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## Effect of Yoga on Neuro-Muscular Efficiency in Normal and Stressful Conditions

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### Abstract:

Delayed fatigue, increase in duration of performance and total work output as studied by finger ergography under normal and stressful conditions was found in subjects undergoing yoga for 3 weeks when compared to subjects of the control group. The aim of present study to find out the effect of yoga on neuro muscular efficiency in the normal a stressful condition. One experimental group 22 males and 19 female and one control group 22 males and 19 female were volunteered for the present study. All subjects of this study were having normal health condition. Finger ergo graph machine with having weight of 3 kg, kymograph drum revolving at the speed 60 mm/ min and sphygmomanometer were used for assessing neuro muscular efficiency. The results reveled that the experimental group showed significant improvement in neuromuscular efficiency as compared the control group.

**KEY WORDS:-** Ergography, Neuro-muscular efficiency, Stress, Yoga-training.

### Introduction:

Very few studies have been reported so far, related to the neuromuscular efficiency and the yogic training. Sahu (1978) found that the neuromuscular activity was reduced after the practice of shavasana. Paranjpe and Bhole\* (1979) concluded that the yogic training having more stress on the physical culture for the first three months, improved the neuromuscular activity while further yogic training of 3 months with more stress on pranayama and meditational aspects, reduced the neuromuscular activity in the same individuals. In these studies, however, the quantum of work was prefixed and the onset of fatigue was the terminal point of the test. It was intended, therefore to see the effect of yogic training on neuromuscular efficiency after the onset of fatigue in normal as well as stressful condition of the working muscle.

### Material and Methods:-

#### 1. Subjects:

(a) **Experimental Group:** 22 male and 19 female students of Teacher's training certificate course in Yoga 1983 served as subjects. All of them were in normal health conditions. Their average htwo, wtwo and age were 168cms, 47 kgs and 32 years respectively in males and 153cms, 47 kgs and 25 years respectively in females. They were imparted 3 weeks yogic training consisting of 23 Asanas, 2 Pranayamas & 2 Kriyas as recommended by Swami Kuvalayananda having more stress on physical culture. Theoretical lectures were also included in the training. They were tested before & after this Yogic training on the finger ergograph machine.

(b) **Control Group:** 21 males and 6 females from the staff members of the institute in normal healthy conditions served as control group. The average htwo, wtwo and age of these subjects were 166cms, 60 kgs, and 34 years respectively in males and 152cms, 48 kgs, and 28 years respectively in females. No yogic training was administered to them but they were allowed to perform their normal activities as usual. Control group was tested two times with an interval of 3 weeks on the ergograph.

### II. Procedure of testing:

This was common for both the groups of subjects as follows:

The subjects reported in the morning at 9.30 after they had a light refreshment. Finger ergograph machine with hanging wtwo of 3 kg and the Kymograph drum revolving at the speed of 60 mm/min. was used as a tool. The iron curtain was also sued between the drum and the subject so that he could not see his own performance (graph) on the drum.

Subjects were instructed to pull the wtwo and release it immediately by using the index finger at every beep sound of the electrical timer, adjusted at the rhythm of one beat/sound. They were instructed to continue pulling as long as possible even after the onset of fatigue till the finger ceases to work any more.

After a rest for 15 to 20 minutes, blood pressure cuff was tied on thearm of the same hand and with the help of a mercury sphygmomanometer, a pressure of 100mm.Hg was maintained to obstruct the blood flow of the working hand. They subject then was asked to repeat the test as before.

For each individual the work was recorded and calculated in two conditions:

**1) Normal Condition:** Work performed with the normal blood flow to the hand.

**2) Stress Condition:** Where the blood supply to the hand was obstructed by applying 106mm Hg. pressure on the same hand while performing the work.

Before each testing, blood pressure and pulse rate of every subject was measured to ensure that he was in normal condition. The average range of their blood pressure was 110-125 for systolic and 70 to 90 mm Hg. For diastolic.

1. The duration of the work done before the onset of fatigue, and
2. The duration of work which continued after the onset of fatigue was calculated form the ergograph as shown in the figure:

FIGURE

A- Duration of work before the onset of fatigue.

B- Duration of work after the onset of fatigue.

**Figure – Normal Finger Ergograph (Diagramtic)**

Decrease in the htwo of contraction after a few seconds, indicates the onset of fatigue but the interesting part was to see whether the subject can prolong the work after the onset of fatigue.

Worked performed = hanging wtwo  $\times$  No. Of contraction  $\times$  average htwo of contraction.

### Results and Observations:

Table represents the results of control and experimental groups, before and after 3 weeks of yogic training respectively with values of mean and SD and significance.

It was observed from the results that when the blood supply was obstructed by applying 100mm Hg. pressure, on the arm (i) total work performed by the individual was decreased and(ii) total duration of work was also reduced.

When the comparisons were made within the group, it was found that the experimental group showed significant improvement in the IInd test after the yogic training in terms of:  
Increased total duration of work. (i)

Increased duration of the work done before and after the onset of fatigue. (ii)

Increased total work performed. (iii)

Under both normal as well as stressful conditions.

The male control group showed non-significant decrease in all the parameters in the IInd test after a gap of 21 days while female control group have shown non-significant and marginal increase in all the parameters.

When the results of both experimental and control groups were compared, the experimental group showed statistically significant improvement over that of the control group. In respect of male subjects, the total duration of work, the duration of work before the onset of fatigue were improved in both the normal as well as the stressful condition, while the prolongation of work and the total work done are significant only in stressful condition.

**Table showing total work output and Duration of work in normal and stressful conditions in control & experimental groups (Mean  $\pm$ SD)**

Conditions	MALES				FEMALES		
		Duration of work before fatigue in Seconds	Duration of work after fatigue in Seconds	Total work output in Ergs.	Duration of work before fatigue in Seconds	Duration of work after fatigue in Seconds	Total work output in Ergs.
(M-22, F-19) Experimental Group	Normal Condition Before Yoga Training	33 $\pm$ 10	36 $\pm$ 10	520 $\pm$ 164	23 $\pm$ 9	31 $\pm$ 14	335 $\pm$ 103
	After Yogic Training	47 $\pm$ 18	52 $\pm$ 15	673 $\pm$ 171	32 $\pm$ 16	36 $\pm$ 15	430 $\pm$ 191
	Significance	<.01	<.01	<.01	<.01	>.1	<.05
	Stressful condition Before Yogic Training	26 $\pm$ 9	31 $\pm$ 9	391 $\pm$ 45	22 $\pm$ 7	25 $\pm$ 8	251 $\pm$ 82
	After Yogic Training	38 $\pm$ 9	47 $\pm$ 13	581 $\pm$ 147	28 $\pm$ 9	39 $\pm$ 14	380 $\pm$ 149
(M-21, F-6) Control group	Significance	<.01	<.01	<.01	<.05	<.01	<.01
	Normal condition Initial	43 $\pm$ 17	42 $\pm$ 15	622 $\pm$ 170	22 $\pm$ 10	18 $\pm$ 7	240 $\pm$ 99
	Final	42 $\pm$ 16	32 $\pm$ 13	547 $\pm$ 175	24 $\pm$ 9	30 $\pm$ 10	272 $\pm$ 94
	Significance	N S	N S	N S	N S	N S	N S
	Stress condition Initial	29 $\pm$ 12	36 $\pm$ 15	459 $\pm$ 167	15 $\pm$ 5	26 $\pm$ 9	198 $\pm$ 54
	Final	33 $\pm$ 15	31 $\pm$ 13	397 $\pm$ 147	16 $\pm$ 6	30 $\pm$ 7	208 $\pm$ 55
	Significance	N S	N S	N S	N S	N S	N S

NS = Not Significant.

In respect of female subjects however only the duration of work before the onset of fatigue and the total work done are statistically significant over the control group during the stress condition.

### Discussion:

As ability to perform a given task at a stretch and to continue it even in challenging situations depends also upon the interest, determination, motivation, zeal, decision, will, and ambitious nature of the individual apart from his physical conditions like strength, energy etc. These psychological factors are more important particularly when there is any physical obstruction or difficulty while working. Normally we observe that a proper encouragement or cheering (external stimulation) can overcome the fatigue at least temporarily, e.g. a sportsman in his event. It indicates that the fatigue does possess a cortical component. Thus actual duration of work is decided more by the psychological set up of the individual during any stressful situation.

In the present study the blood supply to the working hand was not completely stopped but obstructed partly and substantially by applying 100mm Hg. pressure on the arm of the same hand. It was supposed that due to reduced blood supply the finger and the associated muscle would get tired and might cease to pull the wtwo further after the onset of physiological fatigue. There was no encouragement or cheering to the subjects and there was also no compulsion regarding the number of pulls. It was totally left to the decision of the subjects. The results indicate that when the muscles are tired or physiologically fatigued, the inner strong desire is overcoming this stressful condition in the experimental group. That is why the period of work after fatigue and the total output of work was increased. This indicates that even though the yogic training was more on the physical level, it has got some psychological bearing also. The qualities of the individuals like determination, self motivation, interest etc., must be increasing indirectly due to yogic training. However, these factors must be studied side by side to support this possibility, which was not possible in the present study.

#### **Conclusion:**

Within the limitations of the present study, it is concluded that the short term yoga comprising of Asanas, Pranayamas and Kriyas, having primary objective of physical culture, improves neuromuscular efficiency in normal as well as stressful conditions. Thus the ability to continue the work to some extent even in challenging situations, is improved after such yoga. The study of the associated psychological factors would further confirm the results.

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## Comparative Study of Physical Fitness and Physiological Parameters of Cricket and Soft Ball Players

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### ABSTRACT

*In the present chapter, the design of the study has been presented under the following headings: Source of data, Selection of Subjects, Sampling Methods, Equipment's used for collection of data, Administration of test. Sixty (60) subjects were selected for the study. Thirty (30) subjects were taken from cricket game players, while the remaining thirty (30) were taken from softball game Players in Amravati city. The data pertaining to each of the selected physical fitness and physiological variables were examined by the special statistical techniques viz. mean, standard deviation and 't' test.*

### Introduction: -

In most educational systems, Physical Education, also called physical training in many countries, through each with a very different connotation, is a course-both at academic and at teacher training level in the curriculum which utilizes learning in the cognitive (perceptual-conceptual development and information-processing ability), affective (experience of feeling or emotion), and psychomotor (neuromuscular experience of activity) domains in a play or movement exploration setting. Both participation and study are vital to physical education.

Physical fitness is now more or less a matter of concern for a nation. The strength of the democracy of the nation is the collective wellbeing of the people. The ability to performance daily task vigorously and clearly, with energy left over for enjoying pleasure time activities and meeting emergency demands. It was the ability to endure, to bear up, to with stand stress, to carry on in circumstance where an unfit person could not continue and was a major basic for good health and well-being. Agility was the ability to change direction rapidly and accurately and to control body movements. The range of possible movement at the joint was called as flexibility. The ability of muscle to overcome resistance. Most of us, even infants, have a natural curiosity about how our bodies work. Our bodies are quite miraculous. No machine has been constructed that can take over even a portion of a natural body function as effectively. Physical fitness is the general capacity to adapt favourably to physical effort. Individuals are physically fit when they are able to meet both the usual and unusual demands of daily life, safely and effectively with undue stress or exhaustion. Physical fitness is the capacity to carry out reasonably well various forms of physical activities without being unduly tired and includes qualities important to the individual's health and well-being. The fit person is one who is free of limiting and debilitating ailments, who has the stamina and skill to do the day's work and who has sufficient reserve of energy not only to meet emergencies but also to participate in leisure time activities. Sports physiology is derived from exercise physiology. It applies the concept of exercise physiology to training the Softball and enhancing the Softball's sports performance. As physiology mainly focuses on the functions of structures, we can not discuss physiology without knowing anatomy.

Similarly, we cannot understand the anatomy and physiology until unless we know the composition of human body. The physiological parameters seem to play a very important role in the modern competitive sports in production of more excellent performance, because competitions are organized more frequently than ever the sum sets at a place at a particular time it may rise at other place, moreover because of physiological parameters and difference in time the Softballs the same time at another place. It is well known that the individual performance in any sports activities follows diurnal physiological parameters. Pattern method may be derived to condition the Softballs to produce peak performance with change in diurnal physiological parameters. Physiology was the science which deals with the study of human body functions. Pressure that is exerted by the blood upon the walls of the blood vessels and specially arteries and that varies with muscular efficiency of the heart, the blood volume of viscosity, the age and health of the individuals and the state of the vascular wall. The frequency per minute of pressure waves propagated along the superficial, peripheral arteries such as carotid and radial arteries. The amount of air that can be expired from the lung after maximum inspiration was called as exhale capacity of lungs. Raut<sup>29</sup>, in the year 2011 conducted the study on “Comparative Study of Biorhythms with Various Physical Fitness Components”. The purpose of the study was to find out which physical fitness components are dominant in a specific time of a day. To achieve this purpose, twenty students from P.G.T.D. Physical Education department Sant Gadge Baba Amravati University, Amravati were randomly selected. Biorhythms are inherent cycles which regulate memory, ambition, coordination endurance, temperament, emotions, and much more, we each have three fundamental Biorhythms cycles. Each Biorhythms cycle has a particular function, and particular life cycle. Our physical Biorhythms cycle completes one cycle in 23 days. Our emotions Biorhythms cycle completes in 28 days and intellectual Biorhythms cycle completes in 33 days. At mid-point and end point in each cycle, they sharply move back to zero point and changes polarity. The day a cycle changes polarity is called transition days (also called a critical day or cautionary) Transition days are the days when we may feel a little off or have downright bad day. A double transition day is when two of your cycles transition on the same day. This day may be difficult. Triple transition days are rare occurring once every 7-8 years. The age of the selected male subjects ranged from 22 to 30 years. Among the physical fitness variables only three variables were selected that was muscular strength, speed and flexibility. These three fitness components are having different nature. To find out the fitness components for muscular strength (abdominal) bend knee sit-ups test was conducted, to measure the speed, 50-yard dash was conducted and flexibility was measured by stand and bend test simultaneously.

#### **METHODOLOGY: -**

Every researcher wants to be systematic during his whole research work. So, the researcher divides each chapter of his work systematically in order to face less difficulty in the conductance of the problem. In the present chapter, the design of the study has been presented under the following headings: Source of data, Selection of Subjects, Sampling Methods, Equipment's used for collection of data, Administration of test.

#### **Subject:**

Sixty (60) subjects were selected for the study. Thirty (30) subjects were taken from cricket game players, while the remaining thirty (30) were taken from softball game Players in Amravati city.

**Administration of test:**

The testing of all selected parameters was done on the Citizen of Amravati city.

**Agility:** To measure the speed of body movements. Equipment's: Two wooden blocks, Rope lime powder, measuring tape and stopwatch.

**Flexibility:** To measure range of joints.

**Strength:** To measure the strength of the hand grip.

**Exhale Capacity:** To measure Exhale Capacity.

**Blood Pressure:** To measure the Blood Pressure.

**Pulse Rate:** To count the Heart Rate or beats per minute.

**STATISTICAL ANALYSIS: -**

The analysis of data collected on selected physical fitness components namely agility, flexibility, strength (Grip) and physiological variables namely blood pressure, pulse rate and exhale capacity during different times of day have been described in this paper. The purpose of this study was to find out the diurnal variations on selected physical fitness and physiological variables. The data pertaining to each of the selected physical fitness and physiological variables were examined by the special statistical techniques viz. mean, standard deviation and 't' test.

**Comparison of Mean Value of Agility, Flexibility and Strength of Cricket and Softball Player in College Level**

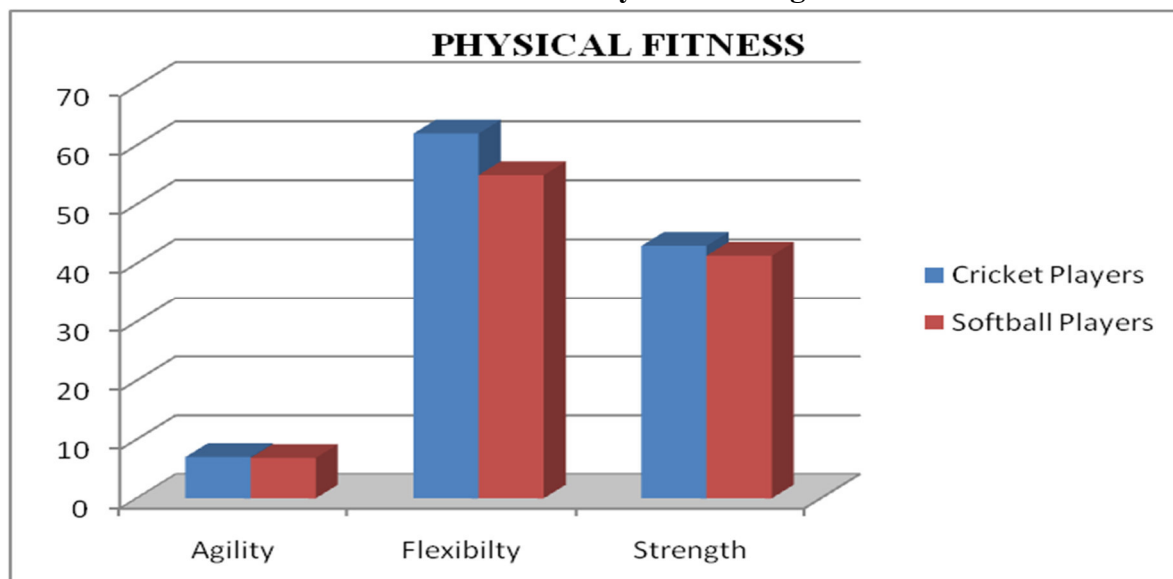
**Table No. 1**

Test	Mean	S.D.	M.D.	S.E.	D.F.	O.T.	T. T
Agility (Cricket/Softball)	7.016	0.48	0.14	0.085	58	1.72	2.02
	6.86	0.42					
Flexibility (Cricket/Softball)	62	3.48	7.033	0.88		7.96	
	54.96	2.61					
Strength (Cricket/Softball)	43	4.16	1.66	1.096		1.52	
	41.33	2.83					

**Level of significance = 0.05**

Table no. 1 reveals that there was no significant difference in Endurance of College Level Cricket and Softball Players in Amravati University. Because mean of Cricket players was 7.016, 62 and 43 which was less than the mean of Softball Players 6.86, 54.96 and 41.33. To check the significant difference between Cricket and Softball Players the data was again analysed by applying 't' test. Before applying 't' test, standard deviation was calculated between Cricket and Softball Players which was 0.48/0.42, 3.48/2.61 and 4.16/2.83 respectively and the calculated value of 't' was found as 1.72, 7.96 and 1.52 only flexibility was greater than the tabulated 't' which was 2.02 at 0.05 level of significance.

**Graphical Representation of Mean Difference of Agility, Flexibility and Strength of Cricket and Softball Players in College Level**



**Comparison of Mean Value of Blood Pressure, Pulse Rate and Exhale Capacity of Cricket and Softball Player in College Level**

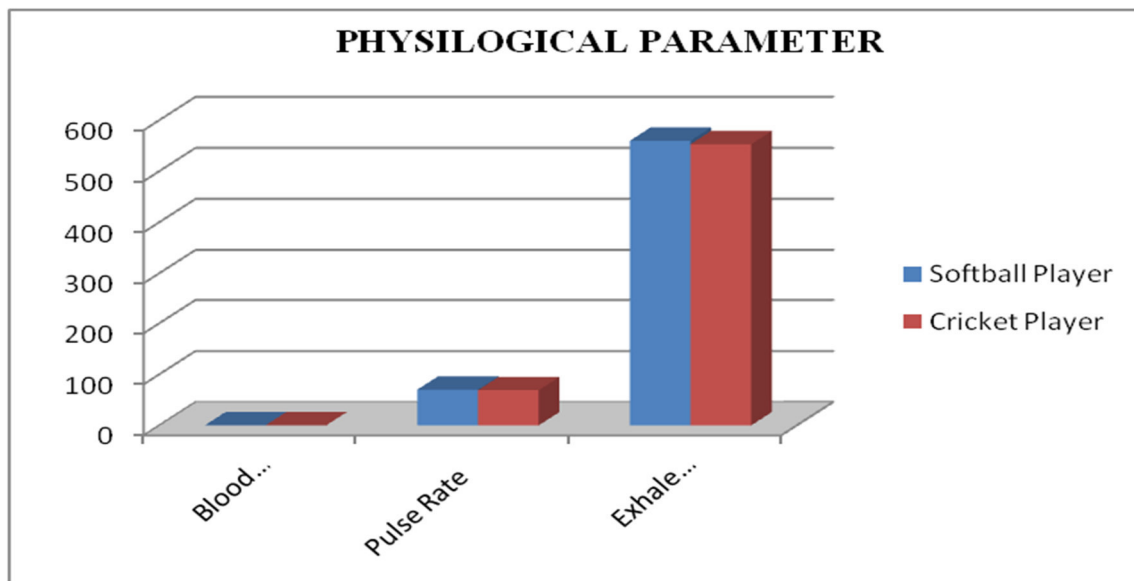
**Table No. 2**

Test	Mean	S.D.	M.D.	S.E.	D.F.	O.T.	T. T
Blood Pressure S/D (Cricket/Softball)	118.33/76.23 120.73/76.96	6.47/6.70 3.71/4.33	2.4/0.73	2.67/1.30	58	0.89/0.56	2.02
Pulse Rate (Cricket/Softball)	69 70.033	1.72 1.80	1.033	0.42		2.43	
Exhale Capacity (Cricket/Softball)	553 559.66	45.94 41.89	6.66	66.89		0.099	

**Level of significance = 0.05**

Table no. 2 reveals that there was no significant difference in Endurance of College Level Cricket and Softball Players in Amravati University. Because mean of Cricket players was 118.33/76.23, 69 and 553, which was less than the mean of Softball Players 120.73/76.96, 70.033 and 559.66. To check the significant difference between Cricket and Softball Players the data was again analysed by applying 's' test. Before applying 't' test, standard deviation was calculated between Cricket and Softball Players which was 6.47/6.70(S/D), 3.71/4.33(S/D), 1.72/1.80 and 45.94/41.89 respectively and the calculated value of 't' was found as 0.89/0.56(S/D), 2.43 and 0.099 only pulse rate was greater than the tabulated 't' which was 2.02 at 0.05 level of significance.

**Graphical Representation of Mean Difference of Blood Pressure, Pulse Rate and Exhale Capacity of Cricket and Softball Player in College Level**



#### Discussion of Hypothesis:

The data is collected from 60-male Amravati colleges of Cricket and Softball players (30-30 players each) during different times of day and after that the collected data was analyzed by comparing the means of again statistically analyzed by applying t-test to check the significant difference among selected physical fitness and physiological variables. Therefore, separate tables and graphs have been presented for each physical fitness and physiological variable. Each table gives the mean of cricket and softball players. Also, the researcher can find the standard deviation of both cricket and softball players and also their mean difference was also been given in the table. The level of significance for the present study is kept at 0.05 level of significance and also the degree of freedom is also be kept in mind for the calculation of tabulated 't' which is then compared with the calculated 't'. This is used for testing of hypothesis which was given by the researcher previously. If the value of the calculated 't' is more than the tabulated 't' then the hypothesis of the researcher will be accepted and if the value of the calculated 't' is less than the tabulated 't' then the hypothesis of the researcher will be rejected. Acceptance or rejection of hypothesis does not matter. In the beginning it was hypothesized that there will be a significant difference of diurnal variations in the selected physical fitness components and physiological variables of cricket and softball game players in Amravati city. The result of the study shows that there is significant difference in Agility, Trunk Flexibility, Grip Strength and Exhale Capacity. The study also shows that there is no significant difference in diurnal variation of Blood Pressure and Pulse Rate.

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## COMPARATIVE STUDY OF INDIAN AND FOREIGN GAMES: FITNESS LEVEL OF BASKETBALL PLAYERS AND KABADDI PLAYERS

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### Abstract

To lay it out plainly, physical work and exercise is significant for everybody. Kids, teenagers, and grown-ups of any age need ordinary active work. Actual work advances great wellbeing, and you should remain dynamic all through all phases of your life paying little mind to your body type or BMI. Regular physical activity can improve your muscle strength and lift your perseverance. Exercise is very important for fitness. Also, when your heart and lung wellbeing improve, you have more energy to handle every day errands. The present examination is to investigate of actual fitness level between outside game ball and Indian game Kabaddi players. To fulfill the objective of the assessment, (40 kabaddi and 40 Basketball) players. Simply those male players were picked who have shared at any rate cover college level. Simply speed, risky power of arms and smoothness were used to measure the actual health parts.

**Keywords:** Physical activity, muscle strength, fitness

### Introduction

Physical wellness is an overall condition of wellbeing and prosperity and, all the more explicitly, the capacity to perform parts of sports, occupations and every day exercises. Actual wellness is commonly accomplished through appropriate nourishment, moderate-enthusiastic actual exercise, active work, and adequate rest. Prior to the modern upheaval, wellness was characterized as the ability to complete the day's exercises without unnecessary weakness. Notwithstanding, with computerization and changes in ways of life actual wellness is currently viewed as a proportion of the body's capacity to work proficiently and viably in work and relaxation exercises, to be sound, to oppose hypokinetic sicknesses, and to meet crisis circumstances.

Around 1950, maybe reliable with the Industrial Revolution and the composition of World War II, the expression "wellness" expanded in western vernacular by a factor of ten. This has prompted an interrelation of human wellness and engaging quality which has prepared worldwide wellness and wellness hardware enterprises. With respect to work, wellness is ascribed to staff that have critical oxygen consuming or anaerobic capacity, for example strength or perseverance. A comprehensive meaning of wellness is depicted by Greg Glassman in the CrossFit diary as an expanded work limit across wide occasions and modular areas; dominance of a few credits of wellness including strength, perseverance, power, speed, equilibrium and coordination and having the option to improve the measure of work done in a given time with any of these spaces. A balanced work out regime will improve an individual

in all parts of wellness, as opposed to one, for example, just cardio/respiratory perseverance or just weight preparing.

Physical wellness has demonstrated to bring about beneficial outcomes on the body's pulse on the grounds that remaining dynamic and practicing routinely develops a more grounded heart. The heart is the fundamental organ responsible for systolic pulse and diastolic circulatory strain. Taking part in an active work will make an ascent in pulse, when the action is halted, nonetheless, the person's circulatory strain will getting back to business as usual. A "ordinary" circulatory strain is viewed as 120/80 or beneath. Through ordinary actual wellness, the heart doesn't need to function as difficult to make an ascent in pulse, which brings down the power on the corridors, and brings down the over all circulatory strain.

Places for infectious prevention and anticipation give way of life rules of keeping up a decent eating routine and taking part in active work to lessen the danger of illness. The WCRF/American Institute for Cancer Research (AICR) distributed elite of proposals that mirror the proof they have found through consistency in wellness and dietary factors that straightforwardly identify with Cancer anticipation. Studies have indicated a relationship between expanded active work and diminished aggravation It produces both a momentary fiery reaction and a drawn out calming impact. Actual work decreases aggravation related to or autonomous of changes in body weight. Be that as it may, the systems connecting active work to irritation are obscure.

Physical work helps the insusceptible framework. This is subject to the convergence of endogenous elements, (for example, sex hormones, metabolic hormones and development hormones), internal heat level, blood stream, hydration status and body position. Actual work has appeared to expand the degrees of normal executioner (NK) cells, NK T cells, macrophages, neutrophils and eosinophils, supplements, cytokines, antibodies and T cytotoxic cells. Nonetheless, the component connecting actual work to insusceptible framework isn't completely perceived.

Physical work influences one's pulse, cholesterol levels, blood lipid levels, blood coagulating factors and the strength of veins. All factors that straightforwardly relate to cardiovascular sickness. It likewise improves the body's utilization of insulin. Individuals who are in danger for diabetes, Type 2 (insulin safe) particularly, advantage significantly from actual work since it initiates a superior use of insulin and ensures the heart. The individuals who create diabetes have an expanded danger of creating cardiovascular illness. In an investigation where an example of around 10,000 grown-ups from the Third National Health and Nutrition Examination Survey, active work and metabolic danger factors, for example, insulin obstruction, irritation, dyslipidemia were evaluated. The examination changed fundamental confounders with moderate/enthusiastic actual work and the connection with CVD mortality. The outcomes showed active work being related with a lower danger of CVD mortality that was autonomous of conventional metabolic danger factors.

Basketball was imagined in 1891 by James Naismith, actual training educator at the YMCA Training School in Springfield, Massachusetts, USA. The game accomplished practically prompt acknowledgment and notoriety, and the main university game, with five players in

each group, was played in 1896 in Iowa City, Iowa, USA. Proficient b-ball in the United States dates from the plan of the National Basketball League in 1898, which made due for a very long time. A later NBL was shaped in 1937 and existed until 1949 when it converged with the three-year-old Basketball Association of America to turn into the National Basketball Association (NBA). Presently, there is one ladies' expert ball alliance in the United States and some of people's proficient groups far and wide. Ball is one of the center games played at secondary schools and universities in the United States.

Basketball is an agreeable game that suits numerous ability levels and ages, attributable to its overall fame. A standard ball group has five players for every side. With indoor courts, you can play b-ball all year. The principle target of the game is to score focuses by shooting the ball through the loop. You utilize guarded systems to keep the other group from scoring.

Playing b-ball requires readiness, strength, and endurance. You should rapidly move and change headings utilizing focused energy, brief term muscle contractions. You'll likewise require solid perseverance, which is the capacity of muscles to more than once apply power for an all-encompassing period. You can expand your strong perseverance by playing b-ball and doing activities to develop lower and chest area fortitude. Playing a group activity, for example, b-ball, can give novel physical and emotional wellness benefits. Exploration from 2018 Trusted Source found that playing a group based game positively affects bone strength. Individuals who played handball and football were appeared to have more bone mineral thickness than the individuals who were inactive. Playing ball expects you to create hand-eye and foot coordination as you keep up your equilibrium all through the developments. As you play, you need to move your body rapidly as you bounce, turn, or alter course. B-ball expects you to utilize engine aptitudes, for example, shooting, passing, and spilling. You'll likewise get gifted in bouncing back and guarded moves. Keeping up a solid body will assist you with playing out these developments effortlessly. Playing b-ball offers youth the occasion to build up the engine aptitudes important for improvement. Exploration from 2018 Trusted Source focuses to the adequacy of ball in upgrading the principal development abilities that kids need to learn. Playing ball assists with improving engine coordination, adaptability, and perseverance. It likewise energizes speed, deftness, and strength. These aptitudes are appeared to positively affect advancing a sound body weight and empowering more actual work, which can improve cardiorespiratory wellness and confidence.

Kabaddi is a game which includes body and brain. It needs lively developments, holding breath and high perception which implies your body and brain should work in wonderful co-appointment. The game additionally expects you to hold breath which is a generally excellent exercise. It is intended for the general exercise of body and psyche.

Kabaddi started in out of date TamilNadu, a southern area of India. Present day kabaddi is in this manner an association of the game played in various structures under different names. Kabaddi got all inclusive presentation during the 1936 Berlin Olympics, appeared by India. The AIKF was reconstituted as The Amateur Kabaddi Federation of India (AKFI) in 1972 and the vital public rivalry for men was held in Chennai. It urges them to watch

themselves and their partners similarly as fight for them. Mental quality: Kabaddi urges players to affront various players from rival gatherings.

Yoga has a vital influence in Kabaddi. The marauder needs to enter the adversary's court reciting "Kabaddi" while holding his breath and needs to keep doing as such until he re-visitations of his home court. This is known as 'Cant', which is firmly identified with "Pranayama" of yoga. While Pranayama is tied in with retaining breath to practice inside organs, 'Cannot' is the way to retain your breath while doing energetic active work. This is maybe one of only a handful few games to join yoga with difficult active work. Yoga encourages you to get to internal strength that permits you to confront overpowering apprehensions, dissatisfactions, and difficulties of regular day to day existence.

### Review of Literature

Dey SK, Khanna GL, Batra (1993) led a review on 25 public kabaddi players (Asiad gold medalists 1990), mean age 27.91 years, who went to a public camp at the Sports Authority of India, Bangalore before the Beijing Asian Games in 1990, were examined for their actual attributes, muscle to fat ratio, slender weight (LBM) and somatotype. The physiological attributes evaluated included back strength, most extreme oxygen take-up limit and anaerobic limit (oxygen obligation) and related cardiorespiratory boundaries (oxygen beat, breathing same, greatest aspiratory ventilation, most extreme pulse). Muscle versus fat was determined from skinfold thicknesses taken at four unique destinations, utilizing Harpenden skinfold calipers. An activity test (reviewed convention) was performed on a bike ergometer (ER-900) utilizing a modernized EOS Sprint (Jaeger, West Germany). The mean (s.d.) rate muscle versus fat (17.56(3.48)) of Kabaddi players was observed to be higher than typical stationary individuals. Their constitution was observed to be endomorphic mesomorph (3.8-5.2-1.7). Mean (s.d.) back strength, greatest oxygen take-up limit ( $V_{O2max}$ ) and oxygen obligation were observed to be 162.6(18.08) kg, 42.6(4.91) ml kg<sup>-1</sup> min<sup>-1</sup> and 5.02(1.29) liter individually. Actual qualities, rate muscle versus fat, somatotype, greatest oxygen take-up limit and anaerobic limit (oxygen obligation) and other cardiorespiratory boundaries were contrasted and other public partners. Present information are similar with information for judo, wrestling and weightlifting. Since no such review has been led on global partners, these information could not measure up. These information might go about as a rule in the determination of future Kabaddi players and to accomplish the physiological status similar to the current gold medalists.

Mehrotra PK<sup>^^</sup>, Varma N, Tiwari S, Kumar P. (1998) led an investigation of lung work tests in players. Ordinary exercise has ended up being helpful for the human body and the lungs are no exemption. The current review was attempted to evaluate the connection between the nature of activity performed and the quantitative impact of these activities on the lungs. Pneumonic capacity trial of athletes occupied with different games were contrasted and one another and with that of the controls. Players playing football (n=18), hockey (n=19), volleyball (n=20), swimming (n=20) and b-ball (n=18) were picked for this review. Clinical understudies (n=20) were picked as controls. The boundaries considered in this review were constrained crucial limit (FVC), constrained expiratory volume (FEV-1), and pinnacle

expiratory stream rate (PEFR). The outcomes demonstrate that all the sportspersons had higher upsides of lung capacities contrasted with the controls. Among the different gatherings of players picked for this review, the swimmers showed the most extreme expansion in their lung capacities.

Barfield, et al., (2010) the Performance Index Evaluation (PIE) is a b-ball explicit appraisal of actual execution. The battery comprises of things regularly remembered for sport appraisals, like readiness and force, yet additionally addresses a frequently disregarded presentation part, to be specific, center strength. The motivation behind this review was to analyze the unwavering quality (test-retest, entomb rater), legitimacy (standard related, develop related), and practice impact of the PIE among mens' and womens' school ball players. Test-retest gauges were moderate for men (infraclass connection co-effective [ICC] = 0.79) and poor for ladies (ICC = 0.35), yet entomb rater dependability was high (ICC = 0.95). Standard related legitimacy proof (i.e., connection among PIE and playing time) was frail, yet build related proof was OK (i.e., school players had higher scores than secondary school players). A training impact was likewise exhibited among men. All in all, unwavering quality of the battery ought to be improved before its utilization is suggested among school b-ball players. Moreover, the battery doesn't give off an impression of being an indicator of execution however seems to recognize ability levels.

Chandrasekaran, (1997) built a b-ball ability test battery for Tamilnadu school young men of fourteen to sixteen years. 156 male b-ball players who addressed their division were the subjects. The starter test bundle included eighteen test things under the five essential abilities. The playing capacity of each subject was dictated by abstract appraisals during the opposition. The excellent goal of the scientist was to build a complete module with set number of test things and more prominent degree of constancy. The accompanying five tests were observed to be profoundly solid and completely legitimate last test battery which yielded a general legitimacy score, 0.972.

Sabharwal, (1991) study was a standard for the choice of Basketball Players based on expertise execution for intercollegiate b-ball men players of Jiwaji University. The subjects were 38 men players in the age bunch somewhere in the range of 18 and 25 years. The test battery comprised of eight things to be specific field objective speed test, ball toss for exactness, spill, three focuses shooting, bouncing back, guarded mix, spilling cum lay-up shooting, and converse spill. B-ball playing capacity was decided by a board of three adjudicators during an Inter-university b-ball title. The scale was somewhere in the range of one and fifty. All the test things were essentially connected with the judge's rating. In the request for their high greatness, three tests were chosen to foster the test battery. The various connection co-effective was processed between model variable and free factor and it was 0.82. Unwavering quality co-productive of the distinctive test things of ball ability test battery was set up. For field objective speed test, it was 0.92, for three focuses shooting 0.93 and for spilling and lay-up shooting 0.91. Legitimacy was set up. The crude scores of at long last chosen ability test things were changed over into standard scores (Z scores). The standard

scores for each subject for every one of the three things were added to acquire composite score. It was associated with ball playing capacity scores. The legitimacy co-productive was 0.91. Diverse test things of legitimacy were determined. Field objective speed test was 0.90, three focuses shooting was 0.91 and spilling and lay up shooting were 0.92. Standards were created based on ordinary bend.

### **Methodology**

The analyst has portrayed the plan of the investigation in detail. The size and determination of the example, the variable and the control utilized the wellsprings of information, the apparatuses and the technique for social event information, the depiction of information gathering instruments and the factual system utilized in the investigation are painstakingly portrayed.

### **Analysis of data**

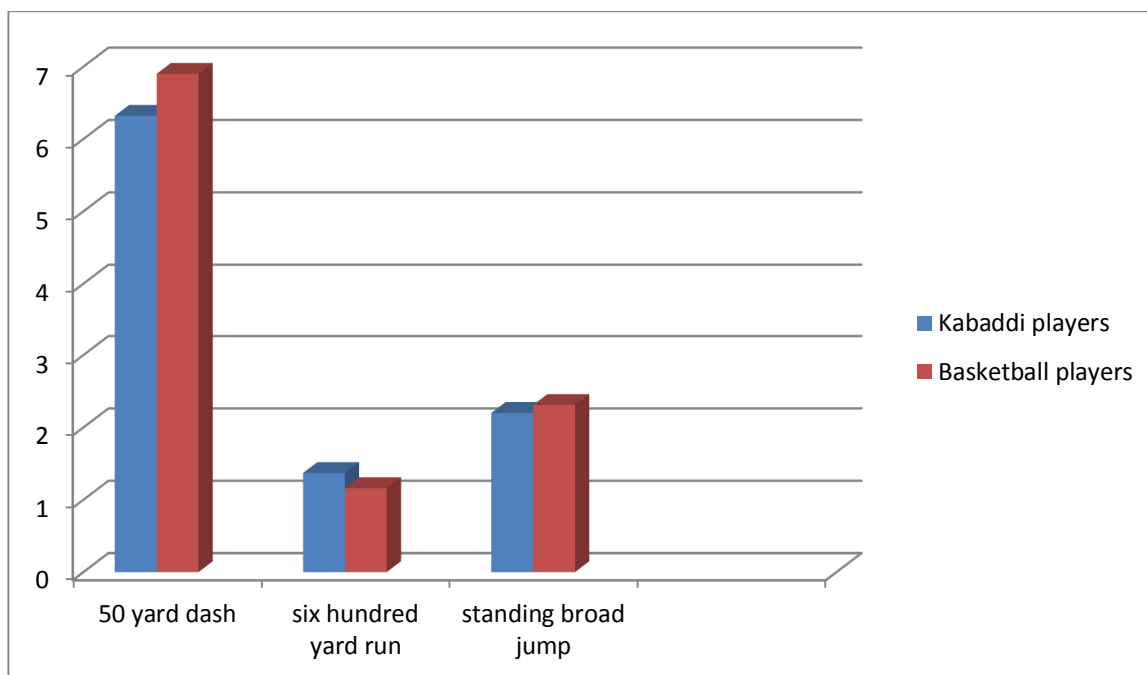
The current assessment was coordinated with the purpose of examining the level of actual health ball and Kabaddi players of University. The data of 80 (40 ball and 40 Kabaddi) players was analyzed by registering 't' test other than the explaining experiences (mean and standard deviation).

The Criterion measures from Physical wellness test have been decided for this investigation. 50 yard run, Standing wide hop, 600 yard run/walk.

Physical Fitness test on Kabaddi and Basketball Players

Variable	Game	Number	Mean	S.D.	T- ratio
50 yard dash	Kabaddi players	40	6.32	0.52	7.815
	Basketball players	40	6.90	0.38	
Six hundred yard run	Kabaddi players	40	1.37	0.21	6.986
	Basketball players	40	1.16	0.14	
Standing broad Jump	Kabaddi players	40	2.20	0.11	4.855
	Basketball Players	40	2.31	0.16	

Graphical representation



### Conclusion

It was found that there is a basic qualification among Basketball and Kabaddi players regarding 50-yard run. It may thusly be contemplated that Basketball players took extra time in 50-yard run than Kabaddi players. It was found that there is a basic qualification in 600 yard run Basketball and Kabaddi players. Kabaddi players took extra time in 600 yard run than handball players. It was found that there is a basic difference among Basketball and Kabaddi major parts concerning standing far reaching jump. Competitors are significantly improved in Standing Broad Jump than kabaddi players.

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## STUDY OF YOGA IMPACTING ON PSYCHOLOGICAL AND PHYSICAL HEALTH

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### Abstract

The current paper centers to examine the significance of Yoga on wellbeing Normal solid volunteers with age at the very least 20 years and not over 60 years, from region Sabarkantha. Estimations/Variables, World Health Organization Quality of life – Brief. The reaction was gathered from 50 respondents out of them 25 as control gathering and 25 as a yoga practice bunch. Tests for Normality (Shapiro Wilk's) completed for every one of the information factors showed an ordinarily dispersed information. Matched 'T' test was utilized to dissect inside bunch contrasts in the yoga and control gatherings and Independent examples 'T' test was utilized to examine the between bunch impact. The current investigation estimated the adequacy of Yoga on Quality of life areas on typical solid volunteers contrasted with control bunch. The investigation showed a huge improvement in yoga bunch on every one of the four spaces of World Health Organization scale like actual wellbeing, mental area, social relationship area and ecological space contrasted with control bunch. With this a straightforward and simple act of standard Yoga strategy helps in working on the personal satisfaction.

**Keywords:** Yoga, Wellbeing, World Health Organization, Improvement, Yoga Strategy, Personal Satisfaction

### Introduction

Yoga is turning into mainstream at the planet. For the worrying psyche it offers comfort. For the worn out, it's miles a shelter. For the commonman or woman it's miles the layout of the day to hold him in shape and lovely. Some usage it for growing memory, know-how and imagination. With its multifold advantages it's miles becoming a chunk of schooling. Experts use it to unfurl in addition layers of attention of their pass in the direction of flawlessness. In mild of its goal premise, the superior scientific framework has supplanted nearly each one of the traditional frameworks of drugs in numerous portions of the globe. It has substantiated itself excellent in saving guy from the lethal palms of infectious and impossible to resist diseases. Be that because it may, new a long way attaining psychosomatic diseases and intellectual troubles are representing an first-rate take a look at to the superior scientific framework. It is right here that yoga is making an vital dedication to the slicing facets scientific framework. Broad exam on Yoga remedy within the route of the maximum latest couple of a few years has drawn out the helpfulness of Yoga for coping with those ailments as a compelling aide to scientific management and moreover for lengthy haul recovery. Anticipation is advanced to fix' Yoga ought to expect a essential element in forestalling ailments. All gyms have started which includes yoga as a function in their timetable and plenty

ofpassonlly for yoga in those gyms. Advancement of effectivewell being is being supported with the aid of usingseveraWorls Health Organization selectnow no longer to be the survivors of cutting-edgeailments. Yoga is assuming an importantelementon thisattitudewithinside the new thousand years. Raju et al (1994) have found that topics World Health Organization rehearsed pranayama ought to accomplish betterpaintingsprices with dwindled oxygen usageaccording to unit paintings and with outenlargement in blood lactate levels. Madanmohan et al (2004) have proven that following 2 months of Yoga getting ready, a given diploma of hobbyactivates a milder cardiovascular reaction, offeringhigherexercising resilience. These discoveries are constant with discoveries of Ray et al (2001) that Yoga getting ready increments stable perseverance, defers starting of exhaustion and empowers one to carry outpaintings at lesser VO2 max. Yogasanas are real stances drilled with mindfulness will in wellknown settle the brain.

### **Significance of Yoga**

Each framework will be acknowledged by the everyday person in the event that it can demonstrate its helpfulness in his everyday parts of life. In the past we have perceived how the general public acknowledged and took on science as a necessary piece of its construction as innovation tackled the issue of giving the fundamental necessities of life and offering a more agreeable life to a person. We have additionally seen, that now society is good to go for Yoga as it offers man a cognizant cycle to tackle the threatening issues of misery, anxiety, passionate surprise, hyperactivity, and so forth, in the general public and assists with inspiring the secret possibilities of man in a methodical and logical manner by what man turns into a more full person.

### **Yoga for Physical fitness**

A proportionate body with all muscles loose in the typical state. It is delicate like a bloom and profoundly adaptable. Promptly it can obtain a precious stone's hardness. All organs and frameworks in the body work in amicability and with least anomalies. The constant and intense diseases evaporate or are missing in such a body. These parts of character advancement at actual level make the body work most effectively by outfitting the energies the correct way. At resting periods every one of the muscles are loose and the joints stay free to moderate energy and the metabolic rate is exceptionally low. During typical exercises, simply the fundamental measure of energy is utilized by the body. At vital occasions, under states of high pressure, the elements of the organs co-ordinate so pleasantly that the fundamental energy gets evoked and streams abundantly into those districts which need more energy. The body gets all the essential solidarity to manage the circumstance. This 'endurance' through tackling of inward fundamental energies and preparing the various organs and frameworks to work in such co-appointment, can be adequately refined by yogic practices. It is around here of utilization of yoga that the experts in actual culture, grapplers, athletes, aerialists, gymnasts, and so forth, are acutely intrigued and are putting Yoga to most extreme use. Bera and Rajapurkar (1993) have revealed that Yoga preparing brings about critical improvement in cardiovascular perseverance and anaerobic edge. This is reliable with the discoveries of Muralidhara and Ranganathan (1982) World Health Organization have

revealed an improvement in heart recuperation record following multi week Yoga preparing program as demonstrated by Harvard step test. Raju et al (1994) have discovered that subjects World Health Organization rehearsed pranayama could accomplish higher work rates with diminished oxygen utilization per unit work and without expansion in blood lactate levels.

### **Mental level**

The force of creative mind Creativity and Will-control are the two parts of brain which go under this head of character advancement. It has been all around perceived that innovativeness is the center of Arts and Technology. It has been seen that yogic practices improve the innovative force of man. Thusly, numerous performers, artists, film craftsmen, specialists and technologists have been drawn to Yoga. Resolve is a fundamental necessity for all people to achieve any work, anyway unimportant or incredible the assignment is. Yoga by its orderly and cognizant interaction of quieting down the brain eradicates the shortcoming in the psyche and assembles resolution into it. In such a brain every impediment is considered as a test and stirs gigantic energy to battle the circumstance. Valiance turns into a piece of the character. Profoundly undaunted, such an individual takes up with great balance the difficulties of life and converts them into promising circumstances for achieving his main goal. There have likewise been various examinations recommending that Yoga produces intense physiological changes (Madanmohan et al 1983, 1992, 2003, 2004, Telles et al 1994, Telles et al 2000, Udupa et al 2003) and advances actual wellbeing by further developing execution. Bera and Rajapurkar (1993) have announced that Yoga preparing brings about critical improvement in cardiovascular perseverance and anaerobic edge. This is reliable with the discoveries of Muralidhara and Ranganathan (1982) World Health Organization have announced an improvement in cardiovascular recuperation record following multi week Yoga preparing program as shown by Harvard step test.

### **Review of Literature**

Gharote, 1976; Gharote, Ganguly and Moorthy, 1976; Moorthy, 1982), adaptability (Moorthy, 1982; Govindarajulu, Gannadeepam and Bera, 2003), increasing engine manipulate and execution (Telles et al 1994, Sahu RJ and Bhole MV, 1983b), alternate digestion and autonomic capacity (Telles et al 1994) and paintings on ventilatory factors of the lungs together with a prolongation of breath retaining time. Studies on schooling of unmarried asanas have exhibited to increment diastolic urgent aspect, beat strain following five minutes exercise of sarvangasana, matsyasana and shirshasana (Kavalayananda, Swami 1926, Bhole MV and Lobo 1981). The acts of precise asanas are likewise exhibited to increment intra-gastric urgent aspect which enables in in addition growing the blood flow (Bhole MV, Karambelkar 1969).

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Raju et al (1994) have discovered that subjects World Health Organization rehearsed pranayama could accomplish higher work rates with diminished oxygen utilization per unit work and without expansion in blood lactate levels. Madanmohan et al (2004) have shown that following 2 months of Yoga preparing, a given degree of activity prompts a milder cardiovascular reaction, proposing better exercise resilience. These discoveries are steady with discoveries of Ray et al (2001) that Yoga preparing increments solid perseverance, defers beginning of exhaustion and empowers one to perform work at lesser VO<sub>2</sub> max. Yogasanas are actual stances drilled with mindfulness will in general settle the brain.

#### METHODS

##### Overview of design

This study seeks to compare the effects of a yoga meditation in normal healthy volunteers on Quality of life.

##### Data Analysis

Tests for Normality (Shapiro Wilk's) carried out for all the data variables showed a normally distributed data. Paired t test was used to analyze within group differences in the yoga and control groups and Independent samples t test was used to analyze the between group effect.

#### RESULTS AND DISCUSSION

A total 50 subjects (yoga, n=25 and control, n=25) took part in this investigation. The mean time of members was 25 years in yoga gathering and 24 years in Control bunch.

Combined t test used to dissect inside bunch changes tracked down a huge expansion in Physical wellbeing ( $t = -17.57$ ,  $p < 0.001$ ), Psychological space ( $t = -14.98$ ,  $p < 0.001$ ), Social relationship ( $t = -13.72$ ,  $p < 0.001$ ) and Environment area ( $t = -15.92$ ,  $p < 0.001$ ) in yoga bunch just and not in controls. Autonomous example t test on change scores was utilized to investigate between bunch changes additionally showed a huge improvement in Physical wellbeing ( $t = -15.67$ ,  $p < 0.001$ ), Psychological space ( $t = -13.47$ ,  $p < 0.001$ ), Social relationship ( $t = -12.05$ ,  $p < 0.001$ ) and Environment area ( $t = -15.73$ ,  $p < 0.001$ ) in Yoga bunch contrasted with Control bunch (Table 1)(Figure 1 to Figure 4).

**Table 1: Changes in the quality of Life following intervention**

Parameter	Yoga		Control	
	Pre	Post	Pre	Post
Physical Function	26.2 (2.38)	32.2** (2.18)	27.04 (1.86)	27.2 (1.61)
Psychological	22.08	26.84**	21.52	21.68

Function	(2.18)	(1.65)	(4.18)	(3.92)
Social Domain	11.44 (1.39)	13.96** (0.84)	10.8 (1.32)	10.8 (1.12)
Environmental Domain	26.08 (3.49)	31.84** (3.10)	31.12 (3.47)	31.08 (3.29)

Graphical Representation

Fig 1. Change in physical following intervention

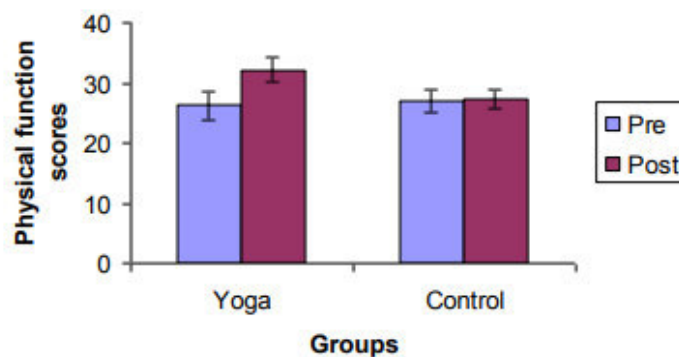


Fig 2. Changes in psychological function following intervention

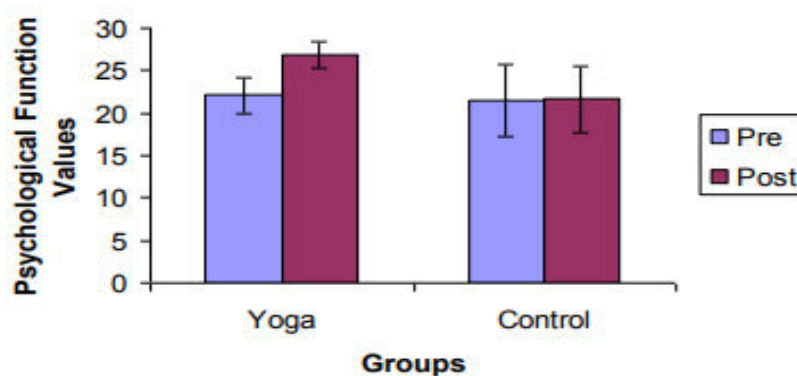


Fig 3. Changes in social domain scores following intervention

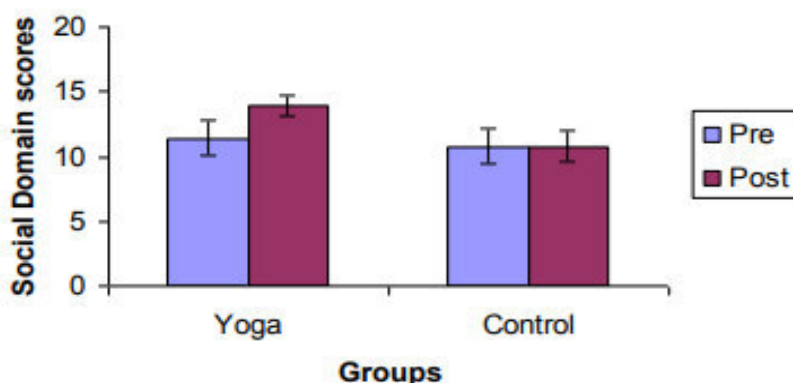
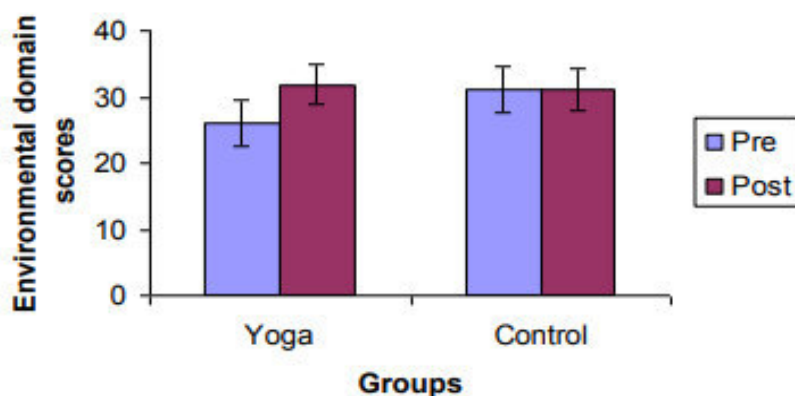


Fig 4. Changes in environmental domain scores following intervention



The examination estimated the adequacy of Yoga on Quality of life areas on typical sound volunteers contrasted with control bunch. The examination showed a critical improvement in yoga bunch on every one of the four spaces of WORLD HEALTH ORGANIZATIONQOL scale like actual wellbeing, mental area, social relationship area and ecological space contrasted with control bunch. With this a basic and simple act of normal Yoga procedure helps in working on the personal satisfaction.

### Conclusion

This kind of yoga practice can be taken on in day by day life to keep up with great wellbeing and furthermore helps in avoidance of numerous psychosomatic issues where mental pressure is accepted to assume a part. These practices primarily decrease psycho physiological excitement yet additionally upgrade various parts of consideration, like the capacity to support; center and shift consideration in this manner ingrains a more noteworthy sum unwinding and significant serenity.

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## COMPARATIVE STUDY OF CARDIOVASCULAR FITNESS BETWEEN RURAL AND URBAN COLLEGE BOYS OF JAMMU AND KASHMIR

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### Abstract

*The main aim of this study is to contrast cardiovascular fitness of rural and urban colleges boys in Jammu and Kashmir. Cardiovascular fitness is defined as the capability to perform physical activities continuously for a sustained period of time. A number of factors contribute to efficient cardiovascular functioning including the ability of the heart to pump blood, the ability of the veins & arteries to carry blood, the ability of the muscles to utilize the oxygen delivered by the blood. The study concerned with Cooper's 12-minute run & walk test to measure cardiovascular fitness level of Rural & Urban college boys of Jammu and Kashmir. Study is delimited on college boys of Kashmir under all the affiliated colleges of university of Kashmir. This investigation was conducted to raise the standard of performance to conceivable international standard we must emphasis scientific basis of physical training at college level. The results of this investigation prove that conditioning programme do increase the cardiovascular fitness of the college boys in Jammu and Kashmir. Study was conducted on two hundred college boys who are studying in different colleges in Kashmir. The data was analysed by applying t-test. Researcher hypothesized as social belief that rural boys are more efficient comparative to the urban boys & that hypothesis has been accepted. End of the day researcher found that there are several factors which affecting the cardiovascular fitness in both rural & urban college boys of Kashmir division.*

**Keywords:** Comparative, cardiovascular fitness, Rural, Urban, college

### INTRODUCTION

Physical fitness is the ability or capability of a person to do physical activities without tiredness and fatigue and participate in leisure activities enthusiastically and overcome difficult situations. According to cardiologists and sports science experts, physical activity can increase cardiovascular efficiency through increasing the working potential of lungs and heart that leads to the reduction of blood pressure and harmful fat in the blood. Nowadays physical exercises, especially morning exercise, walking, jogging, calisthenics, cycling, running and working out, is popular among different groups of people due to its ease and convenience. Physical Fitness is defined as the ability or capacity of a person to perform physical activities for a prolonged period of time without tiredness and fatigue. In addition to that a person should have physical fitness components such as speed, strength, flexibility, endurance, coordinative ability then he/she is physically fit. A number of factors contribute to efficient cardiovascular functioning including the ability of the heart to pump blood, the ability of the veins & arteries to carry blood, the ability

of the muscles to utilize the oxygen delivered by the blood. The study concerned with Cooper's 12-minute run & walk test to measure cardiovascular fitness level of Rural & Urban college boys of Jammu and Kashmir.

### METHODS

For the purpose of the study 200 college boys who are studying in different degree colleges of Kashmir division are selected randomly. In which 50 students are selected from degree college Killam Kulgam and 50 are selected from degree college damhal Kulgam both colleges come under rural areas. 50 students are selected from degree college Anantnag and the last 50 students had been selected from degree college Pulwama as urban samples.

**Selection of Variable:** Cardiovascular fitness has been selected as the variable.

**Criterion Measures:** Cardiovascular fitness was measured with the help of Cooper's 12-minute run and walk test constructed by Cooper in 1960.

**Procedure and Administration:** The standard track is marked into eight divisions of 50 meter by flag post and the subjects were asked to run for 12 minutes continuously. If subjects cannot continue running then they are permitted to walk. Subjects are asked not to take rest. Ten subjects are assigned to each spotter who recorded the laps completed. When subjects completed 12-minute whistle was blown and subjects stood where they had been running. The distance covered is recorded nearest to 50 meters.

**Statistical Technique Employed:** To measure the significance of the differences between rural and urban college boys of Jammu and Kashmir on cardiovascular fitness t-test was employed and the level of significance was kept at .05 level.

### RESULTS

Findings pertaining to cardiovascular fitness of rural and urban college boys which were subjected to t' test have been presented in the following table:

Groups	N	Mean	S. D	T test
Rural	100	2236.6	173.64	2.5869*
Urban	100	2064.95	226.6	

$t_{.05 [198]} = 1.98$

### CONCLUSION

The study was conducted on the cardiovascular fitness of rural and urban college boys of Kashmir division had provided valuable information about the relative health of rural and urban boys as it proved that rural boys are generally fit than their urban counterparts. The study showed that rural boys have on average higher endurance level than urban boys the difference between the figures for urban and rural subjects were deemed to be significant on the basis of t-test.

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## CAREER OPPORTUNITIES IN PHYSICAL EDUCATION AND SPORTS

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**ABSTRACT:** physical education and sports have large number of career opportunities in different fields or departments. Physical education and sports keep physically, mentally fit and wellbeing for individuals. Physical education and sports pursue a number of career opportunities, choosing physical education as a career, have a number of career opportunities in teaching, coaching, health related careers, administrative related careers, and careers in communication media.

**KEYWORDS:** physical education and sports, career opportunities, physical, fit,

**INTRODUCTION:** Physical Education and sports is the constituent part of education choosing or selecting a physical education a person can easily build his /her career in physical education and sports. It is start in the human life from birth of the child till its death. Physical Education is the education which is gained through the physical activities in various conditions and its related responses. In Physical Education and sports the all-round development of the individuals can be made.

Physical Education is integral part of general education system, physical education and sports keeps us mentally alert and boosts our energy. unfortunately, in our state physical education not get the due importance. Without strong physical education background, it is not possible to improve peace cooperation national integration mental health, physical health in the country.

Physical Education students have to read various subjects such as health education, principles and history of physical education, psychology, biomechanics, kinesiology, officiating and coaching, rules and regulations of different games, then after he have different career opportunities in physical education. Physical Education students pursue a variety of careers, teaching, from recreation leadership to athletic training, and from dance therapy to sports management.

### CAREERS PROSPECTS:

1 **PHYSICAL EDUCATION TEACHER:** Physical education teacher, teaches physical and health education in schools from grade first to 12<sup>th</sup> level. In schools' physical education is now compulsory subject if a school is not having a physical education teacher that school is not getting affiliation from central board of secondary education and state boards also, after completion of physical education degree a physical education degree holder will get job in schools. In primary schools one physical education teacher is there then after in middle schools and secondary schools they have the requirement of physical education teacher and p g t physical education teacher. Apart from this they have the responsibility to look administrative works in the school, thus without physical education teacher a school will not run smoothly its functions.

2 **ASSISTANT ROFESSOR:** assistant professor, associate professor, professor is career in physical education after completing p h d degree or qualifying net set exams a physical education student will get job in colleges, universities as assistant professor.

3 **COACHES:** there is a growing demand for good coaches in every game. sports authority of India, state sports authorities and in district youth services and sports have huge demand of coaches. Basketball, football, volleyball, cricket, Kho Kho, kabaddi, in every game offer various opportunities of coaching.

4 **PHYSICAL TRAINING INSTRUCTOR:** physical training instructor or PTI is another career opportunity in physical education students after completion of b p ed or m p ed degrees a physical education student will instruct the physical training programmes in schools colleges clubs.

5 **SPORTS OFFICER:** sports officer is almost in every district who looks the different sports tournaments in the district in addition to that sports officer is the requirement in colleges iit centres. Thus, physical education students have vast career opportunities to run the sports tournaments clubs etc.

6 **UMPIRE/REFEREE:** opportunities to work as a umpire/ referee are available in every game volleyball, football, cricket, basketball, table tennis, handball, athletics, sports clubs, without empire/ referee a sports tournament will not run so empire referee is career option in physical education.

7 **ATHLETIC TRAINER:** an athletic trainer looks the teams during training, conditioning, tournaments, competitions to help treat injuries when they occur, the responsibility of an athletic trainer is to prevent injuries. Athletic trainer trains the sports persons how to prevent from sports injuries. athletic trainer is the option of career opportunities of physical education students.

8 **EXERCISE THERAPIST:** Exercise therapist is a trained professional provide services to injured persons that affect mobility. relieve pain and prevent the athletes from further injuries. Exercise therapist rehabilitates the disabled persons with specific exercises so exercise therapist is another career option in physical education.

9 **SPORTS MARKETING:** sports marketing, here in sports marketing the physical education students are doing the marketing of sports goods, research and development also need the involvement of sports persons.

10 **Dance and aerobics Instructor**

11 **SPORTS JOURNALISM:** sports goods, commentators, programme producers, sports articles sports photo journalist are the career options in physical education.

**CONCLUSION:** above are the bright careers in physical education after having the physical education degrees such as B P E, B. P. ED, M.P.ED. Students can opt according to their interest. After completion physical education courses one can optional a building a career such as physical education teacher, assistant professor, coach, physical training instructor, sports officer, umpire, athletic trainer, exercise therapist etc state Govts should also provide the facilities and job opportunities to the physical education students so that physical education culture will develop fully in the country. Central should make a proper policy to uplift the standard of the physical



education in the country to strengthen the sports culture as well as the providing the career opportunities to the physical education students.

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## **ROLE OF PHYSICAL EDUCATION AND SPORTS IN SCHOOLS: A STUDY**

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### **Abstract**

Physical education and sports develop the all-round development of the personality of a child and it includes physical, mental, social, emotional, moral aspects to make a child a good citizen. Physical education making an individual physically sound, mentally alert, emotionally balanced and socially well adjusted. A sound mind lives in a sound body, students get tired after school work, students mind rejects to work, as a result for leisure activity and refreshment of mind, they require some organised forms of systematic physical education programme. This paper analyzes the scientific evidence that has been gathered on the contributions and benefits of physical education and sports in schools for both children and for educational institutions. Research evidence is presented in terms of children's development in a number of domains: physical, mental, emotional, wellness, neuromuscular, lifestyle, affective, social, and cognitive. The study suggests that physical education and sports have the potential to make significant and distinctive contributions to development in each of these domains. It is suggested that physical education and sports have the potential to make distinctive contributions to the development of children's fundamental movement skills and physical competences, which are necessary for the total development of the child to its fullness. The brain of students gets tired after school work, students mind rejects to work. As a result, for leisure activity and refreshment of mind, they require some organised forms of systematic physical education programme. The study also stresses in physical education programme goal is to prepare students with knowledge, skills, values and sports ethics and develop interest to maintain fruitful lifestyle in schools' homes. Physical education programme included activities are designed to promote physical fitness, to develop and improve motor skills, to infuse gradually knowledge and understanding of rules and regulations, concepts, to develop leadership qualities, tactics, strategies etc.

### **INTRODUCTION**

Physical education and sports is the part of education which is considered with development, growth and education of students through the medium of big muscle activities. It is the education of whole body by means of physical activities. Physical activities are the tools, they are so selected and conducted as to influence every child's life physically, mentally, emotionally and morally. Physical education helps children to develop respect for the body their own and others, contributes toward the integrated development of mind and body, develops an understanding of the role of aerobic and anaerobic physical activity in health, positively enhances self-confidence and self-esteem, and enhances social and cognitive development and academic achievement. Stating that there is, "strong evidence. on the positive effects of physical activities on self-concept, self-esteem, anxiety, depression, tension and stress, self-confidence, energy, mood, efficiency and well-being. This paper seeks to explore some of the scientific evidence that has

been gathered on the contributions and benefits of physical education and sports for both children and for educational systems. Findings that the outcomes of physical education and sports can be understood in terms of children's development in 7 domains:

- Physical
- Lifestyle
- Social
- Mental
- Emotional
- Affective
- cognitive

As its title suggests, this article is concerned with physical education and sport. Since the relationship between the concepts physical education and sport continues to be a cause of debate. According to central advisory board of physical education and recreation in India, "physical education is education, it is education through physical activities for the total personality of the child to its fullness and perfection in body, mind, and spirit". It is worthwhile clarifying the use of the terms in this study predominantly Anglophone countries, the term "physical education" is used to refer to that area of the school curriculum concerned with developing students' physical competence and confidence, and their ability to use these to perform in a range of activities. Sports usually refers to a range of activities, processes, social relationships, and presumed physical, psychological, and sociological outcomes. The United Nations Educational, Scientific and Cultural Organization (UNESCO) the inclusive term "physical education and sport" will be used to refer to those structured supervised physical activities that take place at school and during the school day.

### **PHYSICAL DEVELOPMENT**

Physical education and sports in school is the main social institution for the development of physical skills and the provision of physical activity in children and young people. For many children, school is the main environment for being physically active, through either physical education and sports programs or after-school activities. There is evidence that for a growing number of children, school provides the main opportunity for regular, structured physical activity as a combination of economic pressures and parental concerns for safety means that fewer children are able to play games in non-school settings. Moreover, school-based physical education and sports offers a regulated opportunity for usually qualified, accountable teachers to introduce physical activities and lifestyle skills and knowledge in a structured way to all children, within a safe and supportive environment. The physical health benefits of regular physical activity are well established. Regular participation in such activities is associated with a longer and better quality of life, reduced risk of a variety of diseases, and many psychological and emotional benefits. There is also a large body of literature showing that inactivity is one of the most significant causes of death, disability, and reduced quality of life across the developed world. Evidence is starting to appear suggesting a favourable relationship between physical activity and a host of factors affecting children's physical health, including diabetes, blood pressure, bone health, and obesity.

Basic movement skills, like those developed in physical education and sports form the foundation of almost all later sporting and physical activities. There is evidence that those who have developed a strong foundation in fundamental movement skills are more likely to be active, both during childhood and later in life. There is also a frequently cited, but under researched, hypothesis that the development of a broad range of these basic movement skills through physical education and sports programs is a necessary condition for excellence in sport. Conversely, children who have not been able to acquire an adequate base of movement competences are more likely to be excluded from participation in organized sports and play experiences with their friends because of a lack of basic physical skills. So, as one of the most highly valued aspects of many children's and young people's lives, such omission from the activities that make up physical education and sports is likely to have far-reaching and harmful consequences to the development and education of many children.

#### **LIFESTYLE DEVELOPMENT**

Physical education and sports help the schools to keep the students fit, energetic and at reduced risk for diseases, based on the choices of schools make about students' daily habits, good nutrition daily exercises and adequate sleep are the foundations for continuing good health. Physical education and sports managing stress in positive ways, instead of through smoking or drinking alcohol. Physical education and sports reduce wear and tear in students' body at the hormonal level.

#### **SOCIAL DEVELOPMENT**

Physical education and sports help to develop leadership qualities, sportsman spirit, self-control group cohesion among team members, fair play, courtesy, sympathy etc in schools we will develop these traits in children's personality, through regular participation in physical education programmes such as participation in various physical education activities and games.

#### **EMOTIONAL DEVELOPMENT**

In schools' physical education and sports develops our good emotions or positive emotion, if the children will control these emotions they can perform better and better day by day. Physical education and sports develop positive emotions such as pleasure, hope, joy, desire, interest, enthusiasm etc if the children will not take participate in physical education programmes and sports, they will fall in bad emotions such as grief, fear, hate, crime, shame, blame, anger, guilt, jealousy etc.

#### **AFFECTIVE DEVELOPMENT**

There is now fairly consistent evidence that regular activity can have a positive effect upon the psychological well-being of children and young people, although the underlying mechanisms for explaining these effects are still unclear. The evidence is particularly strong with regards to children's self-esteem. Other associations with regular activity that have been reported include reduced stress, anxiety, and depression. All of these lend support to the claim that well-planned and presented physical education sports can contribute to the improvement of psychological health in young people. One especially relevant set of findings, in this regard, relates to the development of perceived physical competence. It has been suggested that self-esteem is influenced by an individual's perceptions of competence or adequacy to achieve, and that It is

also worth considering the growing interest in the relationship between physical education and sports and students' general attitudes toward school. The evidence supporting such claims is limited and is mostly based on small-scale studies evidence. However, some studies report generally positive outcomes in terms of pupil attendance following the introduction of PES schemes, and there is evidence from studies of pupils at risk of exclusion from school that an increase in the availability of physical education and sports programs would make the school experience more attractive.

### **COGNITIVE DEVELOPMENT**

There is a long tradition claiming that a "healthy body leads to a healthy mind," and that physical activity can support intellectual development in children. However, is a long there is also an increasing concern by some parents that, while physical education and sports has its place, it should not interfere with the real business of schooling, which many believe to be academic achievement and examination results. Researchers have suggested that physical education and sports can enhance academic performance by increasing the flow of blood to the brain, enhancing mood, increasing mental alertness, and improving self-esteem. The evidence base of such claims is varied and more research is still required. However, existing studies do suggest a positive relationship between intellectual functioning and regular physical activity, both for adults and children.

The classic study of the relationship between physical education and sports and general school performance was carried out in France in the early 1950. Researchers reduced "academic" curriculum time by 26%, replacing it with physical education and sports yet, academic results did not worsen, and there were fewer discipline problems, greater attentiveness, and less absenteeism. More recent studies have found improvements for many children in academic performance when time for physical education and sports is increased in their school day. A review of 3 large-scale studies found that academic performance is maintained or even enhanced by an increase in a student's levels of physical education and sports despite a reduction in the time for the study of academic material.

Overall, the available research evidence suggests that increased levels of physical activity in school—such as through increasing the amount of time dedicated to physical education and sports does not interfere with students' achievement in other subjects (although the time available for these subjects is consequently reduced) and in many instances is associated with improved academic performance.

### **CONCLUSION**

Clearly, physical education and sports have the potential to make significant contributions to the education and development of children and young people in many ways, although further research and evaluation will help us better understand the nature of these contributions. Nevertheless, in each of the domains discussed—physical, lifestyle, social, mental, emotional, affective and cognitive—there is evidence that physical education and sports can have a positive and profound effect. In some respects, such an effect is unique, owing to the distinctive contexts in which PES take place. Consequently, there is a duty for those who teach and acknowledge the value of physical education and sports to act as advocates for its place as a necessary feature of

the general education of all children. They need to argue not just for the inclusion of physical education and sports within the curriculum, and for the provision of sufficient time, but also to stress the importance of the quality of the program and share information on the benefits of physical education and sports among administrators, parents, and policy makers.

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## PERFORMANCE AND EXCELLENCE THROUGH YOGA

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### **Abstract**

The purpose of performance and excellence by yoga was to evaluate how Yoga can be beneficial for both physical and mental benefits to the body and mind of a sportsperson. Yoga has been practiced from ancient period. If you are a competitive athlete, it is best to tailor your yoga practice to your training schedule because a particular sport can develop certain muscle groups while ignoring others. Over time, this process causes imbalances in the muscles and joints, leading to overuse injuries. Yoga helps the muscles, tendons, and ligaments move through a full range of motion, thus cultivating balance and core strength which is a huge benefit to athletes in their chosen sports. Another essential element in yoga is breath work (pranayama). The attention to breath during yoga can be considered one of the most important benefits to athletes. The mind-body connection in yoga is essential to helping athletes develop mental acuity and concentration. In addition, yoga helps you to relax not just tight muscles, but also anxious and overstressed minds. Being more relaxed will also aid in athletic performance. So, by adding yoga postures and meditation to the training plan will enhance the performance and prevent injury to a sportsperson. Yoga is most important role in injury rehabilitation.

### **Definition of Yoga**

The word “Yoga” originates from Sanskrit and means “to join, to unite”. Yoga exercises have a holistic effect and bring body, mind, consciousness and soul into balance. The main goals of “Yoga in Daily Life” are Physical Health, Mental Health, Social Health, Spiritual Health, Self-Realization or realization of the Divine within us. These goals are attained by Love and help for all living beings, Respect for life, protection of nature and the environment, A peaceful state of mind, Full vegetarian diet, Pure thoughts and positive lifestyle, Physical mental and spiritual practices, Tolerance for all nations, cultures and religions. Yogic techniques are known to improve one’s overall performance. Pranayama is an important, yet little known part of Yoga. Until recently, this art and science of yogic breathing was almost completely unknown to the common man like many other ancient Indian arts. Pranayama techniques act to purify the nadis including these three main energy channels.

The great Yogis presented rational interpretation of their experiences of Yoga and brought about a practical and scientifically sound method within every one’s reach. Yoga today, is no longer restricted to hermits, saints, and sages; it has entered into our everyday lives and has aroused a worldwide awakening and acceptance in the last few decades. The science of Yoga and its techniques have now been reoriented to suit modern sociological needs and lifestyles. Experts of various branches of medicine including modern medical sciences are realizing the role of these techniques in the prevention and mitigation of diseases and promotion of health. Yoga is one of the six systems of Vedic philosophy. Maharishi

Patanjali, rightly called "The Father of Yoga" compiled and refined various aspects of Yoga systematically in his "Yoga Sutras".

### **Yoga in daily life**

Yoga in Life is a system of practice consisting of eight levels of development in the areas of physical, mental, social and spiritual health. When the body is physically healthy, the mind is clear, focused and stress is under control. This gives the space to connect with loved ones and maintain socially healthy relationships. When you are healthy you are in touch with your inner Self, with others and your surroundings on a much deeper level, which adds to your spiritual health. Yoga increases the flexibility of the spine, improves body's physical condition and heightened awareness to the importance of relaxation. It has been emphasized that each exercise be practiced slowly, coordinating movement with the breath, pausing motionless in each position and always with full concentration.

Yoga is both preventive and therapeutic and has shown to offer both physical and mental benefits to the body and mind. Yoga is distinctly different from other kinds of exercise as it generates motion without causing strain and imbalances in the body. Therefore the practice is an ideal complement to other forms of exercise and an extreme advantage to any sport.

When a player, in any sport, is trying to fulfill thousands, hundreds of thousands or if playing for their country, millions of people's expectations their minds are completely stressed, and their natural efficiency diminishes. No amount of coaching or training can prepare for doubt or worry entering the mind of a player during a game. By holding steady postures and concentrating on deep abdominal breathing we can increase body awareness, relieve chronic stress patterns in the body, relax the mind, center ones attention, sharpen concentration and stay in the zone.

### **Performance enhancement by Yoga**

Yoga is a discipline that seers and saints have been practicing since ancient times to bring flexibility to the spine and joints, to keep the muscles of the body pliable and youthful, increase circulation in arteries and strengthen internal organs.

### **PERFORMANCE IMPROVEMENT BY YOGA**

- **Modulations of frequency and durations of practice**
- **Local muscular adaptation: lactate threshol.**
- **Psycho - Physiological functions**
- **Perceives actions of exercise.**
- **Cardio respiratory reserve respiratory.**
- **Haemodynamic function.**
- **Respiratory function**
- **Tidal volume**
- **Respiratory rate**
- **Body flexibility**
- **Isometric nature of exercise in asnas-strechng.**

**Yoga for swimmers:-**

Olympic gold medalist **Rebecca Soni** fell in love with yoga while training as a professional athlete and has made it a long life practice.

### **MIND-BODY CONNECTION**

When Soni graduated from college she had more time to explore different options for her dryland training, "I was at a point in my career where I was swimming with the pro team," said Soni. "That meant I didn't have to do the college program in the weight room." She went on the search to fill that void in her training. Insert yoga. Although she knew the physical benefits of the practice the biggest reason she started was for the psychological benefits, "It wasn't the flexibility, it wasn't the workout, it was mostly for the mental side of the practice. Having something to do that was mentally quiet." Soni took her first yoga class at a gym, but really got sold when she discovered a class in nature, "I remember taking it at the gym where they offered a tiny little class in the corner. It was okay. Then I started going to a park where they offered a free yoga class. That is where I started doing it more regularly." "It was just a fun adventure and it was complementing my training as well."

### **BALANCE, SELF AWARENESS AND DISCOVERY**

Something Soni loves about yoga is learning to challenge herself and develop self-awareness at the same time, "I can be a little competitive with yoga. Being competitive can be very satisfying, but it has to be kept in check. I do constantly have to check myself. 'Why am I here? What am I focusing on? What am I thinking about through the class?'"

"I do want to challenge myself. It is this beautiful balance between pushing and knowing why I am pushing at the same time. I want to keep progressing both mentally and physically." In her post swimming career yoga has continued to be a huge part of Soni's life, "It has become my most consistent athletic outlet. It is my place where I physically push myself and challenge myself to do things new things. I also still love the quiet and the mental down time." She loves doing a variety of different [vinyasa style classes](#) and is continually discovering new things about both her mind and her body, "About a year and a half after swimming ended I had been doing a good amount of yoga. When we're doing some chest and shoulder openers

it was like a whole new level of opening. It took a year and a half after swimming for my shoulders to open." And yet, yoga is so much more than this. Yoga has been said to help strengthen the power of concentration, to banish constipation, to relieve stomach disorders, improve muscle coordination and reduce excess body fat. Yoga has also been said to strengthen the mind-body connection, bring calmness and relaxation to mind, enhance self-confidence, strengthen self discipline and self-resolve, reduce stress / anxiety and increase vitality and energy throughout the body. Evidently, it would appear that yoga has extensive benefits and can help us to be a more balanced, relaxed, focused, efficient and effective person.

The benefits of yoga can thus be applied to a variety of disciplines including professional sporting athletes. It is necessary to explore what is required to play a sport and play it well. It is well acknowledged that to play any sport, whether it be tennis, volleyball, surfing, swimming or running, we must develop the basic skills and continually train the body so that we can apply the skill in a refined and polished way. This of course requires considerable time, energy and commitment to practice the skill at hand. Having a body that is flexible, strong and controlled is

also another important consideration, if one is not able to move the body with the grace, velocity and speed required, then performance will be lackluster. Similarly, if a person is not able to maintain endurance or stamina for the required duration, the performance will be diminished.

In order to play a sport well, it is also necessary that a person is able to focus and concentrate with confidence on the task at hand without distraction or timidity. As such, dealing with distractions, adversity and stress is an important component. As such, in addition to being able to maintain mental poise and balance, it is essential for a professional athlete to have a high degree of alertness, concentration and focus throughout the sporting match / event.

### **IRAN ASIAN GAMES GOLD MEDLIST TEAM KABADDI COACH SAY: POWER OF YOGA**

Shalja Jain (IRAN KABADDI COACH) had initially rejected the Iran job but accepted it when they returned with a better deal. She taught her players yoga and pranayam, a breathing exercise, and learnt Persian to help her communicate with the team. In yoga, I taught him Kapalbhati, Anulom Vilom and many other asanas. Apart from this, she also used to make him pronounce Om. This gives good control over the breath. I also gave him a lot of meditation. Iranian players never objected to it. She just wanted to improve her game.

#### **Yoga for energy continuum**

Breathing is the essence of energy supply that plays an essential role in carbohydrate, protein, and fat metabolism. Many endurance and power athletes concentrate on improving their breathing. Pranayama proponents say slow, steady, conscious breath increases blood oxygen flow, elongates the inter-costal muscles, and allows the body to engage in more stressful work without a degenerative emergency response—all effects that can help reduce fatigue while performing at peak intensity. Anulom-vilom, bhastrika, seetali, seetakari pranayam are very useful for improving lung capacity that has been shown to improve in various random trial studies among even the fittest of athletes that shows that yoga can help the athlete and scientists explore what remains unexplored. Hatha yoga includes different yoga styles, such as, Ashtanga vinyasa (sometimes called "power yoga"), and Iyengar. These styles are powerful, dynamic, alignment-oriented types of yoga that can work well for general fitness and sport adaptation.

#### **INTERNATIONAL WRESTLER BABITA PHOGAT ( OLYMPIAN )**

While preparing young and adolescent athletes, yoga postures can be an altogether potent component in an athlete's growth spurt when body image, self-esteem, and other psychological issues occur simultaneously. Becoming more aware of the body's restraints is what niyama of Ashtanga yoga focuses on that teaches patience, tolerance and the process teaches respect for one's limitations. An athlete progresses from concentrating on how many reps or laps they can do in a single training session to taking the time to learn each pose, along with its respective function, will likely present new challenges for the young athletes to understand and realize the muscle contraction while doing various mindful bends and twists. They will begin to appreciate their hormonal changes and body image as a whole and that the movement's quality determines the poses' effectiveness. Though an inactive person might find the workout intensity of yoga as low to moderate, an active sportsperson needs to gradually increase the amount of

time that he/she wishes to devote to yoga during training, transition, and competition phases. About 10 minutes of basic yoga postures as a warm-up session followed by breathing exercise would create enough energy to go for 45 minutes of specific workout in a gym, a run, or some other high-intensity workout progress until these poses. Breathing exercises constitute roughly half of the training sessions but as per the adaptability of suitability. It is important to reduce the yoga workload when nearing competition as specific training would be more beneficial for optimum performance.

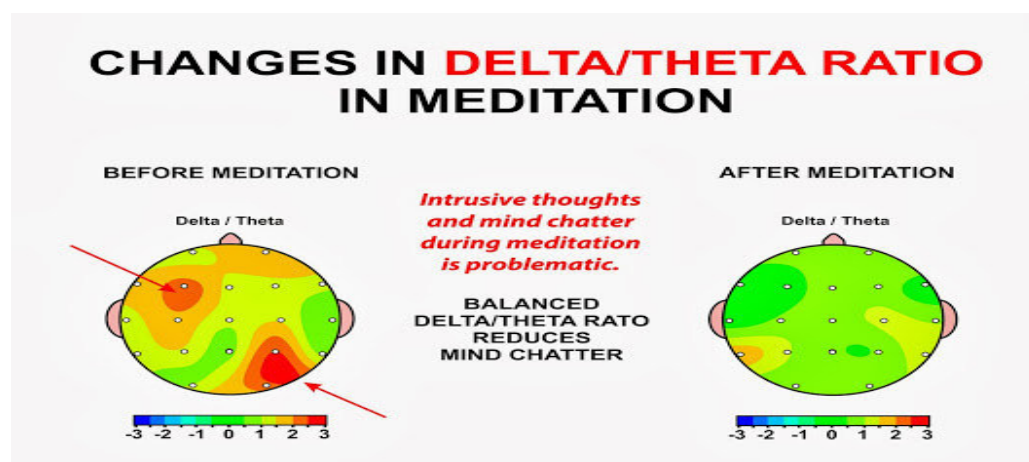
The static stretch and strengthening pose for all muscles, including the deep stabilizers, heighten body awareness that in turn, reduces stress and counterbalances the repetitive actions that are performed in their sport.

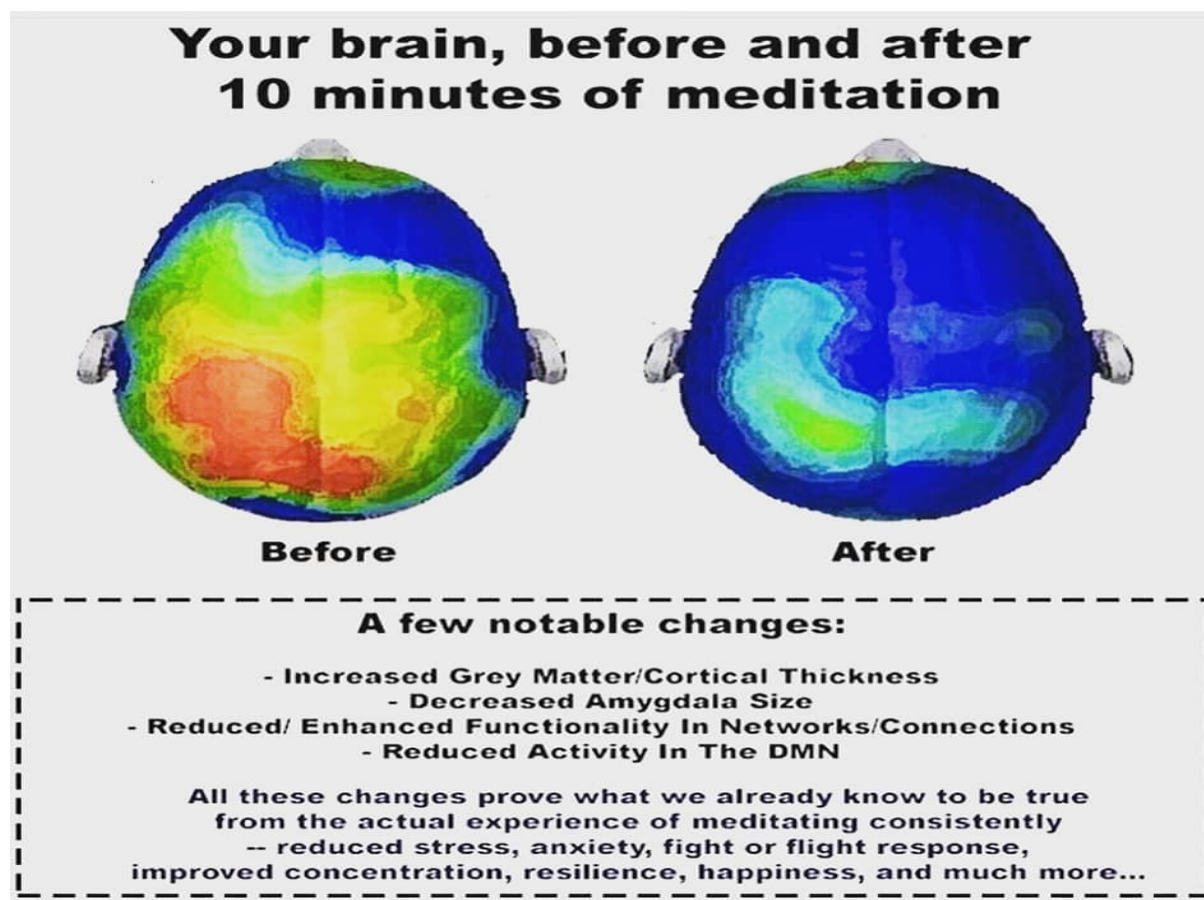
Running sometimes can lead to minor injury or overuse injury to the muscles and tendons of the legs, feet, hips, and low back. One of the essential yoga poses for runners is Virabhadrasana. Its variations stretch many muscles, including the hip flexors, the gluteals, and the psoas, low-back, and groin muscles. This lunging pose lengthens the Achilles tendons and soleus muscles and deeply stretches the hamstrings when combined with parvatsana (hip raise with hands and feet on the ground). Various twisting asanas like markat asana, Ardha Matsendra asana, Vakrasana, hip openers like Badh Padmasana, and kapotasana are useful for tennis players and golfers, and archers.

### Meditation

Meditation is somewhat synonymous with self-reflection, or turning our gaze inwards helping us to transform our mind (I almost think of it as exercise for our brain). Through controlled breathing, visualization, and clearing of the mind we gain all sorts of insight as to who we are. Increased self awareness, concentration, and mental clarity are all benefits we typically see

with consistent (this is the part I know I always struggle with) meditation practice. By simply being in the space and body that we are, we not only help ourselves to better understanding our self, but our behaviors as well (this includes the habits we may practice).





Yoga and meditation have fit together over hundreds of years, helping people stay both physically and cognitively fit. By bringing these two practices together, we become better informed and in tune with our bodies and mind – ultimately it connects us with ourselves, helping us to become a more well rounded individual. Through bringing these two aspects of ourselves together we see greater success with developing and maintaining healthy habits over time.

### **CONCLUSION**

Yoga also helps to reduce stress and anxiety, cultivate self-confidence and self-belief. All of these elements are pivotal to sporting excellence and peak performance. As highlighted above, in order to perform a sporting action efficiently and effectively, a person needs to have a high degree of concentration and focus with a mind that is calm and controlled. For example, some athletes may prefer a style of yoga that emphasizes holding postures for longer durations, thereby improving upon isometric muscle contraction, while others may prefer a schedule for beginners focusing on optimal body alignment. Masters level athletes may be focusing more on spiritual aspects of yoga and to remain free from back bone-related disorders, blood pressure management, etc. Yoga is able to mobilize joints, stretch tissues and ligaments, tone muscles, bring flexibility to the spine and strengthen internal organs. Yoga exercises are based on the formula of stretching, relaxation, deep breathing, increasing circulation and concentration.

Yoga is also beneficial to a professional athlete as it positively contributes to the health and vitality of the body, strengthens internal organs such as the heart, lungs and liver and helps to maintain fitness and agility. Yoga can help a sportsperson to have evenness of mind and control of their thoughts even during stress and/or adversity. Yoga is able to help a person have control over their body through control of their mind. As such, Yoga can play a key role in cultivating mind control and concentration which helps a sportsperson to perform at their peak level.

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## COMPARATIVE STUDY OF ANXIETY, AGGRESSION AND ALIENATION AMONG THE SPORTS PERSON AND NON-SPORTS PERSON

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### Abstract

Sports and video games are very vital for us. They hold us healthful and fit. They provide us a trade from the monotony of each day existence. It is a beneficial way of leisure and bodily activity. Sports and video games assist in individual building. They provide us strength and strength. The contemporary-day paper research approximately the tension a few of the sports activities individual and non-sports activities individual. Sample of the observe changed into decided on in distinctive stages. In first level two hundred topics all sportspersons had been decided on from the bodily schooling colleges. These topics had been decided on through the use of random variety tables. Considering their age, sex, instructional repute and socio-financial history the non-sportspersons had been decided on from the non-bodily instructional colleges. The purpose changed into to suit the sportspersons and non-sportspersons. The observe effects confirmed that there has been significant ( $P < 0.05$ ) distinction within the tension degrees of sportspersons and non sportspersons, specifically, the non sportspersons confirmed better tension degree in fashionable settings. The above paper discusses about the anxiety, aggression and alienation among the sports person and non sports person.

**Keywords:** Sports, strength, anxiety, aggression, alienation, sports person, non sports person

### Introduction

Sports and video games are manner of highbrow and physical boom. During sports activities sports we come to look at many things. We learn how to preserve highbrow balance within the midst of hopes and despair. They make us learn how to deal with the tough scenario. Sports boom a revel in of friendliness. They boom in us group spirit. They help in developing highbrow and physical toughness. They shape our body and make it strong and active. They offer us energy and energy. They get rid of tiredness and lethargy. They beautify blood circulation. This improves our physical properly-being. Sports and video games beautify our capability. They beautify our efficiency. Either have a look at or artwork on my own makes us exhaust. We stay now not inexperienced to do any artwork. Sports get rid of our highbrow exhaustion. Sports are important part of schooling. Education without sports activities sports is incomplete. Keeping their charge in existence, youngsters are taught some sorts of video games within the very early degree in university. These days' sports activities sports are a part of academic curricula. Sports are specially essential for the youth. They help in their physical and highbrow boom. They make contributions within the formation of person. They inculcate in them real values. It is therefore, sports activities sports competition is held at university and college stages. The university college students who perform properly in this competition are promoted to play at the national and

international degree. Thus sports activities sports help in career boom additionally. Sports and video video games offer us opportunity to broaden in existence. These days' sportsactivities sports were commercialized. They have become a remarkable manner of earning. Thesports activities sports person who does properly in sports activities sports is showered with name, reputation and wealth. He becomes a hero overnight. Sports have first-rate ability to offercareer opportunities. So we ought to take them very significantly from the very early age of ourexistence. Sports are real manner of earnings. Sports offer opportunity to reveal abilties. Thus,sports activities sports have first-rate charge in existence. Sports facilities are being superior inrural and semi-town areas. There are playgrounds in villages. Sports infrastructure are being superior everywhere with a view to promote them. Various pastime groups are also doing properly in selling of sports activities sports. The participation in current sports activities sportsis inspired via severa physical, physiological, intellectual and sociological factors. During training, besides real frame and physical fitness of the players, foremost emphasis is laid on thedevelopment of severa varieties of motor abilties worried in the game similarly to on the techniques and tactics of the game. Usually very little hobby has been paid to the intellectual factors which have been proved to make contributions to basic overall performance at the higher stages of competitive sports activities sports.

#### Anxiety:

Anxiety is a sense of dread, worry, or apprehension, frequently with out a clean justification. Anxiety is prominent from worry due to the fact the latter arises in reaction to a clean and realdanger, which include one affecting a individual's bodily safety. Anxiety, through contrast, arises in reaction to seemingly risk free conditions or is the made of subjective, inner emotionalconflicts the reasons of which might not be obvious to the individual himself. Some tension necessarily arises withinside the direction of each day existence and is taken into considerationnormal. But chronic, intense, chronic, or habitual tension now no longer justified in reaction toreal-existence stresses is normally seemed as a signal of an emotional disorder. When such an tension is unreasonably evoked through a particular scenario or object, it's miles called a phobia. A diffuse or chronic tension related to no specific reason or intellectual difficulty is known as fashionable, or free-floating, tension.

#### Aggression

In psychology, the term aggression refers to a set of actions that can cause physical and psychological harm to oneself, others, or objects in the environment. Aggression can be expressed in a variety of ways, including verbal, mental and physical. Human aggression is almost (immediately) any action against another person that is intended to cause harm. In addition, the perpetrator must believe that the behavior harms the target and that the target is motivated to avoid the behavior (Bushman & amp; Anderson 200134, Baron & Richardson 1994, Berkowitz 199335, Geen200136).

#### Alienation

The man or woman is aware about the hindrance in their personal knowledge, and in their

personal impotence earlier than nature. The lack of understanding approximately nature brings sensorial and emotional inconveniences to the man or woman. Sensorial inconveniences are a made of a direct, painful courting with nature. Emotional inconveniences are a made of the reflective courting with nature. The maximum stated emotional nation is the worry this is the outcome of inadequate knowledge, and/or impotence of the man or woman to oppose herbal inconveniences. The man or woman rids themselves of the inconveniences in the limits in theirpersonal opportunities. If the man or woman does now no longer take delivery of their personalimpotence in which they're objectively not able to surpass it, they then shape the want that exceeds their personal opportunities of realization. Since mind are unfastened and can act independently of nature, the man or woman bureaucracy below the strain of the inconveniencesdue to their personal impotence and the want to conquer it, a subjective concept approximatelynature and the legal guidelines of moves inside it to the shape that fits them. If such subjectivedeterminations triumph over the limitations withinside the members of the family with nature,that's feasible due to the fact there's often no inconvenience in direct touch of the man or womanand the character unknown to them, the man or woman rids themselves of the inconvenient anxiety and accepts such determinations as real.

### **Review of literature**

Crabbe Tim (2000) eleven severely evaluated the reason for the use of recreation-centered interventions in reaction to drug use ensuing in tension, aggression, alienation and crook behaviour among younger people. In addition to reviewing the literature it questions the understandings of recreation which normally underpin such interventions. Rather than that specialize in contrasts among recreation and deviant behaviour, the thing attracts interest to thecommonality of carrying and crook/drug use experiences. Through reference to analyze carriedout across the paintings of Leyton Orient Community Sports Programme on a Tower Hamlets Drug Challenge Fund Project, a case is made for the use o recreation in the framework of holistic network improvement interventions in choice to punitive diversionary measures.

Gray et al. , (1989) 6 addresses aggression issues in driving and covers a variety of topics. Definition of aggressive behavior while driving; measurement of aggression; extreme forms of driver aggression; less extreme forms of driver aggression. The report's conclusions focus on the role of society in aggressive behavior, strategies for managing attacks, including driver education and screening, and future research directions.

#### **Methodology**

In the prevailing observe, a cautious series of records changed into undertaken through the researcher to make sure the validity of the records. Wherever, possible, the information for theequal variable changed into recorded from multiple source. This allowed the cautious scrutinyof the recorded information, which could provide greater suitable effects. The present paper observe changed into performed in 3 steps regarding reconnaissance, pattern series/instructionand evaluation, observed through interpretation

of statistics.

#### Selection of Subjects

Sample of the observe changed into decided on in distinctive stages. In first level two hundred topics all sportspersons had been decided on from the bodily schooling Colleges. Considering their age, sex, instructional repute and socio-financial history the non-sportspersons had been decided on from the non-bodily instructional colleges. The purpose changed into to suit the sportspersons and non-sportspersons on age, instructional qualification and socio-financial history. Thus, the full pattern for this observe consisted of four hundred topics.

#### Anxiety Scale

This scale changed into built and standardized through Cattell for American Psychological Association. The scale includes forty objects best and every object is supplied with three alternatives. This is broadly used for measuring fashionable tension a few of the individuals. The writer has supplied numerous reliability indexes and additionally coefficients of validity. It changed into used to degree the tension of sportspersons in addition to non-sportspersons.

#### Analysis

The information traits which include imply, trendy deviation, variety etc. had been decided and the 3 manner evaluation of variance method changed into observed and in the end Scheffé Test of Multiple Comparison changed into used to decide the importance of intergroup imply differences. Analysis of variance changed into used to check the speculation that numerous ways are equal. This method is an extension of the 2 pattern take a look at technique. At first level, the information changed into handled to decide the way and trendy deviations. Afterwards, Four Way Analysis of Variance changed into applied, and in the end Duncan Multiple Range Test changed into used for figuring out the importance of intergroup imply differences.

#### Anxiety

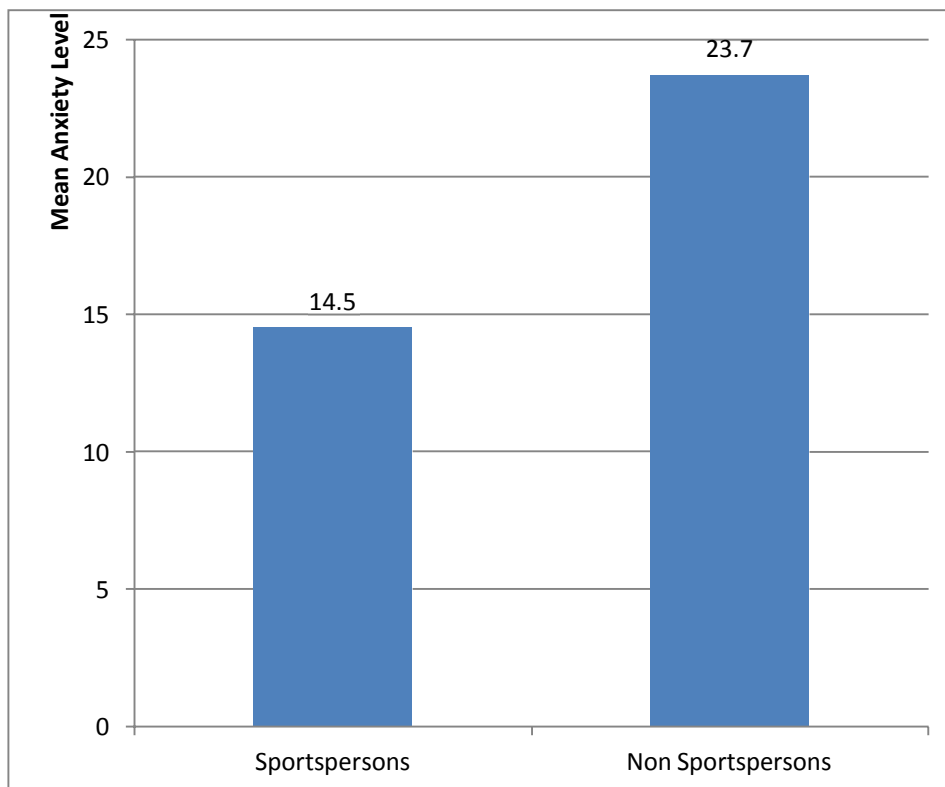
**Table 1:** Comparative analysis of anxiety levels of sportsperson and non-sportsperson

	Mean	SD	SE	Min	Max	MD	'Z'	P
Sportsperson	14.5	2.6	0.86	8.2	19.7	-9.213	-5.321	<0.05
Non Sportsperson	23.7	3.2	1.14	11.6	32.4			

**Table 1** shows comparative assessment of anxiety levels of sportsperson and non-sportsperson selected in the study. It was apparent from the analysis of data that average anxiety level of sportsperson was  $14.5 \pm 2.6$  (varied between 8.2 and 19.7). Furthermore the average anxiety level of non-sportsperson was  $23.7 \pm 3.2$  (varied between 11.6 and 32.4). The comparative analysis of collected data indicated that there is significant ( $P < 0.05$ ) difference in anxiety levels of sportsperson and non-sportsperson selected in the

study, particularly anxiety level of non-sportsperson is considerably higher than the anxiety level of sportsperson.

Graphical Representation



#### Aggression Scale

Aggression Scale In fact, that is popularly called aggression inventory. This questionnaire turned into used because it turned into discovered to be a widespread studies instrument. It measures 4 various factors of aggression. These 4 various factors might be dealt with independently together with the worldwide element of aggression. The reliability of the questionnaire stated via way of means of the writer turned into 0.81. The validity of the questionnaire turned into 0.76.

#### Analysis

The information traits which include imply, trendy deviation, variety etc. had been decided and the 3 manner evaluation of variance method changed into observed and in the end Scheffé Test of Multiple Comparison changed into used to decide the importance of intergroup imply differences. Analysis of variance changed into used to check the speculation that numerous way are equal. This method is an extension of the 2 pattern take a look at technique. At first level, the information changed into handled to decide the way and trendy deviations. Afterwards, Four Way Analysis of Variance changed into applied, and in the end Duncan Multiple Range Test changed into used for figuring out the importance of intergroup imply differences.

**Table 2:** Comparative analysis of aggression levels of sportsperson and non-sportsperson

### Aggression

	Mean	SD	SE	Min	Max	MD	'Z'	P
Sportspersons	31.7	3.86	1.03	20.3	37.8	8.917	4.321	<0.05
Non Sportspersons	22.8	2.63	0.93	15.3	31.9			

Table 2 suggests comparative evaluation of aggression degrees of sportsperson and non-sportsperson decided on within the take a look at. It turned into obvious from the evaluation of information that common aggression stage of sportsperson turned into 31.73 (numerous among 20.3 and 37.8). Furthermore the common aggression stage of non-sportsperson turned into 22.8 (numerous among 15.3 and 31.9). The comparative evaluation of gathered information indicated that there may be significant ( $P < 0.05$ ) distinction in aggression degrees of sportsperson and non-sportsperson decided on within the take a look at, mainly aggression stage of non-sportsperson is extensively better than the aggression stage of sportsperson.

Fig2. Comparison of aggression levels of sports person and non-sports person

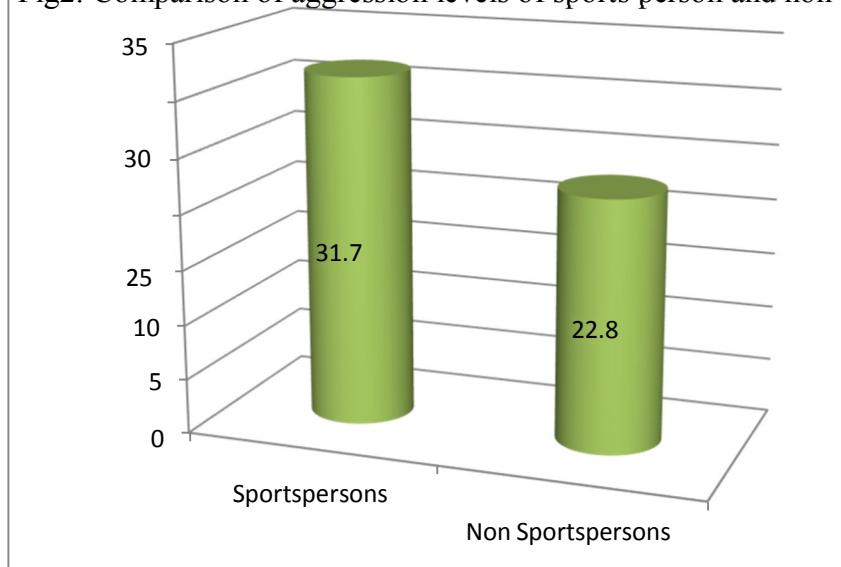


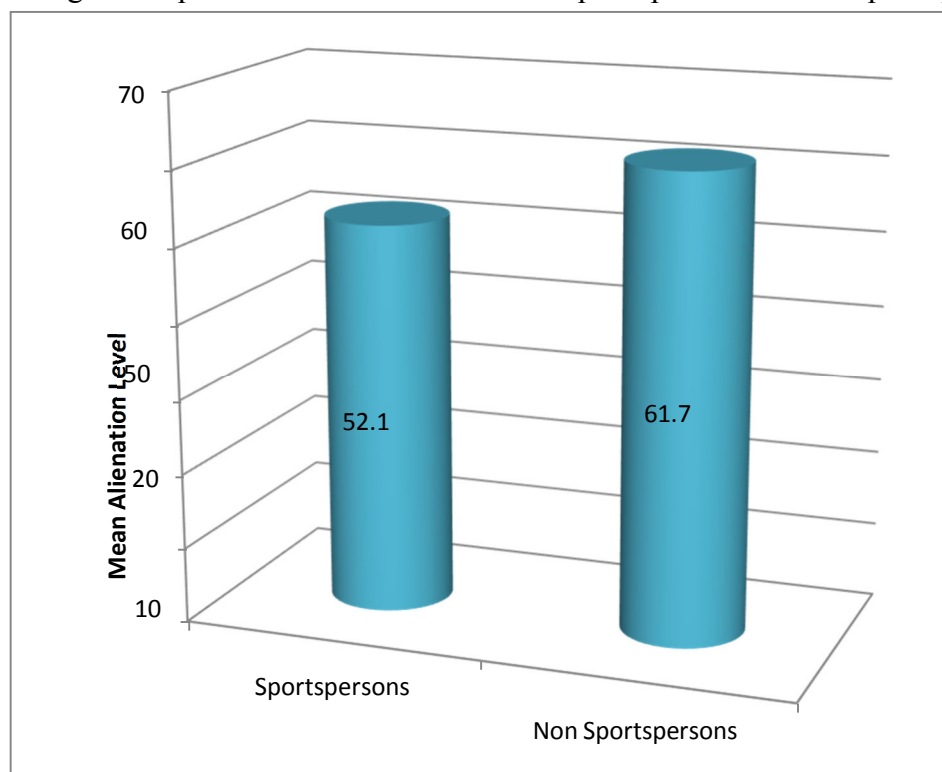
Table 3: Comparative analysis of alienation levels of sportsperson and non-sports person

	Mean	SD	SE	Min	Max	MD	'Z'	P
Sportspersons	52.1	8.9	2.6	42.8	62.9	-9.616	4.562	<0.05
Non Sportspersons	43.2	7.1	2.2	34.1	50.3			

Non Sportspersons	61.7	□10 .2	3.9	45.6	68.7			
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**Table 3** shows comparative assessment of alienation levels of sportsperson and non-sportsperson selected in the study. It was apparent from the analysis of data that average alienation level of sportsperson was  $52.1 \pm 8.9$  (varied between 42.8 and 62.9). Furthermore the average alienation level of non-sportsperson was  $61.7 \pm 10.2$  (varied between 45.6 and 68.7). The comparative analysis of collected data indicated that there is significant ( $P < 0.05$ ) difference in alienation levels of sportsperson and non-sportsperson selected in the study, particularly alienation level of non-sportsperson is considerably higher than the alienation level of sportsperson.

Fig3. Comparison of alienation levels of sports person and non-sports person



### Conclusion

In this chapter of the thesis, the precis of the studies paintings is supplied and the conclusions primarily based totally at the consequences acquired from the amassed facts are supplied hereunder. Following conclusions are drawn on the idea of examine consequences- Anxiety Levels among Sportspersons and Non-sportspersons.

- Anxiety - Sportspersons and Non-sportspersons: The examine consequences confirmed that there has been significant ( $P < 0.05$ ) distinction within the tension ranges of sportspersons and non-sportspersons, specifically, the non-sportspersons confirmed better tension degree in preferred settings.



The outcomes indicated that there has been significant ( $P < 0.05$ ) distinction within the aggressiveness of sportspersons and non-sportspersons, specifically, the sportspersons confirmed better aggressiveness than the non-sportspersons.

The study results showed that there was significant ( $P < 0.05$ ) difference in the alienation feeling in sportspersons and non-sportspersons, specifically, the non-sportspersons indicated relatively high alienation than that of sportspersons. However, majority of sportspersons as well as non-sportspersons showed marginal alienation in general settings

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खेल में चोटें एवं बचाव  
(Sports Injuries and Prevention)

डॉ. आनंद टी. रायपुरे

संचालक

शारीरिक शिक्षण व क्रीडा विभाग प्रमुख

श्री. शिवाजी महाविद्यालय राजुरा

जि. चंद्रपुर (महाराष्ट्र)

**प्रस्तावना :- (Introduction)**

खेलों में कभी-कभी चोटें लग जाती हैं। खिलाड़ियों को खेलों में चोट लगने से उनके निष्पादन पर प्रभाव पड़ता है। कभी-कभी तो खिलाड़ी को मैदान तक छोड़ना पड़ता है। यदि किसी खिलाड़ी को चोट लग जाती है तो उनकी टीम पर बहुत ही उल्टा प्रभाव पड़ता है। आमतौर पर सभी खेलों में खिलाड़ियों को चोटें लगती रहती हैं।

**Keywords :** चोटें, बचाव, प्रभाव, मांसपेशियों

**खेल में चोटें लगने के कारण (Causes of Sport Injuries)**

- 1) विरोधी दल के खिलाड़ियों द्वारा चोट पहुंचाना।
- 2) खिलाड़ी जब अपनी शक्ति से अधिक कार्य करने या खेलने की कोशिश करता है।
- 3) लम्बे समय तक जब खिलाड़ी आराम करता है एवं दोबारा व्यायाम शुरू करता है।

**खेलों में चोटें क्यों लगती हैं (How do sport Injuries occur)**

- 1) खेलों में जब खिलाड़ी को ज्ञान की कमी होती है।
- 2) जब खिलाड़ियों को अपर्याप्त तकनीक बताए जाते हैं।
- 3) जब साधन एवं उपकरण पर्याप्त न हों।
- 4) लापरवाही से चोटें लगती हैं।
- 5) जब खिलाड़ी ने पर्याप्त मात्रा में उत्तेजित व्यायाम नहीं किया हो।
- 6) जब खिलाड़ी शारीरिक रूप से स्वस्थ न हो।
- 7) जब खिलाड़ियों को नियमों के ज्ञान का अभाव हो।
- 8) जब खिलाड़ी ने खेल के मुताबिक कपड़े एवं जूते धारण नहीं किए हों।
- 9) यदि खिलाड़ियों को अच्छे उपकरण न मिलें।
- 10) यदि खिलाड़ी को अच्छा वातावरण न मिले।
- 11) मकान के कारण भी चोटें लगती हैं।
- 12) जब खिलाड़ी में सामान्य चेतना की कमी होती है।
- 13) जब खिलाड़ी को प्रशिक्षण में अधिभार का उपयोग किया जाए।

**खेलों में चोटें लगने से बचाव (Prevention of sports injuries)**

- 1) खिलाड़ी को खेलों में उसी समय भाग लेना चाहिए जब खेल के योग्य हो।
- 2) खेल से पहले उत्तेजित व्यायाम अवश्य करने चाहिए।
- 3) खेल में भाग लेने से पहले उस खेल के नियमों का ज्ञान खिलाड़ी को आवश्यक है।
- 4) खिलाड़ी को खेले की अनुसार ही कपड़े धारण करने चाहिए।
- 5) खेल के अनुसार ही खिलाड़ी को जूते पहनने चाहिए।
- 6) खिलाड़ियों को खेल अनुसार ही उपकरण प्रयोग करने चाहिए।
- 7) वातावरण खेल के अनुसार होना चाहिए।
- 8) खिलाड़ियों में सामान्य चेतना की कमी नहीं होनी चाहिए।

**खेल में लगने वाली चोटें (Sports injuries)**

- 1) मांसपेशियों का दूखना एवं फूलना (Soreness and Swelling of muscles)

लम्बे समय तक जब खिलाड़ी आराम करता है तथा और से व्यायाम शुरू करता है तो उस समय शरीर की मांसपेशियां दुखने लगती हैं इस प्रकार मांसपेशिया का दुखना एवं सुजन आ जाने की स्थिति लगभग पांच दिन तक चलती है ।

#### कारण (Causes)

- 1) तन्तुओं के टूट जाने से ।
- 2) मांसपेशियों में दुग्धाम्ल (Lactic Acid) एकत्रित होने से ।
- 3) मांसपेशियों में पर्याप्त मात्रा में ऑक्सीजन की आपूर्ति न होने पर भी ऐसा होता है ।
- 4) बिना उत्तेजित व्यायामों से ऐसा होता है ।

#### उपचार (Treatment)

- 1) जहां पर दर्द हो वहां पर हल्की मालिश करनी चाहिए ।
- 2) इस एवं पन्द्रह घण्टों के बाद गर्म पानी से सेंकना चाहिए ।
- 3) बर्फ का उपयोग करना चाहिए ।
- 4) मांसपेशियों के दर्द की गोलियां खानी चाहिए ।

#### 2) मांसपेशी का खिंचाव (Muscles Stretching)

##### कारण (Causes)

- 1) सम्बन्धित मांसपेशी के एक भाग में अधिक खिंचाव पड़ने से होता है ।
- 2) मांसपेशी ऑक्सीजन की पूर्ति नहीं होना ।
- 3) सम्बन्धित मांसपेशी का आसपास की मांसपेशियों की तुलना में कमजोर होना ।
- 4) मांसपेशीयों को कार्य करने से पहले पूरी तरह से तैयार नहीं करने से ।
- 5) अधिक कार्य भार के कारण ।
- 6) मौसम अधिक ठण्डा होने के कारण मांसपेशियों का पूर्ण रूप से न गरमाना ।

##### उपचार (Treatment)

- 1) हल्की मालिश उपयोगी रहेगी ।
- 2) खिलाड़ी को पुरा आराम देना ।
- 3) दर्द वाले भाग को थोड़ा उपर उठा कर रखना ।
- 4) बर्फ का उपयोग करना चाहिए ।
- 5) गर्म पानी से सेंकना चाहिए ।
- 6) डॉक्टर की सलाह लेनी चाहिए ।

#### 3) मांसपेशी का मुड़ना (Bending of Muscle)

##### कारण (Causes)

- 1) सामान्य से अधिक झुकाव जोड़ पर पड़ जाने से ।
- 2) जिस दिशा में मोड़ नहि होता है, उधर झुक जाने की स्थिति पर ।

##### लक्षण (Symptoms)

- 1) यह अधिकतर जोड़ों पर होती है ।
- 2) जहाँ पर हड्डियों को अस्थिबन्ध (Ligament) से जोड़ा जाता है ।
- 3) रक्त-स्राव वाली धमनियों में चोट लगने से जोड़ों में सूजन आ जाती है ।

##### उपचार (Treatment)

- 1) पूर्ण आराम कराना चाहिए ।
- 2) ठण्डे पाणी एवं बर्फ का प्रयोग करना चाहिए ।
- 3) डॉक्टर से परामर्श लेना चाहिये ।

#### 4) नील पड़ना एवं छिल जाना (Bruises or Cuts Abrasions)

##### कारण (Causes)

- 1) बिना धारदार वाली वस्तु से आघात होता है ।
- 2) हाकी, क्रिकेट की गेंद, एक दुसरे खिलाड़ी का सिर टकरा जाना आदि ।

##### लक्षण (Symptoms)

- 1) चोट ऊपर से तो दिखाई नहिं देती लेकिन अन्दर काफी श्रति पहुँचा देती है ।

- 2) रक्त की धमानियों एवं मांसपेशियों के अस्थिबन्ध टूट जाते हैं ।
- 3) चोट से प्रभावित स्थान पर सूजन आ जाती है ।
- 4) दर्द शुरू हो जाता है ।

#### उपचार (Treatment)

- 1) बर्फ या ठण्डे पानी की पट्टी चोट वाली जगह पर रखनी चाहिए ।
- 2) डॉक्टर को तुरन्त बुलाना चाहिए ।

#### 5) मोच आ जाना (Sprain)

#### 6) मांसपेशी का ऐंठ जाना (Stiffness of Muscles)

#### 7) हड्डी का टूटना (Fracture)

#### घायल व्यक्ति को ले जाना (Carry of Injured Persons)

जब किसी खिलाड़ी या व्यक्ति को चोट लग जाती है तो उसे प्राथमिक चिकित्सा या डॉक्टर के पास ले जाना पड़ता है। यदि खिलाड़ी खेल के मैदान में घायल हो जाए और अपने आप चलने में असमर्थ हो तो उसे दुसरे व्यक्तियों द्वारा खेल के मैदान के बाहर लाया जाता है। यदि व्यक्ति को एम्बुलेंस में चढ़ाना हो तो दुसरे व्यक्ति की सहायता की आवश्यकता पड़ती है।

घायल व्यक्ति को ले जाने के लिए निम्नलिखित तरीके हैं ।

- 1) अकेले व्यक्ति द्वारा (By Individual)
- 2) दो व्यक्तियों द्वारा (By Two Persons)
- 3) स्ट्रेचर के द्वारा (By Stretcher)

#### 1) अकेले व्यक्ति द्वारा (By Individual)

जब खिलाड़ी का चोट लग जाए और उसको ले जाने का दुसरा साधन न हो तथा वहां पर उसके पास केवल एक व्यक्ति ही रोगी को ले जाने के लिए उपलब्ध हो तो रोगी को पीठ या कंधे पर उठाकर ले जाया जाता है। रोगी को इस ढंग से उठाया जाता है ताकि उसे कोई तकलीफ न हो ।

#### 2) दो व्यक्तियों द्वारा (By Two Persons)

खेलों में जब खिलाड़ी को चोट लग जाए तथा वहां पर रोगी को उठाने के लिए कोई व्यवस्था न हो लेकिन अन्य व्यक्ति उपलब्ध हो तो व्यक्तियों द्वारा चारों हाथों को जोड़कर सीट की आकृति बना कर घायल व्यक्ति को उठाकर ले जाया जाता है।

#### 3) स्ट्रेचर के द्वारा (By Stretcher)

जब खेल शुरू हो और किसी खिलाड़ी को चोट लग जाए ऐसे समय पर खेल को ज्यादा देर तक न रोका जाए और खिलाड़ी को प्राथमिक चिकित्सा की जरूरत हो तो उसे शीघ्रता से दो व्यक्तियों द्वारा रोगी को स्ट्रेचर पर लिटा कर मैदान के बाहर लाया जाता है तथा वहां पर डॉक्टर के द्वारा रोगी को चिकित्सा दी जाती है। जैसे हॉकी, फुटबाल एवं क्रिकेट के खेल में किसी खिलाड़ी को चोट लग जाती है या दुसरे खेलों में खिलाड़ी को चोट लग जाने के कारण उसे स्ट्रेचर पर उठाकर एम्बुलेंस तक ले जाया जाता है ।

#### संदर्भ ग्रंथ सुचि

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