know “Today’s children are tomorrow’s citizens.” An individual whatever his ultimate role in society needs in his growing years a due balance of intellectual physical, moral and aesthetic development which must be reflected in any educational curriculum. Science has provided that efficient functioning of the body improves only when it is activated properly. That is, the effectiveness and efficiency of various organs of the body improve only when it is regularly activated. Hence it becomes necessary to compulsorily impact the programme of physical activity. Unfortunately many schools fail to provide a systematic programme of physical education to the children. The authorities in India tend to reduce the time available for physical activity rather than increasing it. If the rightly stated by Darwin in his theory as

“Survival of the fittest”. Hence to survive fit one has to be fit and to be fit one has to be physically, mentally, socially and emotionally strong which impossible only when physical education is compulsorily implemented in the curriculum along with general education. The next section provides review of historical study in this connection.

**Knuttgen** compared the physical fitness of Danish and American school children. A partial determination of fitness AAPER Youth fitness test was given to 319 male and 134 female Danish school children. The results of the testing were compared to the American standard, which were complied in terms of both age and the nelson and cozens classification index. It was found that approximately 70% of the boy's scores and 86% of the score of the girls exceeded the various American mean scores.

**Brongder** has conducted a comparison of physical fitness and antipoetic measures of preadolescent maximum American and Anglo American males. Three hundred Maxico-American males between the age of 8 years were selected for the comparison. He found significant difference between the Maxican-American and Anglo-American males in certain physical fitness activities were significantly higher for the Maxican-American males.

**Robson** compared the physical fitness of tribal and urban students and administered the (AAHPER) test to 60 tribal and 60 urban students studying at M.B.B College. The mean differences between the physical fitness of urban and tribal significant at 5% level of risk. It was found that urban students were better in pull-ups and soft-ball throw for distance and superiority was statistically significant at 5% level of risk.

**Ray** has conducted a comparison of physical fitness improvement for students assigned in two classes of the two module tested one was of frequent every two weeks combined mean percentile scores to both male and female in the 7<sup>th</sup> and 9<sup>th</sup> grades were computed on their initial tests. The study found that difference between the two tests frequent physical education classes relatively more value to the fitness of students.

**Dahl** analyzed the AAPER youth fitness test on 400 Negro and white boys from the same schools. It was found that the Negro boys obtained a higher mean score than the white boys on gross body co-ordination (Soft ball throw) and difference was significant at the 5% level of risk. The study showed that physical fitness and general motor ability of student can be improved by special training by combination of isopiestic and isotonic exercised.

**Johnson** has investigated the effect of a season of inter-collegiate soccer participation on selected components of physical fitness. The elements of physical fitness measured were agility cardio respiratory endurance, muscular strength of the legs and running speed. During period as selected, the subjects were engaged in a maximum of four practices. The seasons schedule included thirteen games plus two pre season practice games. It was found that participation in inter-collegiate soccer program likely to cause adaptations in the circulatory and respiratory system resulted in increased efficiency or improved cardio-respiratory endurance.

**Singh** evaluated the physical fitness of 67 male hockey player were selected through random sampling from the Punjab State to serve as subjects in this study. The subjects were tested in 9 different components of physical fitness, extent flexibility, dynamic flexibility, explosive strength, static strength, dynamic strength, trunk strength, co-ordination, equilibrium and endurance. This study showed dominance of explosive strength with 9 components of physical fitness among hockey players of Punjab state.

**Parchman** has compared the leg strength and cardio vascular respiratory endurance of college women during semester class participation in basketball and swimming leg strength were tested with a dynamo-meter.

### **Statement of the problem**

The purpose of this study was to compare the physical fitness of sports men and non-sports men in Government Senior Secondary School (boys) located in different places in district Karnal of Haryana state.

### **Objectives**

The study under consideration is going to achieve the following objectives:

- I. To find out the shoulder strength of the Sports man and non-sports man players.
- II. To identify the flexibility difference between Sports man and non sports man player.
- III. To identify the explosive strength of both Sports man and non-sports man player.
- IV. Find out the agility & muscular strength in Sports man and non-sports man player.

### **Limitation of the study**

Physical fitness will be estimated only by AAHPEP physical fitness test battery. However, this study was limited to the sports and Non-sports school boys only studying in 10 to 12 standard in Government Senior Secondary School.

### **The Terms used in study**

Physical fitness is a basic component of total fitness which includes efficiencies, mental and emotional stability and social adaptability. Physical fitness is positive quality found in people of all age group but in different degree.

### **Cardio Vascular Endurance**

Cardio Vascular endurance is related to work or contractions of large muscle groups over a long period of time, stress is placed on the respiratory systems and circulatory systems of the body when they must supply adequate blood and oxygen to the muscles.

### **Strength**

One of the most basic components to success in all movements is strength Muscular Strength is defined as the amount of force that can be exerted by a particular muscle. The development of strength is specific to the muscle or muscles involved in a particular exercise.

### **Power**

Power is the capacity of the body to release maximum force or muscle contraction in the shortest possible time power denotes explosive movements, a release of maximum force at maximum speed. Obviously power is highly dependent upon the elements of speed and strength.

### **Flexibility**

Flexibility is the range of movement in a joint the degree of flexibility determines the extent of extension and flexion of a joint and consequent body in term of bending, reaching, twisting and turning. The degree of flexibility is first determined by the nature of the joint itself and then by the ligament and muscles related to the joint.

### **Ability**

Ability of a person to change direction or body position quickly and re-gain poise or control to proceed with another movement. Agility highly depends upon or interrelated with

speed, strength balance and co-ordination. It developed through practice and confidence in movement.

### **Speed**

Speed and strength are integral components of fitness found in varying degrees in virtually all athletic movements. The combination of speed and strength is called power. For many years, coaches and athletes have sought to improve power in order to enhance performance. Throughout this century and no doubt long before, jumping, bounding and hopping exercises have been used in various ways to enhance athletic performance. Speed is the rapidity with which one repeats successive movements of the same pattern. Great speed in muscle contraction is not always conducive to the greatest efficiency of movement.

### **Methodology**

In present study, the various steps in the methodology followed for selection of variables then given orientation of subject, test administration, collection of data, and statistical treatment were given to the collection. The problem is to analyse the selected physical fitness variables of Government Secondary School Boys in Karnal District. The subjects were selected from 10th to 12th standard with the age group of 16 to 18 years. A random selection of 100 subjects was made, 50 from each of sportsmen and non-sportsmen. These samples were then tested with the help of AAHPER fitness test to find out physical fitness.

### **Procedure for Test for application in physical fitness**

#### **A.A.H.P.E.R. Youth Fitness Test**

A.A.H.P.E.R. Youth Fitness Test was devised by American Alliance for health, education and recreation in Washington, this test consists of six items which are adopted in this particular study to measure high and low physical fitness of sportsmen and non-sportsmen in Government Senior Secondary School Boys in Karnal District. The test items administered are as follows.

- Pull ups for boys to measure arm strength
- Shuttle run to measure for Agility

- Standing Board Jump for boys to measure explosive strength of legs, for power
- 50 yard dash for boys and to measure speed
- Bent-knee sits ups for boys to measure abdominal strength.
- 600 yard run and walk for boys to measure cardio vascular endurance

### **Conclusion**

The purpose of the study is to compare the physical fitness of boys in Govt. Senior Secondary School for testing the physical fitness through AAHPER test. Two groups were formed 50 boys each of sports men and non-sportsmen from the area under consideration. The variables in these tests are speed, agility, power, strength and flexibility. The data were analyzed with reference to the objectives by using differential analysis with student unpaired t-test using statistical software. Out of the five Physical variables Speed, power, Agility, Strength and Flexibility, the study found speed, power and Agility are higher of the sportsman boys as compared to non sportsman boys in schools of karnal city.

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