

## **INFLUENCE OF CAPTAIN ATTRIBUTES AND COPING ON STRESS AMONG SPORTS CAPTAIN**

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### **Abstract**

The role of a captain is to be motivator which in turn indicates that the captain can never have a bad day and always need to be motivated. A captain does not function in separation of the team to whom they are answerable. Team captains play an essential leadership role within team situations. The study is focused on identifying the Impact of influence of captain attributes and coping on stress among sports captain at University levels in Tamil Nadu. Sample size of the research was 300 team captains in University level at Tamil Nadu through Simple random sampling technique. The analysis identified there is influence of captaincy attributes and coping on captaincy stress. It is also identified there is influence of captaincy stress on burnout. Hence, it is concluded that that the sport team captains learn the skills and responsibilities of a captain from monitoring prior captains and on the situation training. Both players and coach support may also be essential in managing stress at ground.

**Keywords:** captaincy attributes, coping, captaincy stress, stress and burnout.

### **Introduction**

The role of a captain is to be motivator which in turn indicates that the captain can never have a bad day and always need to be motivated. To date there has been minimum studies inspecting captaincy stress, and none evaluating the influence of regularly team performances.



  
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## **Impact of Coach Behaviour and work life balance on stress among sports team captains at University levels in Tamil Nadu**

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### **Abstract**


Team captains play an essential leadership role within team situations. To date there has been minimum studies inspecting captaincy stress, and none evaluating the influence of regularly team performances. The study is focused on identifying the Impact of Coach Behaviour and work life balance on stress among sports team captains at University levels in Tamil Nadu. Sample size of the research was 300 team captains in University level at Tamilnadu through Simple random sampling technique. The analysis identified there is the influence of coach behaviour and work life balance on captaincy stress. It is also identified there is influence of captaincy stress on team failure. Hence, it is concluded that the coach should exercise restraint to reduce the stress of the captain and the team players. Support from players relationship and family members should be given for helpful work life balance. Both players and coach support may also be essential in managing stress at ground.

**Keywords:** Coach Behaviour, Work Life Balance, Captaincy Stress and Team Failure.

### **Introduction**

The captain has to make compromises and sacrifices in his role as a payer to accommodate all team players and to put the needs of the team first in all his priorities. The role of a captain is to be motivator which in turn indicates that the captain can never have a bad day and always need to be motivated. To date there has been minimum studies inspecting captaincy stress, and none evaluating the influence of regularly team performances. Team captains play an essential leadership role within team situations. Mosher (1979) stated that team captains are a proper, elected leader of the playing group and need to share a vital relationship between the coacher and the team players. Specified the smallest existing knowledge into proper leadership in



  
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## COMPARISON OF PHYSICAL FITNESS COMPONENTS BETWEEN BASKETBALL AND VOLLEYBALL PLAYERS AT COLLEGE LEVEL

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### Abstract

The present study efforts were made to analyse the physical fitness variables at college level players between basketball and volleyball. To achieve this purpose, hundred ( $n = 100$ ) college students were selected at random, fifty ( $n = 50$ ) from basketball and fifty ( $n = 50$ ) from volleyball as subjects and their age ranged between 18 and 24 years. Explosive power and speed were selected as criterion variables for this study and they were assessed by using standing broad jump and 50 meter run. The significance level was set to priority at 0.05. The collected data were analysed by independent  $t$  ratio to find out the significant difference if any between the groups. The results of the study showed that there was an insignificant ( $p \geq 0.05$ ) difference on explosive power and significant difference ( $p \leq 0.05$ ) on speed between basketball and volleyball players.

**Keywords:** Physical fitness, explosive power, standing broad jump, speed, basketball players, volleyball players.

### Introduction

Regular exercise is one of the best things you can do for your health. It has many benefits, including improving your overall health and fitness, and reducing your risk for many chronic diseases (medlineplus.gov). Physical fitness is one of the components of the total fitness of the individual, which also includes mental social and emotional fitness. Total fitness is essential (Fitness) for healthful living. Physical education is potentially a powerful force in the present day society to develop total fitness (Robert, 1972). Fitness is determined by what we do twenty four hours a day. To live, work, sit, walk, think, eat and sleep. Fitness helps to enjoy the life (Lawrence, 1975). Physical fitness is not a static factor and it varies from individual to individual and with the same person from time to time depending on various factors (Harrison, 1976). In the context of physical fitness, 'exercise' refers to any activity involving a fairly high degree of physical movements that makes one breathless and sweaty if it is done vigorously during physical exercise one has to breath more deeply to get more oxygen into the lungs and the heart must beat harder and faster to pump blood to the muscles (Dorgo, 2009). The physical benefits are unarguable but there are physiological benefits also, many people have sound sleep after exercise, wake up more refreshed and are more alert and better able to concentrate than when they are unfit. Exercise of the right sort should make one feel better live longer and have less illness (Tony Smith, 1983).

The jumpers need greater leg strength and power while jumping. Explosive power is the ability is the ability to release maximum muscular force in the shortest time (Baugartner *et al.* 1991). It is one of the most important features of athletes. The biological basis is represented only by the energy aspects of substrate utilization, as many investigators believe. Indeed, the most peculiar factors for explosive power development must be formed in neuromuscular properties (Bosco *et al.* 1992). The length of the jump will depend to a greater degree upon the force or push the jumpers can generate the ability to outline the force is explosive power. In turn, the explosive power mainly depends upon one's leg strength (Paulson, 2003). Standing broad jump is used as a test to measure the explosive power in this study.

Muscles are made up of a combination of fast-switch and slow-switch fibers. Fast-switch fibers contract rapidly and slow-switch fibers contract more slowly and with lower level of force. Speed is an ability to execute motor action under given condition in maximum possible time (Clarke & Clarke, 1987). If all other things are equal, athletes with longest muscle fibers and greater percentage of fast switch fiber should have the ability to run faster (Jarver, 1978) than an athlete with shorter slow -switch fibers. Eicher (1975) pointed out that speed is the product of two factors, stride length and stride frequency. Increasing either factor automatically increases a runners sprinting speed. Stride frequency is an inborn quality; it might be possible to improve it slightly through training (Astrand & Rodahe, 1970). But the stride length can be increased by increasing the leg strength and power. In this study fifty meters sprint has been taken as a test for measuring the speed of the subjects.

### Materials and Methods

The purpose of the study was to analyse the physical fitness variables of the college level players between basketball and volleyball. To achieve this purpose, hundred ( $n = 100$ ) college students were selected from the constituent colleges of University of Allahabad, Prayagraj, Uttar Pradesh at random, fifty ( $n = 50$ ) from basketball and fifty ( $n = 50$ ) from volleyball as subjects and their age ranged between 18 and 24 years. Explosive power and speed were selected as criterion variables for this study and they were assessed by using standing broad jump and 50 meter run. The significance level was set to priority at 0.05. The collected data were analysed by independent  $t$  ratio to find out the significant difference if any between the groups. The selected variables were assessed by using standard test and procedures, such as explosive power and speed by using standing broad jump test and 50



  
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## STRESS AMONG SPORTS TEAM CAPTAINS AT UNIVERSITY LEVEL IN TAMIL NADU

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The captain of any sports team has to take a lot of responsibility and has to necessarily multitask as a strategist, player, and finally in case of a defeat has to take all the blame. A team with a weak leadership can never unify together to focus on a common goal. The captain has to make compromises and sacrifices in his role as a player to accommodate all team players and to place the needs of the team ahead of his own priorities. The role of a captain is to be motivator which in turn indicates that the captain can never have a bad day and always need to be motivated. To date there has been minimum studies inspecting captaincy stress, and none evaluating the influence of regularly team performances. Team captains play an essential leadership role within team situations. Mosher (1979) stated that team captains are a proper, elected leader of the playing group and need to share a vital relationship between the coacher and the team players. Cotterill and Cheetham, (2017) found that most of the team captains were elected based on performance and suitability for the squad and their responsibility was highly essential for team performance and success in any sport.

The study on captaincy stress is at a nascent level. Fransen, et al. (2014) espoused the leadership role of the team captain as focused on objectives, inspiration and ensuring that teammates execute their game their peak performance, encouraging harmony and cohesion within the squad and to coordinate with all outside influences. Mosher (1979) discovered three key elements to the captain's role as leading the team under different situations, the connection between the coach and the players and represent the squad at official meetings. Smith (1986), reasoned that athletes face many situational stresses from life, training, and competition and these include rigorous training, meeting performance standards, injury, and preserving interpersonal relationship.

These stressors tend to get increased due to the responsibility of being a player who is expected to revel with game skills combined with the leadership responsibility expected from a captain. Cotterill and Fransen (2016) found that though plenty of research has explored leadership from the standpoint of the coach but limited research has so far been carried out in athlete leadership in the team and as well the role of the captain Voelker et al.(2011) initiated that participants recognized the role of a captain as stressful because of the tall expectations one associates with the position. Smith, Arnold & Thelwell (2018) identified that research has yet to exactly examine stressors confronted by sporting captains, who need to balance their role as a player and contend at an elite



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## EFFECTS OF THERABAND TRAINING AND CIRCUIT TRAINING ON SPEED AMONG COLLEGE LEVEL ATHLETES

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### *Abstract*

The Aim of the study was to find out the effects of Theraband training and Circuit training on speed among college level Athletes. The investigator randomly selected 90 athletes ( $n = 90$ ), who competed at inter collegiate level sports meets. They were divided into three groups with thirty subjects each ( $n = 30$ ) at random again consisting thirty subjects in each group and they were randomly assigned as experimental group I (TTG) and Experimental group II (CTG) and control group (CG) and speed has selected as criterion variable of this study. The experimental group underwent circuit training for eight weeks three days per week and a session on each day. The difference between the pre-test and post-test means were subjected to statistical treatment using ANCOVA, In all cases 0.05 level was fixed to test the hypothesis of the study, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to theraband training and circuit training on Speed as compared to control group.

*Keywords:* Theraband training, Circuit training, speed, college athlete.

### **Introduction**

Athletic performance has dramatically progressed over the past few years. Performance levels inconceivable before square measure currently commonplace, and also the range of athletes capable of outstanding results are increasing. One issue is that athletics may be a difficult field, and intense motivation has inspired long, arduous hours of labour. Also, employment has become a lot of refined, part from the help of sport specialists and scientists. A broader base of information regarding athletes currently exists, that is mirrored in training

## GENDER DIFFERENCE TOWARDS STRESS AMONG SPORTS CAPTAINS

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### Abstract

Team captains play an essential leadership role within team situations. The study is focused on identifying the gender difference towards stress among sports team captains at University levels in Tamil Nadu. Sample size of the research was 300 team captains in University level at Tamilnadu through Simple random sampling technique. The analysis found that coach behaviour is not influences captaincy stress with respect to male of gender. But, the coach behaviour is influences captaincy stress with respect to female of gender. Male captains opined that emotional intelligence is highly influenced stress when compared female sports team captains. Female captains opined that captaincy stress is highly influenced burnout when compared male sports team captains in University levels at Tamilnadu. Hence, it is recommended that the both male and female captains have a control over their stress, which will really advantage the playground, excluding personal benefits for the captains.

**Keywords:** coach behavior, emotional intelligence, captaincy stress and burnout.

### Introduction

Sports team leaders play an important role in team success. Proper coaching staff, team leader and team members should have good cooperation in terms of the team they play. Eligible captains are selected for the success of the team and the team. The role of captains is vital to the



## INFLUENCE OF CIRCUIT TRAINING AND EXPLOSIVE STRENGTH TRAINING ON SPEED AMONG ATHLETES

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### *Abstract*

The aim of the study was to find out the influence of Circuit training and explosive strength training on speed among college level Athletes. The investigator randomly selected 90 athletes ( $n = 90$ ) at college level. They were divided into three groups with thirty subjects each ( $n = 30$ ) at random again consisting thirty subjects in each group and they were randomly assigned as experimental group I (CTG) and Experimental group II (ESG) and control group (CG). The speed was selected as criterion variable of this study. The experimental groups underwent their training for eight weeks three days per week and a session on each day. The difference between the pre-test and post-test means were subjected to statistical treatment using ANCOVA, In all cases 0.05 level was fixed to test the hypothesis of the study, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to circuit training and explosive strength training on Speed as compared to control group. However there was an insignificant difference ( $p \geq 0.05$ ) between two experimental groups.

*Keywords:* Circuit training, explosive strength training, speed, college athlete.

### **Introduction**

Performance levels inconceivable before square measure currently commonplace, and also the range of athletes capable of outstanding results are increasing. Athletic performance has dramatically progressed over the past few years. One issue is that athletics may be a difficult field, and intense motivation has inspired long, arduous hours of labour. Also, employment has become a lot of refined, part from the help of sport specialists and scientists. A broader base of information regarding athletes currently exists, that is mirrored in training methodology.



## EFFECT OF CIRCUIT TRAINING ON STRENGTH ENDURANCE AMONG PLAYERS OF DIFFERENT TEAM GAMES

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### **Abstract**

This study was investigated about the impact of circuit training on muscular strength endurance between trained untrained players. To achieve this purpose of the study, thirty women ( $n = 30$ ) students were selected from different area of Chennai club players. The selected players were divided in to two equal groups included of fifteen players ( $n = 15$ ), namely, experimental was Circuit training Group-I (CTG), and Control Group-II (CG). Experimental Group underwent eight weeks of circuit training, and the control group did not involve any special training apart from their regular activities and practices. Strength endurance was selected as criterion variable for this study and it was measured by using bent knee situps. Analysis of covariance (ANCOVA) was applied as statistical tool. In all cases 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to circuit training on strength endurance as compared to control group.

**Keywords:** Circuit training, strength endurance, female players.

### **Introduction**

Physical fitness refers to the ability of your body systems to work together efficiently to allow you to be healthy and perform activities of daily living. Being efficient means doing daily activities with the least effort possible. A fit person is able to perform schoolwork, meet home



## INFLUENCE OF STEP AEROBICS AND OWNBODY RESISTANCE TRAINING ON HDL-c AMONG COLLEGE ATHLETES

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### Abstract

The purpose of this study is to investigate the lipid profile alterations that take place during the step aerobics exercise and own body resistance training among male college athletes. Forty-five college male athletes were randomly selected as subjects and their age ranged between 18-25 years. They were randomly divided into three equal groups such as experimental group (EG I & II) and control group (CG) with fifteen subjects ( $n=15$ ). The experimental group underwent Step aerobics and own body resistance training for eight weeks three days per week and a session on each day. In which the group I underwent step aerobic exercises (SAT) and group two underwent own body resistance training (ORT) for three days per week for eight weeks and group III Control group (CG) which did not undergo any specific training apart from their regular activities. HDL cholesterol selected as a test variable and assessed before and after the training period. The collected data was statistically analysed by using analysis of covariance (ANCOVA) and Scheffe's test was applied as a post hoc test to determine the paired mean difference. From the results of the study, it is found that there was a significant improvement ( $p \leq 0.05$ ) in HDL cholesterol level of training groups when compared to control group.

**Keywords:** Step aerobics, ownbody resistance training, HDL Cholesterol.

### Introduction

The term 'lipid profile' describes the varying levels of lipids in the blood, the most commonly reported ones being low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol and triglycerides. High levels of LDL cholesterol indicate surplus lipids in the blood, which in turn increase the risk of cardiovascular complications. HDL cholesterol transports lipids back to the liver for recycling and disposal; consequently, high levels of HDL cholesterol are an indicator of a healthy cardiovascular system (Aadahletal.,2009). Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines. The



## COMPARATIVE STUDY OF PHYSICAL FITNESS AND PHYSIOLOGICAL PARAMETERS BETWEEN DEAF/DUMB AND BLIND STUDENTS OF VIDARBHA REGION

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### **Abstract**

The purpose of the study was to find out the Study of Physical Fitness and Physiological Parameters Between Deaf/dumb and blind Students of Vidarbha Region. For the present study the source of subjects were selected from the deaf/dumb and blind school of Vidarbha Region. One hundred ( $n = 100$ ) students were selected as the subjects from deaf/dumb and blind schools of Vidarbha Region. Out of hundred subjects, fifty ( $n = 50$ ) students were selected from deaf/dumb and fifty ( $n = 50$ ) from blind schools of Vidarbha Region. The subjects were selected by using simple random sampling method. In this study comparison of two physical variables I.e. strength and flexibility and two physiological variables fat percentage and Exhale Capacity were taken into consideration from both deaf/dumb and blind students of Vidarbha Region. For the present study data pertaining to various physical and physiological variables were be collected through the administration of various tests. The data for the study is to be collected and statistical analysis and interpretation of data were be done by using statistical technique 't' test because only two groups are considered one group from deaf/dumb population from various deaf/dumb schools of Vidarbha Region and other group from blind section of the various schools of Vidarbha Region. It is concluded that there was a significant difference ( $p \leq 0.05$ ) in physical fitness and physiological parameters between deaf/dumb and blind students of Vidarbha Region.

**Keywords:** Physical Fitness, physiological fitness, Deaf/dumb and blind students.

### **Introduction**

Physical fitness is the general capacity to adapt favorably 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

## EFFECT OF RESISTANCE TRAINING PROGRAMME ON VO<sub>2</sub> MAX AMONG BADMINTON PLAYERS

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### *Abstract*

The purpose of the study was to find out the effect of circuit training programme on VO<sub>2</sub> max of badminton players. For this purpose ( $n = 40$ ) male subjects were selected randomly and between the age group of 14 to 17 years. The selected subjects were divided into experimental group (EG) ( $n = 20$ ) and control group (CG) ( $n = 20$ ). The experimental group underwent resistance training programme for a period of 12 weeks for three days a week. The control group did not actively take part in any physical fitness training programme. All the subjects were tested in vo<sub>2</sub> max using astrand ryhming step test. The data were analyzed with analysis of co variance (ANCOVA). The result of the study revealed that the significant difference ( $p \leq 0.05$ ) were seen at 0.05 level in Vo<sub>2</sub> max of experimental group following 12 weeks of circuit training when compared to control group.

*Keywords:* Badminton players, VO<sub>2</sub> max, resistance training.

### **Introduction**

Badminton is an incredibly athletic sport; it incorporates the muscles in both the upper and lower body, using a number of muscles in unison. The muscles largely used in the body are on the dominating side, this long term usage causes imbalance in muscles, and particularly high intensity sports like badminton muscle imbalance can lead to injuries. Lower body and core strength helps the player to move quickly around the court. If the player is supported with strong muscles, it makes him to retrieve the shuttle much easier. For faster court recovery and to reach base position the lower limb strengths plays an important part. When properly performed, strength training can provide significant functional benefits and improvement in overall health and well-being, including increased bone, muscle, tendon, and ligament strength and toughness, improved joint function, reduced potential for injury (Shaw, 2014).



# Effect of Circuit Training Programme on Flexibility among Badminton Players

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## ABSTRACT

The purpose of the study was to find out the effect of circuit training programme on flexibility of badminton players. For this purpose ( $n=40$ ) male subjects were selected randomly and between the age group of 14 to 17 years. The selected subjects were divided into experimental group ( $n = 20$ ) and control group ( $n = 20$ ). The experimental group (EG) underwent circuit training programme for a period of 10 weeks for three days a week. The control group (CG) did not actively take part in any physical fitness training programme. All the subjects were tested in flexibility of lower back and hamstring muscles using sit and reach test. The data were analyzed with analysis of co variance (ANCOVA). The result of the study revealed that the significant difference were seen ( $p \leq 0.05$ ) on flexibility of experimental group following 10 weeks of circuit training when compared to control group.

**Keywords:** Circuit training, flexibility, badminton players.

## INTRODUCTION

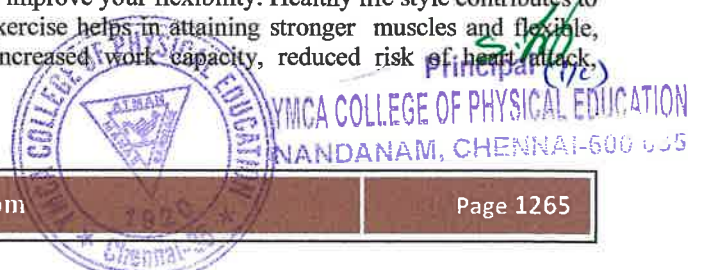
Badminton is a popular fast-paced indoor sport. To be successful in badminton you need excellent court speed and agility, with a good background of endurance (www.topendsports.com). The fitness training for badminton should focus on speed, agility and endurance, with also strength and flexibility also important.

Training should be sport specific, addressing the specific needs of a badminton player. On court training, such as playing games and badminton drills, will provide fitness benefits, but it needs to be supplemented with extra off-court training, such as resistance exercises in the gym and other cross training activities.

Flexibility is one of the vital fitness factor required for a badminton player in order to reach, dive and turn to cover all parts of the court. (https://shuttlesmash.com) The badminton player should stretch before each activity (training and competition), plus other stretches, such as PNF and active stretches, to increase the flexibility of specific muscle groups. Lack of flexibility and muscular stiffness has been linked with increased risk of musculoskeletal injury (Micheo & Baerga, 2012). Specifically, the muscles of the posterior leg, commonly known as the hamstring, have a greater tendency to shorten without proper conditioning. Lack of flexibility in the hamstring muscles is directly related with low back pain in adults and adolescents (Middelkoop, 2011).

Flexibility is important in badminton footwork because in most instances, the player is required to lunge forward to the front of the court, for stretching to sides and arching back to hit shuttles in a rally. A badminton player needs to be flexible to improve the power of smash or stroke. A major benefit of increased flexibility is a reduced risk of injury. If the muscles are stiffer it is prone to injuries under pressure, more over flexibility of muscles and joints helps to relax easily after a training session. The speed at which a player moves to change direction requires flexibility

Circuit training is a form of body conditioning through exercises done through a set of stations for the development of whole body fitness using high-intensity aerobics or using own body weight or external weight. Exercise "circuit" is one completion of all prescribed exercises in the program. Circuit training is excellent for fitness as it can be used to increase muscle strength, endurance and aerobic fitness. Circuit training can be performed using weight training exercises or by using one's own body weight to create a resistance. Badminton requires both the anaerobic and aerobic energy systems for different reasons. Exercise is a great way to improve your flexibility. Healthy life style contributes to optimal health and quality of life (Charles, 1994). Regular exercise helps in attaining stronger muscles and flexible, lower heart rate, and increased oxygen supply to brain, increased work capacity, reduced risk of heart attack, hypertension, increased flexibility (Howley, 1986).



## EFFECT OF CIRCUIT TRAINING PROGRAMME ON VO<sub>2</sub> MAX AMONG BADMINTON PLAYERS

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### *Abstract*

The purpose of the study was to find out the effect of circuit training programme on VO<sub>2</sub> max of badminton players. For this purpose ( $n=40$ ) male subjects were selected randomly and between the age group of 14 to 17 years. The selected subjects were divided into experimental group ( $n = 20$ ) and control group ( $n = 20$ ). The experimental group underwent circuit training programme (CTG) for a period of 12 weeks for three days a week. The control group (CG) did not actively take part in any physical fitness training programme. All the subjects were tested in VO<sub>2</sub> max by using Astrand - Ryhmingstep test. The data were analyzed with analysis of co variance (ANCOVA). The result of the study revealed that the significant difference ( $p \leq 0.05$ ) were seen on Vo2 max of experimental group following 12 weeks of circuit training when compared to control group.

*Keywords:* Circuit training, VO<sub>2</sub> max, badminton players.

### **Introduction**

Badminton is a, non-contact sport that is enjoyed by millions of kids, teens, adults, seniors, and the elderly around the world. It's a sport that requires eye-hand coordination, stamina, pace, and the ability to make quick decisions. Badminton requires unique physical and physiological characteristics, such as speed and stamina, as well as a strong endurance foundation. Aside from ability, physiological parameters such as strength, pace, agility, and endurance play a different role in developing a champion badminton player. Badminton is a popular fast-paced indoor sport. To be successful in badminton you need excellent court speed and agility, with a good background of endurance ([www.topendsports.com](http://www.topendsports.com)). Training should be sport

## EFFECT OF CIRCUIT RESISTANCE TRAINING ON CARDIORESPIRATORY ENDURANCE OF BADMINTON PLAYERS

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### *Abstract*


The purpose of this study was to find out the effect of circuit resistance training on cardiorespiratory endurance of badminton players. Forty male badminton players ( $n = 40$ ) were randomly selected as subjects and their age ranged between 14 and 17 years. They were randomly divided into two equal groups such as experimental group (*EG*) and control group (*CG*) with twenty subjects each ( $n = 20$ ). The experimental group underwent circuit resistance training for 10 weeks three days per week and a session on each day. Control group was not exposed to any specific training apart from their curriculum. Cardiorespiratory endurance was selected as criterion variable for this study and it was measured by using coopers 12 minute run or walk test and the distance covered in meters was recorded. Analysis of covariance (*ANCOVA*) was applied as statistical tool. In all cases 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to circuit resistance training on cardiorespiratory endurance among badminton players as compared to control group.

*Keywords:* Resistance training, circuit training, cardio respiratory endurance, badminton players

### **Introduction**

Badminton is an explosive sport that requires the athlete to be able to move in multiple directions while smashing and receiving a shuttlecock with speeds of up to 332 km/h<sup>1</sup>. Badminton is aerobic base anaerobic sports which demand fast glycolysis energy system as dominants. Repeated jump smashes, lunges, fast changes of direction; all require the entire body to generate maximum power.



  
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## INFLUENCE OF CIRCUIT TRAINING ON STRENGTH ENDURANCE AMONG HIGH SCHOOL BASKETBALL PLAYERS

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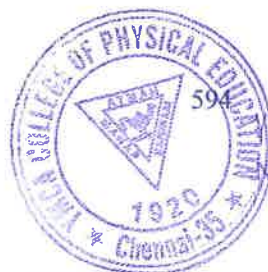
### *Abstract*

The purpose of this study was to find out the influence of circuit training on strength endurance among high school basketball players. Thirty male students ( $n = 30$ ) were randomly selected as subjects and their age ranged between 14 and 17 years. They were randomly divided into two equal groups such as experimental group (EG) and control group (CG) with fifteen subjects each ( $n = 15$ ). The experimental group underwent circuit training for eight weeks three days per week and a session on each day. Control group was not exposed to any specific training apart from their curriculum. Strength endurance was selected as criterion variable for this study and it was measured by using bent knee sit ups. Analysis of covariance (ANCOVA) was applied as statistical tool. In all cases 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ( $p \leq 0.05$ ) due to circuit training on strength endurance as compared to control group.

*Keywords:* Circuit training, strength endurance, high school students, basketball players.

### **Introduction**

Physical fitness is nowadays considered as one of the most important health markers in childhood (Ortega et al., 2008). Consequently, in the last decades several countries have been promoting physical fitness improvement among young people in different ways (Department of Health and Human Services, 1990). In many circumstances, schools have been considered the best setting in which children with low fitness levels can be identified and a healthy lifestyle can be promoted (Ortega et al., 2008). Therefore, one of the main strategies of the government was focused on modifying school health a more important role in the Educational System. Schools are mainly attempting to increase the pupils' health level by using measures



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## Influence of brisk walking, aerobics and Yogasanas on strength and static balance among geriatric men

**A Jemima and Dr. K Jothi**

### Abstract

This study was to compare the influence of brisk walking, aerobics exercises and Yogasanas on strength and static balance among geriatric men. Based on a survey on treatments, place of residence, interest and ability to participate in the study 60 geriatric men in the age group between 60 and 70 years were assigned into four groups of which first group served as brisk walking group (BWG), second group served as aerobic exercises (AEG) group, third group served as Yogasana group (YG) and the fourth group was control group (CG). They were measured of their strength using sit and stand test and static balance which formed pre test scores. The subjects were involved in their respective experimental protocols and post test scores were collected immediately after the completion of the experimental period of 12 weeks. The results on strength and balance due to brisk walking, aerobic exercise and yogic practices among geriatric men showed significant improvement as the obtained F values of 31.42 and 11.20 were significant and the Scheffe's post hoc analysis results showed compared to control group, brisk walking group, aerobic exercise group and yogic practices significantly improved strength and balance. The comparisons among treatment groups proved that yogic practice was significantly better than brisk walking and aerobic exercise in improving strength and there was no significant difference among experimental groups on balance of geriatric men. It was concluded that geriatric men who were unable to do yogic practices may undergo walking practices to maintain their strength and balance.

**Keywords:** Influence, brisk walking, strength and static


### Introduction

The ageing process is of course a biological reality which has its own dynamic, largely beyond human control. The chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible." (Gorman, 2000) [5] When one grows older, bones can become brittle and the muscles shorten. An elderly person can lose the balance and coordination that they had their entire lives. Staying active helps keep the body flexible. Stretching routines will lengthen muscle tissue and help prevent wasting and shortening. Exercise can reduce incidents of arthritis and osteoporosis by increasing bone density and joint range of motion. If one is currently being treated for any chronic illness, the doctor can advise for safe exercises that will improve the health. Thus, physical activity helps for mobility during old age. There is no down side to regular exercise as one grow older. Even if traditional programmes will not work because of physical constraints, one can still be active. Many problems associated with growing older will improve if one stay active, as long as the doctor accepts. (Darla Ferrara (2011) [1].

Walking helps to overcome some of the physical problems associated with getting older by (a) improving balance, co-ordination and joint flexibility. (b) reducing the risk of falls (c) preventing the development of osteoarthritis and osteoporosis by strengthening bones and joints – hip fractures in over 45s could be reduced by up to 50% with regular walking.(d) improving muscle strength, increasing confidence, stamina and energy levels. (e) reducing the risk of developing Alzheimer's, dementia and confusion.(f) improving social life. Walking is a great way of getting out and about and if one do it with friends or join a walking group, it can be a great way to socialise. Thus, it is recommended for effective geriatric care all adults should do at least 30 minutes moderate exercise per day, but only around 15% of people aged over 65 are currently achieving this.

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## Effect mental training on achievement motivation of state level fencers

**T Murugesan and Dr. K Jothi**

### Abstract

The study was designed to investigate the effect of mental training on Achievement motivation State level fencers of Tamil Nadu. For this 30 state level fencers were selected randomly from Tamil Nadu. Their age ranged from 18 to 25 years. They were divided into two equal groups namely Experimental Group and control group. Five days in a week, for three months, Experimental Group underwent mental training, and control group was not given any specific training. The criterion variables chosen was, namely achievement motivation. The subjects were assessed before and after the training period of three months. The analysis of covariance was used to determine any significant difference present among the two groups of the dependent variables. The study revealed that the selected psychological variable achievement motivation significantly improved due to the influence of mental training among state level fencers.

**Keywords:** Mental training, achievement motivation, state level fencers

### Introduction

Sports have become an important part of nations cultural as well as of other cultures throughout the world. Sports provide society to such an extent that it has been described by many as a microcosm of society. In other words, sports mirror the values structures and dynamics of our society. As such sports reflect characteristics of society. to achieve excellence in any sport or athletic competition, it is important to focus on mind just as much as body. "A healthy mind is what drives good practice, preparation, and focus before enter a game. Any successful athlete will tell the importance of their mental approach when it comes to improving physical skills and performance. Sports psychology is a fast-growing branch of science that seeks to learn more about how our minds can improve athletic ability and maximize our performance in different sports" Andy Gillham (2017) [5]. Vallerand (2004) [6] explains that Achievement motivation represents the "hypothetical construct used to describe the internal and/or external forces that lead to the initiation, direction, intensity, and persistence of behavior". Bill Cole (2008) [1] The mental demands of competitive fencing require strong control over mind, body and emotions, and any fencer wishing to succeed under fire needs calmness, poise and mental toughness.

### Methodology

#### Subjects


The study was designed to investigate the effect of mental training on Achievement motivation State level fencers of Tamil Nadu. For this 30 state level fencers were selected randomly from Tamil Nadu. Their age ranged from 18 to 25 years. They were divided into two equal groups namely Experimental Group and control group.

#### Training Protocol

The training session includes Self talking, Mental imagery, goal setting, Programme speeches, Meditation. The training was conducted Five days a week last for 45minutes for three months. Group-1 Experimental group underwent the training and group 2 control group did not under go any training. The level of achievement motivation before and after the training period was measured using M.L. Kamlesh Sports Achievement Motivation inventory.

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## Effects of circuit training on speed related parameters among fencers

**T Murugesan and Dr. K Jothi**

### Abstract

The purpose of the study was to find out the effects of Circuit training on speed related parameters among fencers. To achieve this purpose of the study twenty men football players were selected randomly from the Department of physical education. They were divided into two equal groups of each ten players. Group I underwent Circuit training for three days per week for eight weeks and Group II act as control group who did not underwent any special training programme apart from their regular physical education curriculum. The following variables such as speed and speed endurance were selected as criterion variables. The speed rate was assessed by 50 meters dash and speed endurance was assessed by using 110 meters. All the subjects of two groups were tested on selected criterion variables at prior to and immediately after the training programme. Analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the groups on each selected criterion variables separately. In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. The results of the study revealed that there was a significant difference between Circuit training group and control group on selected criterion variables such as speed and speed endurance. And there was significant improvement as selected criterion variables namely speed and speed endurance.

**Keywords:** Circuit training, speed related, parameters among fencers

### Introduction

As knowledge and information proliferated through experience, scientific research and philosophical enquiry, an identifiable body of knowledge evolved in physical education.

Defines physical education as a system of education where the educative values are being acquired through participation in a planned physical activity programme conducive to the society resulting in physical, mental and social development of the participants.

The physical work done by an individual depends upon the duration, nature and the purpose of activity. The physiological systems switch over from one energy source to another as the activity changes. Accumulation of lactic acid causes feeling of uneasiness and fatigue in the muscle. If the activity is aerobic, there will be constant supply of oxygen and the energy for the working muscles will be supplied by the lactic acid system, the 'Kreb's cycle' and ultimately fat will also be used as energy.

Exercise is not a single entity, there are many kinds of exercises which vary in intensity, frequency and duration and having variable effects on the body systems. Exercise may favorably modify the natural history of a number of chronic diseases. If confers increased physical abilities and improves the quality of life. The purpose of the study was to find out the effects of Circuit training on speed related parameters among fencers.


### Methodology

#### Selection of subjects

Twenty men fencers were selected randomly from the department of physical education and sports sciences, Annamalai University, Chidambaram. They were divided into two equal groups of ten player's students each. The groups are namely Circuit training group and control group. Group I underwent Circuit training for three days per week for eight weeks and Group II act as control group who did not underwent any special training programme apart from their regular physical activities.

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## Comparative effect of yogic practices with green tea supplementation on cholesterol levels of obese men

**Jothi K and Manoj Kumar R**

### Abstract

This study aims at finding out the effect of yogic practices (YP) and yogic practices with green tea supplementation (YPwGT) on total cholesterol (TC) and low density lipoprotein (LDL) among obese men. Forty five obese men with 30 kg/m<sup>2</sup> to 40kg/m<sup>2</sup> of Body Mass Index and they were divided into three equal groups consisting of fifteen (n=15) subjects each. Experimental Group I underwent yogic practices without green tea (YP) for five days per week. Experimental Group II underwent yogic practices with green tea (YPwGT) for five days per week and group III acted as Control. Prior to the experimental treatments, all the subjects were measured of their total cholesterol and low density lipoprotein through laboratory analysis of blood samples and scored recorded were considered as initial scores. The experimental group I underwent yogic practices consisting of suryanamaskar and 10 asanas and the training sessions lasted for 40 minutes. Experimental group II in addition to the yogic practices was provided with green tea supplementation. The experimental treatments lasted for 16 weeks with respective experimental treatments and immediately after completion of experimental treatment, the subjects was once again measured of their TC and LDL which formed the final scores. The difference between the initial and final scores was considered as the effect of experimental treatment. The NCOVA results proved there was significant reduction of TC and LDL due to YP and YPwGT. Though there were better reduction of cholesterol levels due to YPwGT, the difference was not found significant. It was concluded YP and YPwGT can be practiced by obese men to manage their cholesterol levels, TC and LDL.

**Keywords:** Yoga, green TEA, LDL, HDL, TC, obese men

### Introduction

Obesity is defined as abnormal or excessive fat accumulation that poses a risk to health. Exercise is a key component in the prevention of obesity. This is a condition in which energy intake, in the form of food, exceeds the energy expenditure of daily living and the excess energy is stored in the form of adipose tissue made up of fat cells. Two factors facilitate the onset and progressive nature of obesity. The first is the age related reduction in the energy expended to maintain waking bodily functions the basal metabolic rate of about 2% every 10 years. The second is the lowered metabolic rate of obese individuals. Combine these two factors with reduced physical activity and the development of obesity is inevitable.


The practice of yoga is an art and science, dedicated to creating union between the body, mind and spirit. Its objective is to assist the practitioner in using the breath and body to foster an awareness of ourselves as individualized beings intimately connected to the unified whole of creation. In short, it is about making balance and creating equanimity so as to live in peace, good health and harmony with the greater whole. This art of right living was perfected and practiced in India thousands of years ago and the foundations of yoga philosophy were written down in *The Yoga Sutra* of Patanjali, approximately 200 AD. This sacred text describes the inner workings of the mind and provides an eight-step blueprint for controlling its restlessness so as to enjoying lasting peace (Eugene, 1997) [3].

Manchanda SC and Madan K (2014) investigated the effects of yoga and meditation on cognitive, Physical and hematological variables of school children aged between 11 to 16 years. The results of the yoga experimental group (n=20) was significantly improved than those of the control group (n=20) in all physical, cognitive and hematological variables ( $P<0.05$ ).

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## Effect of Varied Physical Activities on Resting Heart Rate and Vital Capacity of Geriatric Men

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### Abstract


The aim of this research was to find out the effect of varied physical activities, namely, brisk walking (BW), aerobic exercises (AE) and yogasana on physiological variables resting heart rate and vital capacity of geriatric men. 60 geriatric men in the age group between 60 and 70 years were assigned into four groups of which first group served as BW group, second group served as AE group third group served as yogasana group (YG) and the fourth group was control group (CG). The subjects were measured of their resting heart rate through palpation method and vital capacity through Spirometer. The subjects underwent experimental protocols for 12 weeks and post test scores were obtained. ANCOVA results showed vital capacity was significantly improved due to varied physical exercise as the obtained F value of 15.18 was significant and the Scheffe's post hoc analysis results showed compared to control group all the three experimental groups improved vital capacity. The results on resting pulse rate proved yogic practices significantly altered resting pulse rate while other forms of physical activities failed to significantly alter. It was concluded that geriatric men can improve resting heart rate and vital capacity by yogasanas then brisk walking and aerobic exercises which were able to significantly alter only vital capacity and not resting heart rate.

### INTRODUCTION

The chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible." (Gorman, 2000) Thus, ageing process is of course a biological reality which has its own dynamic, largely beyond human control. When one grows older, bones can become brittle and the muscles shorten. An elderly person can lose the balance and coordination that they have had their entire lives.

Exercise can reduce incidents of arthritis and osteoporosis by increasing bone density and joint range of motion. Staying active helps keep the body flexible. Stretching routines will lengthen muscle tissue and help prevent wasting and shortening. Physical exercises of any form are prescribed to improve the health at any stage of the life as physical activity helps for mobility during old age. There is no down side to regular exercise as one grow older. Even if traditional programmes will not work because of physical constraints, one can still be active. Many problems associated with growing older will improve if one stay active, as long as the doctor accepts.( Darla Ferrara (2011)



  
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## Relationship between Communication Skill and Health Related Physical Fitness Variables of Engineering College Students

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### Abstract


The aim of this study was to find out the relationship between communication skill and selected health related physical fitness variables of engineering college students. 250 final year engineering college men students, consisting of all areas of specialization, such as civil, mechanical, computer science, electrical and electronics etc were randomly selected from five engineering colleges in and around Chennai. To determine communication skill was measured using standard questionnaire and health related physical fitness variables such as cardiovascular endurance, muscular endurance, muscular strength, flexibility and percent body fat were measured through standard tests. Thus, data on communication skill and health related physical fitness components of engineering college men students were collected. To test statistical significance of the relationship between Communication Skill with health related physical fitness variables Pearson's Correlation Coefficient was calculated. The obtained Correlation Coefficients proved that there were significant relationship between Communication skill and health related physical fitness variable percent body fat with obtained 'r' value of -0.100 were greater than the required table 'r' value of 0.095 required to be significant at 0.05 level. It was concluded that psychological variable communication skill is significantly related with health related fitness variable percent body fat of engineering college students.

**KEYWORDS:** Health Related Physical Fitness variables, Muscular Flexibility, Muscular Strength, Muscular Endurance, Cardiovascular Endurance, Percent Body Fat, Communication Skill

### Introduction

World Health Organization has set a target that every person in the world should become health conscious by 2000 AD and it is a right step in the attainment of health for all. The International Olympic Committee has signed an agreement with (W.H.O.) for furthering the cause of health for all and sports for all by 2000 AD. This agreement is clearly directed towards attaining total fitness of all individuals by 2000 AD. As the fitness thought grew at the end of the last century, it became clear that several specific components contribute to an individual overall level of fitness. Physical fitness is classified into health related, skill related and physiologic fitness. Health related fitness is related to the aptitude to perform activities of daily living without too much exhaustion and is conduce to a low risk of premature hypo kinetic diseases. The health related fitness components are cardio respiratory (aerobic) endurance, muscular strength and endurance, muscular flexibility, and body composition. (Williams, 2006) Humans have always been interested in good life. The physical aspects of the good life have included positive health



  
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# EFFECT OF CALISTHENIC EXERCISE ON SELECTED PHYSIOLOGICAL VARIABLES OF POST MENOPAUSE WOMEN

\*A. Sivagami \*\* Dr. K. Jothi dayanandan

## Abstract

The purpose of the study was to discover the effect of calisthenic exercise (CE) on selected physiological variables of post menopause women. To achieve the purpose of the study thirty (n=30) women were selected from 45 to 50 years through the medical test. The selected subjects were further classified at random into two equal groups of 15 (n=15) subjects each. Group - I (Experimental Group) underwent calisthenic exercises (CE) for thrice in a week for six weeks, and each section lasted 45minutes and the Group – II - acted as a control group (CG) they did not participate in any kind of training programme apart from the daily activities. The selected physiological variables such as Systolic Blood Pressure (SBP) and Diastolic Blood Pressure (DBP) were measured by omran blood pressure digital monitor. The collected data were analysed statistically through analyze of covariance (ANCOVA) to find the significance difference. The results of the study showed that selected physiological variables were significantly improved due to calisthenic exercise (CE) of post menopause women.

## Keywords

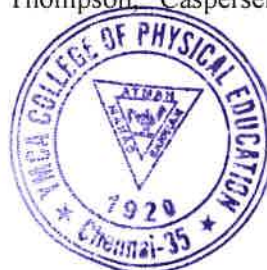
Calisthenic Exercise (CE), systolic blood pressure (SBP), diastolic blood pressure (DBP), menopause women.

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## INTRODUCTION

There are so many changes in post menopause women lie physiological and chemical changes occur in the body today we consider ourselves as modern and civilized but of course not happy at all. There is good evidence that physical activity at work or during leisure time may reduce rates of cardiovascular disease. In addition to the benefits of physical activity to lipid and lipoprotein levels, physical activity may protect against these diseases in part through effects on blood pressure (Powell, Thompson, Caspersen, Kendrick, 1987).





Research Article

## INFLUENCE OF TAI CHI WITH AND WITHOUT GREEN TEA SUPPLEMENTATION ON MUSCULAR ENDURANCE AND MUSCULAR STRENGTH OF OBESE MEN

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### ABSTRACT

This study aimed to find out the effect of tai chi with and without green tea supplementation on muscular endurance and muscular strength of obese men. Forty five obese men with 30 kg/m<sup>2</sup> to 40kg/m<sup>2</sup> of Body Mass Index were randomly selected from Chennai District, Tamil Nadu. They were randomly divided into three groups consisting of fifteen (n=15) subjects each. Experimental Group I underwent tai chi without green tea (TC) for five days per week. Experimental Group II underwent tai chi with green tea (TCwGT) for five days per week and group III acted as Control Group. Subjects who were in the control group were not exposed to any experimental training. Prior to the experimental treatments, all the subjects were measured of their muscular endurance through sit ups test and muscular strength through pull ups tests and scored recorded were considered as initial scores. The experimental group I underwent 13 specific exercises and the training sessions lasted for 40 minutes. Experimental group II in addition to the tai chi training was provided with green tea supplementation. The experimental treatments lasted for 16 weeks with respective experimental treatments and immediately after completion of experimental treatment, the subjects were once again tested of their muscular endurance and muscular strength which formed the final scores. The difference between the initial and final scores was considered as the effect of experimental treatment. To test significance, ANCOVA was used and in all cases 0.05 level was fixed to test the significance of the study. The results of this study proved that there were significant improvement in muscular endurance and muscular strength of obese men due to tai chi and tai chi with green tea supplementation and comparing with control group the improvement were significant at 0.05 level. It was concluded that TC and TCwGT were improved muscular endurance and muscular strength of the obese men.

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### INTRODUCTION

Tai chi, a traditional Chinese exercise, has been practiced for centuries in China by the elderly and young to attain agility, balance, and posture control. Its beneficial effects on health have been observed, and the maintenance of balance control in older people in particular has drawn increasing attention from scientific researchers. A number of cross sectional and longitudinal studies have provided positive evidence that tai chi practitioners not only have better cardiorespiratory function, but also perform better in balance control, flexibility, and muscle strength tests. Moreover, a study identified that the intervention of tai chi reduced the risk of multiple falls by as much as 47.5%. Although many studies have confirmed the effects of tai chi exercise on balance control for the elderly, little effort has been devoted to determining the underlying mechanism. Tai chi exercise requires continuous, slow

movement with small to large expressions of motion, the shift of body weight from unilateral to bilateral, and circular movements of the trunk and extremities, involving both isometric and isotonic contractions. All forms of tai chi emphasise conscious awareness of body position and movement, which seem to contain the characteristics of proprioceptive exercise. (Paul Lam and Nancy Kayne, 2006). Green tea, one of the most popular drinks around the world, may benefit bone health and the researchers suggest it has the potential to help prevent and treat osteoporosis and other bone diseases suffered by millions of people worldwide. Other studies have already suggested that chemicals in green tea benefit health in many ways, for example by preventing cancer and heart disease, but this is the first study to pinpoint which of those chemicals may also improve bone health by stimulating formation and slowing the breakdown of bone.

There are several studies which prescribe different sets of exercises to reduce obesity and there are researches that diet

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## EFFECTS OF ADAPTED AEROBIC DANCE ON SELECTED PSYCHOMOTOR VARIABLES AMONG INTELLECTUALLY CHALLENGED CHILDREN

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### ABSTRACT

The aim of this study was to suggest suitable adaptation for aerobic dance for the benefit of intellectually challenged children and to find out the effect of the same on selected psychomotor variables, such as, movement time and reaction time. For this purpose the investigator selected 30 intellectually challenged children and divided into two groups, experimental (n=15) and control (n=15). The experimental group was asked to perform with non-disabled peers along with music and video display of the aerobic dance. Pre and posttest scores on movement time and reaction time were collected and subjected to statistical analysis using ANCOVA. The results proved that there was significant improvement on movement time ( $P<0.05$ ) and reaction time ( $P<0.05$ ) due to adapted aerobic dance. It was concluded that the adaptation of aerobic dance with non-disabled exercise partners along with music and video display make the intellectually challenged children involve in the experimental treatment which can be followed future researchers apart from the fact that it contributes for the beneficial improvement of selected psychomotor variables of the intellectually challenged compared to controls.

**Key Words:** Intellectually challenged; psycho motor variables, movement time, reaction time.

### INTRODUCTION

Physical fitness is of great importance for all human being irrespective of age. Bucher (1985) explains physical fitness is the ability of an individual to live a full of balanced life. It involves physical, mental, emotional, social and spiritual factors and the capacity for their whole form expression. Human Psychomotor skills are organized patterns of muscular activities guided by changing signals from the environment. In research, concerning psychomotor skills particular attention is given to the learning to coordinated activity of the arms, hands, fingers and feet. The role of verbal processes is not emphasized (Oxendline, J.B.,1983)

The term intellectually challenged is increasingly being used as a synonym for people with significantly below-average IQ. These terms are sometimes used as a means of separating general intellectual limitations from specific, limited deficits as well as indicating that it is not an emotional or psychological disability. Intellectual disability is also used to describe the outcome of traumatic brain injury or lead poisoning or dementing conditions such as Alzheimer's disease. It is not specific to congenital conditions like Down syndrome. Mental retardation is a term for a pattern of persistently slow learning of basic motor and language skills ("milestones") during childhood, and a significantly below-normal global intellectual capacity as an adult. One common criterion for diagnosis of mental retardation is a tested intelligence quotient (IQ) of 70 or below and deficits in adaptive functioning. (Badano, Jose L. et.al. 2006) People with mental retardation may be described as having developmental disabilities, global developmental delay, or learning difficulties.

Adapting a physical activity may refer either to technical adaptations, such as using assistive aids and adapting the game equipment's, structural, for instance adapting rules and



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# ASSOCIATION BETWEEN HEALTH RELATED PHYSICAL FITNESS AND STRESS MANAGEMENT ABILITY OF ENGINEERING COLLEGE STUDENTS

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## ABSTRACT

This study aims at finding out association between selected health related physical fitness and stress management of engineering college students. 250 third year engineering college men students, consisting of all areas of specialization, such as mechanical, computer science, electrical and electronics etc were randomly selected from five engineering colleges in and around Chennai. To determine health related physical fitness variables such as cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition were measured through standard tests and psychological variable stress management was measured using standard questionnaire. Thus, data on health related physical fitness components and stress of engineering college men students were collected. To test statistical significance of the relationship between health related physical fitness variables with stress Pearson's Correlation Coefficient was calculated. The obtained Correlation Coefficients proved that there was significant association between health related physical fitness variable, cardiovascular endurance with obtained 'r' value of 0.183. It was also found that there were no significant association between health related physical fitness variables, muscular flexibility, muscular strength, muscular endurance and percent body fat of engineering college students.

**Key Words:** Health Related Physical Fitness variables, Muscular Flexibility, Muscular Strength, Muscular Endurance, Cardiovascular Endurance, Percent Body Fat, Stress Management

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## INTRODUCTION

Modern man lives in a mental world in which the important skills of success are based on his psychological activities. Increasing pressures on human mind in the pursuit of materialistic philosophy are making inroads into the happiness of life. Moreover, the twentieth century is a revolt against the traditional practices prevalent in the past. To keep pace with the fast and vast changes that are taking place in the various disciplines, there is a tremendous demand and responsibility cast on the training system to meet the challenges of preparing men and women to achieve tasks with success and excellence. (Mohan 1986)

Psychology is an academic and applied discipline involving the scientific study of mental functions and behavior. Psychologists study such phenomena as perception, cognition, emotion, personality, behavior, and interpersonal relationships. Psychology also refers to the application of such knowledge to various spheres of human activity, including issues related to everyday life



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## INFLUENCE OF MARTIAL ARTS TRAINING ON SELECTED MOTOR FITNESS VARIABLES AMONG FENCERS

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### ABSTRACT

The examination was intended to explore the impact of Martial Arts Training (MAT) on motor fitness factors among fencers. For this 30 intercollegiate level fencers were chosen arbitrarily from Chennai, Tamil Nadu. Their age ranged from 18 to 25 years. They were separated into two equivalent gatherings to be specific MAT and non-specific group (NSG). Elective days in seven days, for 90 days, Specific Group underwent MAT, and NSG was not given a particular preparing. The basic factors chosen were strength and coordination. The subjects were assessed before and after the training period of 90 days. The subjects were evaluated when the preparation time of 90 days by wall sit test and alternative hand wall test. The examination of covariance was utilized to decide any huge distinction present between the two gatherings of the reliant factors. The investigation uncovered that the selected factors variables significantly improved due to the influence of MAT among fencers.


**Keywords:** Martial Arts Training (MAT), Strength (ST) Coordination (CDN).

### INTRODUCTION

Sports have become a significant piece of countries culture just as of different societies all through the world. Sports give society so much that it has been depicted by numerous individuals as a microcosm of society. As such, sports reflect the qualities constructions, and elements of our general public. As such, games reflect attributes of society. to accomplish greatness in any game or athletic contest, centre around the brain similarly as much as the body. "A sound psyche is the thing that drives great practice, planning, and centre prior to entering a game. Any fruitful competitor will tell the significance of their methodology with regards to improving actual abilities and execution.

Fencing is a battle sport that does not include actual contact with the exception of the utilization of weapons (foil, epee or saber) to contact the rival in a game activity called assault. This resistance circumstance is comprised of definitive, short, quick, and complex activities, so the speed of development and perceptual exactness abilities are fundamental for a decent presentation. The improvement of the fencing execution level hence requires the obtaining of explicit psychomotor and neuromuscular abilities that can be passed on through specific activities during actual arrangement programs.



  
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**EFFECT OF ADOPTED AEROBIC DANCE AND YOGIC PRACTICES ON SELECTED  
PHYSIOLOGICAL VARIABLES AMONG INTELLECTUALLY CHALLENGED  
CHILDREN**

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**Abstract**

The purpose of this study was to find out effect of adopted aerobic dance and yogic practices on selected physiological variables among intellectually challenged children. To achieve the purpose of this study forty five students were selected from Ujjain City, Madhya Pradesh were selected. The age of the subjects were ranged from 10 to 16 years. The subjects were further classified at random into three equal groups of 15 subjects Group - I underwent adopted aerobic dance training. Group - II underwent yogic practices for four days per week for eight weeks and group - III acted as control. The selected criterion variable vital capacity and Body mass index were assessed before and after the training period. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, between the experimental groups and control group on selected criterion variables the Scheffé's post-hoc test was used. The results of the study proved that significant improvement due to eight weeks of adopted aerobics dance and yogic practices on selected physiological variables among intellectually challenged children.

**Keywords:** Adopted Aerobic Dance, Yogic Practices, Vital Capacity, Body Mass Index

**INTRODUCTION**

Human Psychomotor skills are organised patterns of muscular activities guided by changing signals from the environment. Driving a car and eye-hand co-ordination takes such as drilling a tooth, throwing a ball, typing, operating a lathe, and playing a trombone are behavioural examples. Also called Sensorimotor and perceptual motor skills, they are studied as special topics in the experimental psychology of human learning and performance. In Research concerning Psychomotor skills [jothi et., al., 2006] particular attention is given to the learning to co-ordinated activity of the arms, hands, fingers and feet. The role of verbal processes is not emphasized (Oxendline, 1983).

The genetic factors, growth and development considerations and prior environmental experiences provide learners to come to a learning situation with dissimilar probabilities for success. Although we are typically concerned with the group, or gear instruction for the average individual within the group, there are many reasons why this concern and procedure can be questioned. In support of this approach, we of course assume that principles of learning or laws of behaviour generally apply to most individuals. Doubtless, it is practical to instruct in number rather than on an individual basis (Robert, 2004).

Specify measures for possible use in a signing or selecting students or particular training efforts or of evaluating progress and proficiency in various areas of psycho motor performance and provide suggestions for materials and apparatus development for inclusion in particular psychomotor development and training activity (Mac, 2003).

Balance to maintain body position referred to as balance, is necessary for the successful performance of sports skills. It is essential in those dynamic sports requiring sudden changing movements (Robert, 2001).

Retardation is the act or result of delaying; the extent to which anything is retarded or delayed; that which retards or delays. In particular, it can mean in medicine in two ways namely, Mental retardation and psychomotor retardation. [jothi et., al., 2010] Mental retardation is a term for a pattern of persistently slow learning of basic motor and language skills ("milestones") during childhood, and a significantly below-normal global intellectual capacity as an adult. One common criterion for diagnosis of mental retardation is a tested intelligence quotient (IQ) of 70 or below and deficits in adaptive functioning (Badano Jose, et.al-2006).



## Effect Of Adapted Aerobic Dance On Reaction Time And Balance Among Intellectually Disabled Girls

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### Abstract

To investigate the effects of Adapted Aerobic Dance (AAD) on Reaction Time (RT) and Balance (BE) among Intellectually Disabled Girls (IDG). To accomplish the motivation behind this examination the investigator chose 30 educable IDG in the age group of 10 to 16 years from Mano Vikas kendra Alka puri, Ujjain. The chose 30 IDG were two classified under two gatherings, gathering one as undergo an observational AAD and gathering two as control group (CG). Pre tests were directed on every one of the 30 IDG before exposed to observational on selected criterion variables, which formed the underlying scores of the subjects. The observational gatherings (OG) underwent the AAD training for eight weeks. Immediately after completion of observational period, post test scores were gathered from every one of the 30 subjects. The chosen criterion variable RT and BE were measured and tested for both gatherings using the ruler drop and stork test. The contrasts between the underlying and last scores of the selected variables such as RT and BE were considered as the effect of respective observation treatments.

**Keywords:** Adopted Aerobic Dance (AAD), Reaction Time (RT), Balance (BE), Intellectually Disable Girls (IDG).

### INTRODUCTION

Adapted Physical Education (APE) is actual training which has been adjusted or altered, so it is as fitting for the individual with a disability as it is for a individual exclusive of a disability. Actual training is one of the most main parts of a kid's development. Researchers currently realize that active work shapes our minds just as our bodies on account of the neural associations between our muscles and our cerebrums. The better physical training is related to better results for individuals with learning incapacities, and better wellbeing results sometime down the road. Physical work is characterized as any real development created by skeletal muscles that require energy use. Exercises attempted while working, playing, voyaging, doing housework and participating in sporting pursuits are incorporated along these lines.

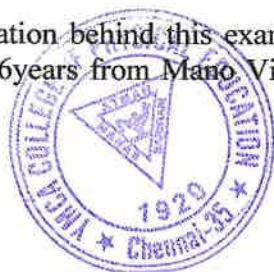
Contrasted with the individuals who meet those measures, individuals who are deficiently truly dynamic have a 20% to 30% expanded danger of all-cause mortality. Kid's with scholarly incapacities (which may incorporate Down disorder, Fragile X condition, and other psychological postponements or incapacities) Physical exercise is characterized as any real development created by skeletal muscles that require energy use. Exercises attempted while working, playing, voyaging, doing housework and participating in sporting pursuits are incorporated along these lines. Physical exercise similarly as. Embraced actual work can help assemble youngsters' certainty and assist them with getting know different children locally (and the other way around). In kid's with Down disorder, specifically, cardiovascular wellness is basic to improved wellbeing. Teenagers who have Down condition are a few times bound to be fat than their friends without Down disorder.

### METHODOLOGY

To accomplish the motivation behind this examination the investigator chose 30 educable IDG in the age group of 10 to 16 years from Mano Vikas kendra Alka puri, Ujjain. The chose 30

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## Impact on Balance Training on Walking Ability among Intellectual Impaired Children

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Received 20th May 2018, Accepted 8th June 2018

### Abstract

The purpose of the study was found out whether the balance training would significantly improve the walking ability on intellectual impaired children. To achieve this purpose, the single group design was formulated because a single group design is maximize the treatment variance and minimize the error variance. The investigator took all possible steps to control to extraneous design factors while choosing the experimental design for the present study. The performance of the subjects was recorded in the group. In the group was given balance training for five days a week for six weeks. After the completion of training period final test was conducted for a group of intellectual impaired children. The scores were recorded and analysed. Balance training for the period of six weeks with duration of 3 minutes for one repetition up to 30 minutes. The results presented in the pre test mean value of Walking ability (M: 7.26) was improved to 6.10 after six weeks. Balance training with mean difference of 1.16. The obtained 'value of 2.484 was greater than the required' value of 2.144. Hence, it was proved that there was significant improvement in Walking ability among Impairment Children due to Balance training.

**Keywords:** Balance Training, Walking Ability, Intellectual Impaired Children.

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### Introduction

Adapted physical education is an attitude, a way of teaching in both main stream and segregated environment, that is reflected in the beliefs and practices of teachers who adjust learning experience to meet individual needs and assure optional success in physical and motor functioning. Adapted physical education is also a comprehensive service delivery system designed to individually solve their problems within the psychomotor domain.

Corrective Physical Education is a program that emphasizes the change or improvement in function or structure by means of selected exercises. Developmental physical education stresses the development of motor ability and physical fitness in those who are below the desired level. Adapted physical education programs, are those which have the same objectives as the regular physical education program, but in which adjustments are made in the regular offerings to meet the needs and abilities of exceptional students. It should be explained here that adapted has also been widely used as a general term for all the programs directed toward students with deficiencies and disabilities.

Balance training is the challenging the body to maintain proper postural control throughout a series of demands that can be placed upon it typically while

standing still or through advanced transitional movements. Balance exercises can vary complexity and the demand placed upon the body. The simplest of balance exercises focus on pure stabilization such as standing on one leg. The exercise can be made challenging by adding specific upper or lower body movement while balance on one leg unsupported or perhaps on an unstable surface. Finally, performing more dynamic movements such as steps, hops, and jumps that result in a balanced finish position are examples of the most difficult of exercises in a progression of balancing.

### Intellectual Disabilities

Intellectual disabilities in a person is a condition and not a "disease" It cannot be reverted by any treatment. But, with training most of these persons with intellectual disabilities can be made to perform activities of daily living and thereby become less dependent on others. The person with Intellectual disability may face difficulties in the performance of age appropriate daily living task because of his limitation in his adaptive behaviour skills.

### Causes of Intellectual Disabilities

#### Pre-Natal Causes;

- Very high fever in the pregnant mother
- Sexually transmitted disease through father or mother
- Malnutrition.

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## ANALYSIS OF REVERSIBILITY RATE ON SELECTED FITNESS COMPONENTS AMONG SENIOR LEVEL SCHOOL FOOTBALL PLAYERS

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### ABSTRACT

The purpose of this study was to find out the analysis of reversibility rate on selected fitness components among senior level school football players. To achieve the purpose of this study 15 football players from MSP Solai Nadar Memorial Higher Secondary School, Dindigul were selected. The subjects were randomly selected among the football players who represented the state level tournaments. The subjects were in the age group of 14 to 16 years. Single group design pre and posttest research design was followed by the investigator. In this study the investigator measured the speed by 50m dash, agility by shuttle run and cardio vascular endurance by 12 minutes copper's Test initially. After reversibility rate of the subjects for six weeks, the subjects were measured again the physical variables through same test. The difference between the initial and final scores was the reversibility of the senior level school football players. The obtained data were subjected to statistical treatment using t-test. Result revealed that there is significant improvement on physical fitness component after reversibility rate among senior level school football players.

**KEYWORDS:** Speed, Agility, Cardio Vascular Endurance, Football.

### INTRODUCTION

The term training refers to a planned program of exercises directed towards improving the functional capacity of a particular body system. This improvement does not occur all of a sudden, but requires adherence to carefully planned and executed activities. Attention is focused on factors such as frequency, length of workout, type of training, speed, intensity and repetition and the principles such as overload, specificity and reversibility. Reversibility refers to the cessation of regular physical training. This is otherwise known as detraining. Unlike machines which deteriorate with use, the human body possesses the ability to adapt itself to use and increase the capacity and efficiency of the body system being utilized. Conversely, the principle of disuse dictated that if one is fit and stops training the level of fitness will decline.

### REVIEW OF RELATED LITERATURE


Robert Thomas (2016), Seventeen male collegiate swimmers were studied before, during, and after 14 days of reduced training (tapering). Maximal arm power was measured using a bio-kinetic swim bench and during a tethered (power) swim test and each swimmer also swam 200 yards (182.9m) at an evenly spaced velocity corresponding to 90% of his best performance of the season. Tapering had no influence on post exercise acid-base balance, but there was a significant increase ( $p < .05$ ) in power output on both the bio-kinetic swim bench and the power swim test. Performance times improved an average of 3.1%. The improvements are in part due to significant gains in muscular power.



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Section Articles

Comparative Effect of Moderate High and Moderate Intensity Aerobic Training on Cardio respiratory Endurance of Football Players

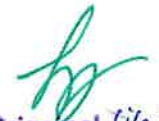
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Download



Abstract

Cardio respiratory endurance is broadly considered as the best single measurement of aerobic fitness. Intensity based continues exercise helps to improve / maintain aerobic fitness as well as cardiac function. The objective of this study was to find out the comparative effect of moderate high and moderate intensity aerobic training on Cardio respiratory Endurance of Football Players. To achieve the purpose of this study ninety (N=90) men students (mean age  $20 \pm 1.3$  years) were randomly selected from Chennai City Colleges in

  
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# EFFECT OF ORAL MOTOR EXERCISES ON VITAL CAPACITY AMONG STATE LEVEL FOOTBALL REFEREES

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## ABSTRACT

*Studies on the ideal physiological properties of a successful football referees show that due to the improvements in the speed and skills of the game, training for referees become more dynamic. Because of this, some physical and physiological tests in their programs to see how the referees are doing and to evaluate their preparation plans for their match. The purpose of this study was to find out the effect of oral motor exercises on vital capacity among state level football referees. In order to achieve this purpose, 30 Chennai referees in football were taken as subject in the age group of 19 to 35 years. The initial performance on vital capacity was determined. Based on the initial scores, the subjects were divided into two equal groups. Group I was treated as, experimental group and group II was treated as control group. Experimental group was given six weeks oral motor exercises and control group was not given any training. Thus the experimental design was equated group design. After the experimental period of six weeks, vital capacity of both the groups were tested and the differences between the experimental group and control group final scores was considered as the effect of oral motor exercises in football referees. The difference was treated for statistical significance through 't' test. In all cases 0.05 levels was fixed to test the hypothesis. The results proved that there was significant improvement in vital capacity of the football referees due to six weeks oral motor exercises. Hence it was recommended that oral motor exercises improved overall physiological development of the body especially on vital capacity, hence these exercises may be included in the routine exercise program of football referees and players.*

**Key words:** Oral motor exercise, Vital capacity, moderate intensity aerobic.

## INTRODUCTION

The world's favorite game spans more than 100 years. It all began in 1863 in England, when rugby football and association football branched off on their different courses and the Football Association in England was formed becoming the sport's first governing body. On the contrary, apart from the need to employ the legs and feet in tough tussles for the ball, often without any laws for protection, it was recognized right at the outset that the art of controlling the ball with the feet was not easy and, as such, required no small measure of skill. The very earliest form of the game for which there is scientific evidence was an exercise from a military manual dating back to the second and third centuries BC in China. The very earliest form of the game for which there is scientific evidence was an exercise from a military manual dating back to the second and third centuries BC in China.

The latter was played out with a smaller ball by two teams on a rectangular field marked by boundary lines and a Centre line. The objective was to get the ball over the opposition's boundary lines and as players passed it between themselves, trickery was the







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## Effect of high intensity plyometric training on selected motor fitness variables among soccer players

**Dr. Jackson Sutharsingh**

### Abstract

The purpose of the study was to find out effect of 6 weeks of high intensity plyometric training on speed and agility among soccer players. To achieve the purpose of the study thirty subjects (N=30) were randomly selected as a subjects from Chennai. The subjects age ranged between 18 to 25 years. The selected subjects were randomly divided into two equal groups of 15 each, such as experimental and control group. The experimental group participated in the high intensity plyometric training for thrice in a week for 6 weeks, one session per day, each section lasted 45minutes, The control group did not participate in any kind of special training programme apart from the daily physical activities. The speed and agility was measured by 30m dash and shuttle run test. The subjects of two groups were tested on selected variables prior and immediately after the training period. The collected data were analysed statistically through analyze of covariance (ANCOVA) to find the significance difference. The 0.05 level of confidence was fixed to test the level of significance difference, the result of the study showed that systematic practice of high intensity plyometric training improved the speed and agility among soccer players.

**Keywords:** High intensity plyometric training, speed and agility

### Introduction

Sports have a very important role in modern society. It is important for an individual, a group, a nation and indeed the world. Sports performance is the result and expression of the total personality of a sports man. The development of a sports man enabling him to achieve high level of performance is usually concerned in four areas namely physical power, social adjustment, psychological development and physiological efficiency.

Plyometric exercise are the rapid deceleration and acceleration of muscles that create a stretch shortening cycle. The exercise train the muscles, connective tissue and nervous system to effectively carry out the stretch – shortening cycle, thereby improving an athlete's performance.

An essential for successful performance in many motor activity is speed and agility. The frequency of sprints in football players is 11% of their total movement in a full game. The frequency of sprint tends to be greater in strikers and midfielders than on backs. They tend to sprint often to collect the ball or to defend the ball.

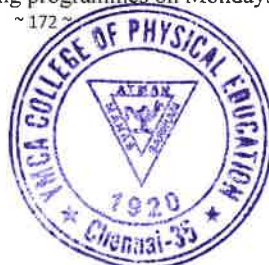
### Methodology


To achieve the purpose of the study thirty subjects (N=30) were randomly selected as a subjects from Chennai. The subjects age ranged between 18 to 25 years. The selected subjects were randomly divided into two equal groups of 15 each, such as experimental and control group. The experimental group participated in the high intensity plyometric training for thrice in a week for 6 weeks, one session per day, each section lasted 45minutes, The control group did not participate in any kind of special training programme apart from the daily physical activities. The speed and agility was measured by 30m dash and shuttle run test. The subjects of two groups were tested on selected variables prior and immediately after the training period.

### Training Programme

During the training period the experimental group I (HIPT) underwent 6 weeks of high intensity plyometric training programmes on Mondays, Wednesdays and Fridays, in addition to

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## Different proportion of moderate high and high intensity interval training on dribbling performance among college level soccer players

**Dr. Jackson Sutharsingh and Kaviraj P**

### Abstract

Soccer is really beautiful game because of the high level Physical work and fluidity. The aim of the study was to find out the effect of twelve weeks high and moderate high intensity endurance training on dribbling performance among college level soccer players. To achieve the purpose forty five (N=45, age 20-25) men soccer players were selected from YMCA college of Physical Education and divided in to three equal groups. Group I [n=15, Underwent high intensity interval training (HIIT), 60 min/day/3 days / week/ 12 weeks], Group II [n=15, underwent moderate high intensity interval training (MHIIT) 60 min/day/3 days / week/ 12 weeks], Group III acted as control. 2% rule was implemented to increase the training intensity every two weeks starts from 75% for (MHIIT), 85% for (HIIT). The data were collected before and after the intervention on dribbling performance which was assessed by Mor- Christian general soccer ability test. Collected data were statistically analyzed by using one way ANOVA, 0.05 level of confidence was fixed to test the significance. When the obtained 'F' ratio was significant, Scheffé's post hoc test was used to find out the paired mean difference. The Results of the study Reveals that, there was a significant difference between pre and post test mean of two experimental groups due the high and moderate high intensity Interval training. However high intensity training ( $t=9.72^*$ ) shows better improvement than moderate high intensity training ( $t=8.44^*$ ). And there was a significant difference between groups on Dribbling performance ( $F=7.19^*$ ). The Scheffé's post hoc result reveals that, there was significant mean difference between High intensity training and control group, and Moderate High intensity training and control groups. Hence it was concluded that, high intensity interval training is the best way to manage the game pressure in respect to dribbling, running and tackling in modern soccer game.

**Keywords:** Aerobic, high intensity, moderate high intensity, resting heart rate

### Introduction

Football is a universal game which increases popularity through the tempo and fluidity<sup>1</sup>. Football match and training stresses to the physical and physiological systems, which can vary depending on the intensity and duration of the work. This is Important that players are capable of exercising at high intensities for prolonged periods of time. Aerobic is the dominant energy system in soccer and international players' covers approximately 12 km, however the high intensity running and sprinting 3-6 sec dominates the game.

A challenge in sport physiology is how to improve athletic performance. In recent years, short duration exercise (10-30 s) maximal/near maximal bursts, also termed speed endurance training, has emerged as an innovative and time efficient strategy to induce rapid physiological remodeling and enhance work capacity [2]. Soccer is played on a tremendous outdoor area and over a longer duration, which requires running greater distances with involves high intensity sprint activities for a huge quantity of the game and energy release<sup>1</sup>. First step for studying such processes would be to select anaerobic training programme in different work/rest profiles and then determine how the different proportion of intensity based training affects performance.

Endurance refers to the capacity of retaining performance quality in particular duration. The performance of endurance attributes to the central nervous system function, maximum oxygen uptake and the body's energy reserves and utilization.

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## Impact of submaximal and maximal training on pulse rate and endurance among college level football players

**P Kaviraj and Dr. J Jackson Sutharsing**

### Abstract

This paper aimed to find out the impact of submaximal and maximal training on pulse rate and endurance among college level football players for the purpose of the study, forty-five men football players were selected randomly as subjects and divided in to three groups namely submaximal and maximal training group, and control group of fifteen subjects in each groups and the subject's ages ranged from 18-27 years. All the subjects were tested on selected variables prior to and immediately after the training period. The selected criterion variables such as endurance was measured by Copper's 12 min/walk test and resting pulse rate was measured by palpation technique. The analysis of covariance (ANCOVA) were used to find the significant difference if any, among the experimental and control groups on selected criterion variables. In all the cases, 0.5 level of confidence was fixed to test the significance, which was considered as an appropriate. Since there were three groups involved in this study the Scheffe's test was used as post-hoc test. Results proved that there were significant improvements in the variables such as endurance and pulse rate due to training on the experimental groups. Participation in submaximal and maximal training resulted in a significant development in the endurance and pulse rate on experimental groups when compared to control group.

**Keywords:** Submaximal and maximal training, endurance, pulse rate

### Introduction

#### Submaximal exercise

An exercise bout in which the energy requirement is greater than that which can be supplied aerobically at  $VO_{2max}$  is called submaximal exercise. Submaximal aerobic exercise is any physical activity where the intensity or workload of a particular exercise is increased at a steady rate, but only works the body up to 85 percent of the maximum heart rate. The human body is very adaptable. The greater the demands made on it, the more it adjusts to meet those demands. Over time, immediate, short-term adjustments translate into long-term changes and improvements. When breathing and heart rate increase during exercise, for example, the heart gradually develops the ability to pump more blood with each beat. Then, during exercise, it doesn't have to beat as fast to meet the cells' demands for oxygen. The goal of physical training is to produce these long-term changes and improvements in the body's functioning.

#### Maximal aerobic exercise

Maximal aerobic exercise is any physical activity or exercise capacity is the maximum amount of physical exertion that an athlete can sustain. An accurate assessment of exercise capacity requires that maximal exertion is sufficiently prolonged to have a stable (or steady state) effect on the circulation and that the pattern of athlete response is consistent above 85 percent when exertion is repeated. The highest intensity, greatest load or longest duration exercise of which an individual is capable is called maximal exercise. An incremental exercise to maximum bout consists of a series of progressively increasing work intensities that continue until the individual can do no more.


Resistance training comprises of weight lifting and power lifting, in which resistance exercise used in training becomes the competition tool, and body building, in which resistance exercise training is used to create an idealized physique. Additionally, resistance training has become integral part of training in other sports such as football, track and field, and tennis. While sports depend on specific talents and characteristics, such as strength, explosiveness, power,

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## EFFECT OF ISOLATED CONVENTIONAL, VISION TRAINING AND YOGIC PRACTICES ON SPEED, AGILITY AND PLAYING ABILITY OF HOCKEY PLAYERS

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### Abstract:

The purpose of the study was to find out the effect of isolated conventional, vision training and yogic practices on speed, agility and playing ability of hockey players. To achieve the purpose of the present study, one hundred and fifty Inter-Collegiate male hockey players from Chennai district, Tamilnadu, India were selected as subjects at random and their age ranged from 18 to 25 years. Selected subjects were divided into three equal groups consisting of 50 subjects each, such as conventional training group (CTG), vision training group (VTG) and yogic practice group (YPG). Training was given on three days a week for 12 weeks. Before and after the training speed, agility and hockey playing ability was measured and the collected data was analysed by using ANCOVA at 0.05 level of significance. It was concluded that all the three training had improved speed, agility and hockey playing ability. Further, it was concluded that conventional training group showed more speed improvement than other two groups. Vision training had better agility and hockey playing ability than the conventional training and yogic practice groups.

**Key Words:** Speed, Agility, Hockey Playing Ability, Conventional, Vision Training & Yogic Practice

### Introduction:

The purpose of the study was to find out the importance and effect of conventional, vision training and yogic practice on speed, agility and hockey playing ability of hockey players. Conventional training is required to cover essential work related skills, techniques and knowledge. Importantly however, the most effective way to develop fundamental skills is through conventional skills training method was found throughout the history. The following are the conventional method of training followed traditionally in our country. The training methods are aerobic training, strength training, flexibility training, game skills, minor games etc. As the sport is played on a synthetic surface, strains on the body may occur when compared to grass. While the principle of specificity would dictate that a hockey training program should mirror the game as closely as possible, in this case there may be good cause to argue against training exclusively on artificial turf. Anaerobic power and anaerobic endurance is must for elite hockey performance. Although the majority of the game is spent in low level activity such as walking and light jogging, repeated back to back sprints make speed and tolerance to lactic acid an important characteristic in players. A player with good aerobic fitness will be able to play very hard without getting as tired as a less fit opponent. Having sufficient fitness is also likely to mean a player can do more training over prolonged periods of time.

Strength (Dureha K Dilip and Akhil Mehrotra, 2003) is also central to a hockey training program. Although players aren't required to hold off physical challenges, power is required for acceleration, speed and quick changes in direction. Upper body strength allows players to shoot more powerfully and pass over a greater range of distances. Better flexibility allows a greater range of limb and joint motion during play, and therefore more power. The conventional training helps to develop all the requirements to become a successful hockey player. Vision training is the training of visual perception and recognition, and is used throughout the optical world as a method of training the eye. Vision is the first step of information processing and visual skills can improve learning. A number of abilities are not only significance of sport, but that some are found at a higher level in athletes than non-athletes. Time and patience are necessary for the significance of sports vision to be reorganized by every individual participating in sports, whether amateur or professional in reorganized athletes or recreational sports (Kluka, 2000).

Hockey is spontaneous situational game. Most real deal play situations have deficit of time and information. Hockey players must make proper decisions and effectively perform mental skills within that time. Situational thinking becomes the most important hockey skill. Many hockey players with good physical abilities get tired quickly at the game. Most of them believe that they need to focus more and more on their strength conditioning. A hockey player with a significant level of visual thinking ability can demonstrate stable individual hockey technique for a longer time. Yogic practice aims at both prevention and treatment of various diseases. Breathing exercises like Pranayama, including Kapalabhati, is very effective for keeping the lungs



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## EFFECT OF BARBELL TRAINING ON NOMINATED PHYSICAL VARIABLES AMONG ENGINEERING COLLEGE MEN KABADDI PLAYERS

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### Abstract:

The purpose of the current study was to find out the effect of barbell training on nominated physical variables among engineering college men kabaddi players. For the purpose of the study, thirty men kabaddi players studying bachelor's degree from the engineering colleges, affiliated to Anna University, Chennai were selected as subject and they were divided into two equal groups of fifteen subjects each at random namely barbell training group and control group. The age of the selected subjects were ranged from 18 to 22 years. Group I underwent barbell training for three days per week for eight weeks and Group II acted as control they did not undergo any special training programme apart from their regular activity. The following dependent variables were selected for this study namely Speed and Explosive Power. The data were collected on selected dependent variables at prior and immediately after the experimental period as pretest and posttest respectively. The data were analyzed by applying dependent 't' test and analysis of covariance (ANCOVA) to find out the significant difference among the groups, if any separately for each dependent variable. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate. The result of the study showed that barbell training group has significantly differed on selected dependent variables namely Speed and Explosive Power than the control group.

**Key Words:** Barbell Training, Speed & Explosive Power

### Introduction:

Kabaddi is a contact team sport played between two teams of seven players each. Kabaddi was originated from Tamil Nadu, India and it is the traditional game of Tamil Nadu people. The objective of the game is for a single player on offense, referred to as a "raider", to enter into the opposing team's half of a court, tag out as many of their defenders (anti raider) as possible, and return to their own half of the court, without being tackled by the defenders, and in a single breath. Around 11 international competitions are being organized including world cup and Asian games for both men and women. Pro kabaddi league (PKL) was established in 2014 at India. After the establishment of PKL, kabaddi took a top place among other sports because of the fitness of the player and tremendous execution of skills by the players. Recent years it attracted around 435 million audience. To obtain the top performance and to execute the skills efficiently, rapidly and powerfully than the powerful opponent, players started doing various types of training in their schedule. To hold the position of best player in the field, a player needs to prove he is very fast and more explosive than his strong and powerful opponent. Few players are nicknamed as 'Express train' and 'Power player' based on their raid speed and powerful come back from the tackle on the court. Kabaddi needs speed in the raid and come back from the tackle. Explosive power is very much needed to come back from the tackle. Explosive power and quick reaction is needed to catch the strong raider with the lightning speed while raider making wrong move during raid. This study highlights how to improve the two important components speed and explosive power needed for the kabaddi player through barbell training.

Free weights present a number of different testing conditions compared with weight machines. Freeweight require greater motor coordination than do machines, primarily because the individual must control free weights through all spatial dimensions, whereas machines generally involve control through only one plane of movement (Fleck S J and Kraemer W J, 1996). This attribute can be an advantage or a disadvantage, depending on the motor function (e.g., frail elderly, those with neuromuscular disease, people with arthritis, and soon) may require machine-based testing initially until sufficient improvement in physical function occurs. Another more practical reason for using free weights is their low cost and availability.

Speed is not just how fast someone can run, but is dependent on their acceleration (how quickly they can accelerate from a stationary position), the maximal speed of movement, and also speed maintenance. Movement speed requires good strength and power, but also too much body weight and air resistance can act to slow the person down. In addition to a high proportion of fast twitch muscle fibers, it is vital to have efficient



  
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# EFFECT OF 30/40 AREA SMALL SIDED FOOTBALL TRAINING ON SELECTED PHYSICAL VARIABLES AMONG SLUM CHILDREN

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## Abstract

The problem of the study was to analyze the effect of 30/40 area small sided football training on selected physical variables among slum children. To attain the purpose of the study 30 slum children's were selected from R. K. Nagar, Chennai and their age ranged between 12 and 15 years. The chosen subjects were separated into two equal groups with 10 subjects each based on their initial football playing ability. Separated group I underwent 30/40 Area training group, Separated Group II consider as Control group did not participated in any training. Pretest was conducted for all two groups on selected physical variables of Speed, Endurance and Co-ordination. Training Programme limited with 5 days per week for 6 weeks of training were conducted. The selected variables such as speed, endurance and co-ordination were measured by 30meter sprint, cooper test and tennis ball throw test. The subjects of two groups were tested on selected variables prior and immediately after the training period. Collected data were analyzed to use ANCOVA and 0.05 level of confidence was fixed. Results proved that small sided football training improves on selected physical variables among slum children's.

## INTRODUCTION

Small-sided games (SSGs) are one of the most common drills used by coaches for soccer training. Although in the past SSGs were mainly used to improve the interaction among players and to develop technical and tactical abilities, they are now employed by many amateur and





## Research article

# INFLUENCE OF SELECTED MOBILITY EXERCISES AND PARTICIPATION IN SPECIAL GAMES ON GAME PERFORMANCE AMONG INTELLECTUALLY DISABLED CHILDREN OF UNDER 16 AGE GROUPS

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### Abstract

The purpose of the study was to find out the influence of selected mobility exercises and participation in special games on game performance among intellectually disabled children of age group under 16. Thirty male students who were studying in Balar Kalvi Nilayam and YMCA College Special School, Chennai, acted as subjects for the study. They were only mild and moderate in intellectual disability. These students did not undergo any special training or coaching programme apart from their regular routine physical activity classes as a part of the curriculum in the school. They were attached at random, based on age in which 30 belonged to under 16 age group. Under 16 age group was divided into three equal group of ten for each experimental treatment. 10 students (Treatment group I) underwent calisthenics and special games participation, 10 students (Treatment group II) underwent aquatics and special games participation, 10 students (Treatment group III) underwent yoga and special games participation. The subjects were tested on selected criterion variables prior (pre-test) and after twelve weeks of training (post-test). The pre and post test data collected from three groups on game performance (Bocce skill performance, Badminton skill performance, Table Tennis skill performance), were statistically examined for significant difference, by applying the analysis of covariance (ANCOVA). 't' ratio was also computed to find out significant improvement due to the training on game performance. When ever an 'F' ratio for adjusted test was found to be significant for adjusted post test means, Scheffe's test was followed as a post-hoc test to determine which of the paired mean differences was significant. The result of the study showed that there was a significant improvement on selected criterion variables such as, Bocce skill performance, Badminton skill performance, Table Tennis skill performance due to mobility exercises and participation in special games, however no significant differences among the groups.


**Key words:** Mobility exercises, intellectual disability, special games, Bocce,

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## Research article

### EFFICACY OF SELECTED MOBILITY EXERCISES AND PARTICIPATION IN SPECIAL GAMES ON GAME PERFORMANCE AMONG INTELLECTUALLY DISABLED CHILDREN OF UNDER 14 AGE GROUPS

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Received 14<sup>th</sup> May 2018, Accepted 24<sup>th</sup> June 2018

#### Abstract

The purpose of the study was to find out the efficacy of selected mobility exercises and participation in special games on game performance among intellectually disabled children of age group under 14, thirty male students who were studying in Balar Kalvi Nilayam and YMCA College Special School, Chennai, acted as subjects for the study. They were only mild and moderate in intellectual disability. These students did not undergo any special training or coaching programme apart from their regular routine physical activity classes as a part of the curriculum in the school. They were attached at random, based on age in which 30 belonged to under 14 age group, Under 14 age group was divided into three equal group of ten for each experimental treatment. In the under 14 age group 10 students (Treatment group I) underwent calisthenics and special games participation, 10 students (Treatment group II) underwent aquatics and special games participation, 10 students (Treatment group III) underwent yoga and special games participation. The subjects were tested on selected criterion variables prior (pre-test) and after twelve weeks of training (post-test). The pre and post test data collected from three groups on game performance (Bocce skill performance, Badminton skill performance, Table Tennis skill performance), were statistically examined for significant difference, by applying the analysis of covariance (ANACOVA). Computed 'T' ratio for find out significant improvement due to the training on game performance. Whenever an 'F' ratio for adjusted test was found to be significant for adjusted post-test means, Scheffe's test was followed as a post-hoc test to determine which of the paired mean differences was significant. The result of the study showed that under 14 age group there was a significant improvement on selected criterion variables such as, Bocce skill performance, Badminton skill performance, Table Tennis skill performance due to mobility exercises and participation in special games, however no significant differences among the groups.

**Key words:** Mobility exercises, intellectual disability, special games, Bocce

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## Efficacy of therapeutic recreation on cognitive abilities of trainable mentally challenged children

Dr. J Samuel Jesudoss

### Abstract

The purpose of the study was to find out the influence of therapeutic recreation on cognitive abilities of trainable mentally challenged children. To achieve this purpose, forty moderate (Trainable) mentally challenged children were randomly selected from Balavighar school, kilpauk, Chennai. The subjects who adolescent boys and girls ranging from 12 to 17 years of age. They were randomly divided into two equal groups. The experimental group consists of 20 moderate mentally challenged children and control group 20 moderate mentally challenged children. The subjects were trained for 12 weeks with therapeutic recreation like yoga, aerobics, calisthenics, and music therapy. The Cognitive Domain (Memory and Attentional focus) selected as a criterion variables were recorded prior, mid and immediately after the training program by test (identification and reading) through the special educators. The Two way repeated measures of ANOVA were applied to find out the significant difference if any in the criterion variables between pre mid and post-tests. The result of the study revealed that there was significant differences on Cognitive Domain (Memory and Attentional focus) after a training period of 12 weeks.

**Keywords:** Therapeutic recreation, cognitive abilities, mentally challenged children

### Introduction

Yoga is a scientific system of physical and mental practices that originated in India more than three thousand years ago. Its purpose is to help each one of us achieve our highest potential and to experience enduring health and happiness. With Yoga, we can extend our healthy, productive years far beyond the accepted norm and, at the same time, improve the quality of our lives.

The Calisthenics exercise is one of more available means of developing coordination, reaction time and balance. The Calisthenics exercise must be performed in an exact manner and in full range of motion. In most cases ten or more repetitions are performed for each exercise and repeated in sets of two or three (Seaman 2003) [1].

Calisthenics exercises are the all-time favourite means of developing physical condition. Exercises serve nicely as a warm up routine for other activities to follow and it generally provides an outlet for the need for something vigorous especially when a particular lesson requires the pupils to observe and listen more than usual. (Staley 1926) [3]

The investigator has chosen minor games which included the basic motor activities. Since the subject under treatment are children, the investigator felt that they may feel stale and bored-up if the same types of exercises were given on all the day of a week. The investigator strongly felt that if the activities are in the form of minor games, they will be happy to participate with the competitive spirit without feeling fatigue.

### Methodology

To achieve this purpose, forty moderate (trainable) mentally challenged children were randomly selected from Balavighar School, kilpauk, Chennai. The subjects were adolescent boys and girls ranging from 12 to 17 years of age. They were randomly divided into two equal groups. Experimental group consists of 20 moderate mentally challenged children and control group 20 moderate mentally challenged children. The subjects were trained for 12 weeks with movement oriented therapy like yoga, aerobics, calisthenics, and music therapy. The factor of Cognitive Domain the mathematical Skill was selected as criterion variable and they were

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## Impact of music therapy on mathematical skills of educable mentally challenged children

**Dr. J Samuel Jesudoss**

### Abstract

The purpose of the study was to find out the effect of movement oriented music therapy on Mathematical Skills of educable mentally challenged children. To achieve this purpose, forty mild (educable) mentally challenged children were randomly selected from Balavighar School, kilpauk, Chennai. The subjects who adolescent boys and girls ranging from 12 to 17 years of age. They were randomly divided into two equal groups. The experimental group consists of 20 mild mentally challenged children and control group 20 mild mentally challenged children. The subjects were trained for 12 weeks with movement oriented therapy like yoga, aerobics, calisthenics, and music therapy. The Mathematical Skills as one of the cognitive domains was selected as a criterion variables were recorded prior, mid and immediately after the training program by the test Numbers Counting through the special educators. The Two way repeated measures of ANOVA were applied to find out the significant difference if any in the criterion variables between pre mid and post-tests. The result of the study revealed that there was significant differences on Mathematical Skills after a training period of 12 weeks, which included movement therapy.

**Keywords:** Music therapy, mentally challenged children, calisthenics

### 1. Introduction

Yoga is a scientific system of physical and mental practices that originated in India more than three thousand years ago. Its purpose is to help each one of us achieve our highest potential and to experience enduring health and happiness. With Yoga, we can extend our healthy, productive years far beyond the accepted norm and, at the same time, improve the quality of our lives.

The Calisthenics exercise is one of more available means of developing coordination, reaction time and balance. The Calisthenics exercise must be performed in an exact manner and in full range of motion. In most cases ten or more repetitions are performed for each exercise and repeated in sets of two or three (Seaman 2003) [2].

Calisthenics exercises are the all-time favourite means of developing physical condition. Exercises serve nicely as a warm up routine for other activities to follow and it generally provides an outlet for the need for something vigorous especially when a particular lesson requires the pupils to observe and listen more than usual. (Staley 1926) [3]

The investigator has chosen minor games which included the basic motor activities. Since the subject under treatment are children, the investigator felt that they may feel stale and bored-up if the same types of exercises were given on all the day of a week. The investigator strongly felt that if the activities are in the form of minor games, they will be happy to participate with the competitive spirit without feeling fatigue.

### 2. Methodology

To achieve this purpose, forty mild (educable) mentally challenged children were randomly selected from Balavighar School, kilpauk, Chennai. The subjects were adolescent boys and girls ranging from 12 to 17 years of age. They were randomly divided into two equal groups. Experimental group consists of 20 mild mentally challenged children and control group 20 moderate mentally challenged children. The subjects were trained for 12 weeks with movement oriented therapy like yoga, aerobics, calisthenics, and music therapy. The factor of Cognitive Domain the mathematical Skill was selected as criterion variable and they were

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## Research article

# RELATIVE EFFECT OF PLYOMETRIC BALLISTIC TRAINING AND BASKETBALL DRILLS ON SELECTED PSYCHOMOTOR VARIABLES AMONG SCHOOL LEVEL BASKETBALL PLAYERS

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Received 4<sup>th</sup> January 2019, Accepted 30<sup>th</sup> February 2019

## Abstract

The purpose of the Study was to find out the relative effect of plyometric ballistic training and basketball drills on selected psychomotor variables among school level basketball players. To achieve the purpose of the study, sixty (n=60) School level basketball players from CMC school, Vellore were selected as subjects at random and their age ranged between 16 to 18 years. The selected participants were randomly (simple random sample) assigned to one of four groups of fifteen (n=15) each, such as experimental group I, experimental group II, experimental group III and control group. The group I (n=15) underwent plyometric training, group II (n=15) underwent ballistic training, group III (n=15) underwent Basketball drill for a duration of 12 weeks and the number of sessions per week is confined to three days, in addition to the regular schedule and group IV (n=15) acted as control. Agility was selected as dependent variables for this study. The following independent variables were selected for this study such as plyometric training, ballistic training, and Basketball drill. The pre-test and post-test randomized control group design was used as experimental design. The collected data from the four groups prior to and immediately after the training programme on selected criterion variables were statistically analyzed with analysis of co-variance (ANCOVA) to find out the significant difference between experimental and control groups. Whenever the 'F' ratio for adjusted test was found to be significant, the Scheffe's test was applied as post-hoc test to find out paired mean difference. In all the cases 0.05 level of significant was fixed to test the hypothesis. The plyometric training, ballistic training, Basketball drill training had significantly improved the participants agility. The plyometric training had significantly outperformed than ballistic training, Basketball drill training on the participant's agility.


**Key Words:** plyometric training, ballistic training, Basketball drill training

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## Analysis of physical fitness variables of kho-kho and kabaddi players

**Dr. J Samuel Jesuodoss**

### Abstract

The purpose of this study was to compare the physical fitness variables between kho-kho and kabaddi players of higher secondary school girls. To achieve the purpose of the study, selected 15 kho-kho players and 15 kabaddi players from P.S.G.G. Kanya Gurukulam Higher Secondary School, Peelamedu, Coimbatore. who did not participate in any of the special training or the coaching programme. However they were allowed to participate in their regular physical education classes in the college as per their curriculum. The subjects were aged between 20 and 25. For the study, the physical fitness variables selected were Endurance and Flexibility. To find out whether there was any significant difference between kho-kho and kabaddi players, the dependent 't' ratio was used. The result of the study showed that there was a significant difference in Endurance and Flexibility between kho-kho and kabaddi players of Higher Secondary School girls.

**Keywords:** Endurance flexibility

### Introduction

A sport is an indoor or outdoor activity involving physical and mental effort and skill, a game where people compete with each other according to fixed rules [1]. It is an activity people take up during their free time, usually for fun, amusement, recreation or entertainment [2]. It is used to be considered, a peripheral activity, a part time and an appendage to the core of life which life can do without a refuge for the escapist. But such a definition of sports has undergone a sea change in the modern days when sports have become indispensable for life to be meaningful and wholesome, both playing (sports) and watching sports [3]. (Bucher 1964). Fitness means the ability of an individual to live a happy and well balanced life. It involves not only physical but intellectual, emotional, social and spiritual aspects of an individual [4]. Interaction and interdependence of these phases of a man's health are such that any deviation from normal in any aspect of these components of fitness will make a man unable to meet the demands placed on him by his work or way of life. Physical fitness is the capability of the heart, blood vessels, lungs and muscles to function an optimal efficiency [5]. (Getchell 1965)

### Methodology

For the purpose of this study was to compare the physical fitness variables between kho-kho and kabaddi players of higher secondary school girls. To achieve the purpose of the study, selected 15 kho-kho players and 15 kabaddi players from P.S.G.G. Kanya Gurukulam Higher Secondary School, Peelamedu, Coimbatore. who did not participate in any of the special training or the coaching programme. However they were allowed to participate in their regular physical education classes in the college as per their curriculum [6]. The subjects were aged between 20 and 25. For the study, the physical fitness variables selected were Endurance and Flexibility [7].

### Analysis and interpretation of the data


Single group design was used for the study. The following statistical procedures were used to analyze the obtained data. To find out whether there was any significant difference between kho-kho and kabaddi players, the dependent 't' ratio was used. To test the level of significance of difference between the means 0.05 level of confidence was fixed.

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## Effect of circuit resistance training on motor fitness variables among college football players

**Dr. J Samuel Jesudoss**

### Abstract

The purpose of the study was to find out the effect of circuit resistance training on motor fitness variables among college football players. To achieve the purpose of the study, 15 men football players were selected as subjects randomly from the SRM University Chennai who did not participate in any of the special training or the coaching programme. However they were allowed to participate in their regular physical education classes in the college as per their curriculum. The subjects were aged between 18 and 25. For the study, the dependent variables selected were speed and agility. Circuit Resistance Training was selected as independent variable. To find out whether there was any significant difference between the pre-test and post test means, the dependent 't' ratio was used. The result of the study showed that the training program had resulted in a significant improvement in the speed and agility of college football players.

**Keywords:** Circuit resistance training

### Introduction

The caloric cost of exercise can be increased to bring about improvements in more than one aspect of fitness by modifying the standard approach to resistance training [2]. This approach, called circuit resistance training. The game of Football demands a high level of fitness that will enable the players to run strongly, to move quickly off the mark in any direction to control, to pass accurately and to tackle efficiently throughout the game [3]. Football requires a high standard of physical fitness along with skills. Since the game of Football is played for 90 minutes (if necessary an extra period of 30 minutes in the match ends in a draw in knock out tournament) it demands a high level of physical fitness and the training programme should be planned accordingly. Football, at any age, is a physical game. It involves running. It involves twisting and turning. It involves jumping, kicking, and tackling [4]. In addition, as young players mature, the stresses and strains of the competitive environment become greater and greater. Football is fitness dominating sports along with technical and tactical skills. Physical fitness is used to denote the sum five components. I.e. strength, speed, endurance, flexibility endurance and their complex form [5].

### Methodology

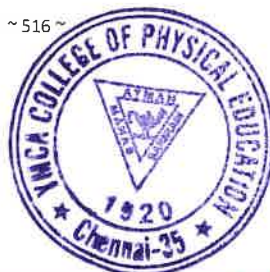
To achieve the purpose of the study, 15 men football players were selected as subjects randomly from the SRM University Chennai who did not participate in any of the special training or the coaching programme [6]. However they were allowed to participate in their regular physical education classes in the college as per their curriculum. The subjects were aged between 18 and 25. For the study, the dependent variables selected were speed and agility. Circuit Resistance Training was selected as independent variable [7].

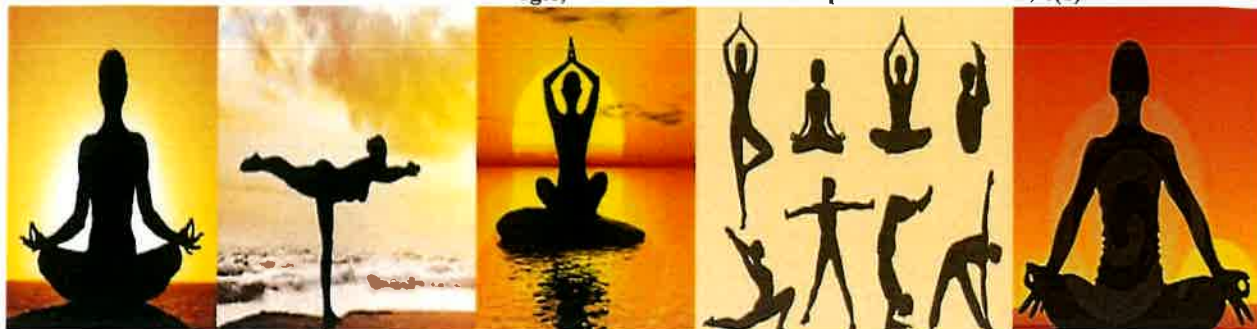
### Analysis and interpretation of the data

Single group design was used for the study. The following statistical procedures were used to analyze the obtained data. To find out whether there was any significant difference between the pre-test means the dependent 't' ratio was used [1]. To test the level of significance of difference between the means 0.05 level of confidence was fixed.

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## Effect of selected yogic practice on the physical fitness components of college students

Dr. J Samuel Jesuudoss

### Abstract

For the purpose of the study, 20 college men were selected as subjects randomly from the YMCA College of physical education, Chennai who were not participated any of the special training or the coaching programme. However they were allowed to participate in their regular physical education classes in the college as per their curriculum. The subjects were aged between 20 and 25. For the present study the following dependent variables were selected Coordination, Flexibility. Yogic practice was selected as independent variable. To find out whether there was any significant difference between the pre-test means the dependent 't' ratio was used. The result of the study showed that the training program has resulted in a significantly improved the flexibility and coordination of college students.

**Keywords:** physical fitness, flexibility and coordination

### Introduction

A sport is an indoor or outdoor activity involving physical and mental effort and skill, a game where people compete with each other according to fixed rules [3]. It is an activity people take up during their free time, usually for fun, amusement, recreation or entertainment, It is used to be considered mere trivia, a peripheral activity, a part time and an appendage to the core of life which life can do without a refuge for the escapist [4]. But such a definition of sports has undergone a sea change in the modern days when sports have become indispensable for life to be meaningful and wholesome, both playing (sports) and watching sports [5].

### Methodology

For the purpose of the study, 20 college men were selected as subjects randomly from the YMCA College of physical education, Chennai who were not participated any of the special training or the coaching programme. However they were allowed to participate in their regular physical Education classes in the college as per their curriculum [1]. The subjects were aged between 20 and 25. For the present study the following dependent variables were selected Coordination, Flexibility. Yogic practice was selected as independent variable [6]. During the training programme the subjects underwent their training programmes for five days per week (morning) over 6 weeks. Every training session lasted for 45 to 60 min. approximately [2].

### Analysis and interpretation of the data

Single group design was used for the study. The following statistical procedures were used to analyze the obtained data. To find out whether there was any significant difference between the pre-test means the dependent 't' ratio was used [7]. To test the level of significant of difference between the means 0.01 level of confidence was fixed.

**Table 1:** Summary of Mean, Standatrd Deviation and Dependent 'T' Test for the Pre and Post Tests on Flexibility of Experimental Group

Group	Number	Mean	S.D	Obtained 't' ratio
Pre test	20	24.30	3.60	4.06*
Post-test	20	28.75	2.93	

\*Significance at 0.05 level, t (0.5) 19 = 2.093


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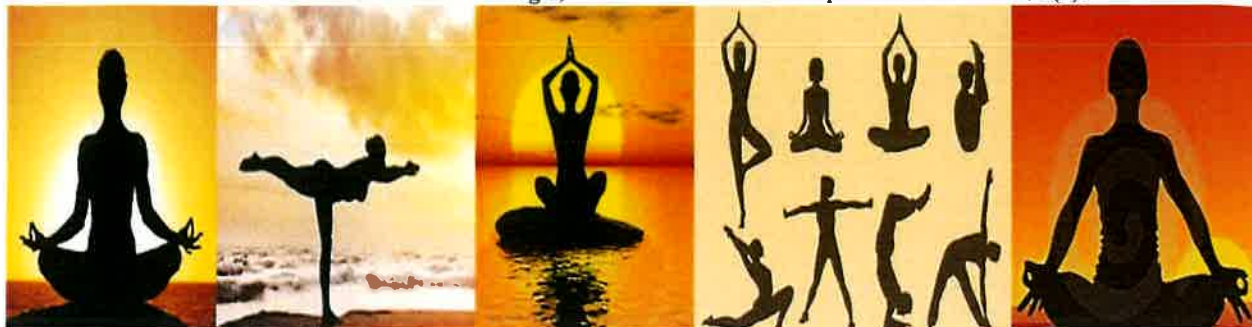
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## Influence of selected mobility exercises and participation in special games on game performance among intellectually disabled children of under 18 age groups

**Dr. J Samuel Jesuodoss**

### Abstract

The purpose of the study was to find out the influence of selected mobility exercises and participation in special games on game performance among intellectually disabled children of age group under 18, thirty male students who were studying in Balar Kalvi Nilayam and YMCA College Special School, Chennai, acted as subjects for the study. They were only mild and moderate in intellectual disability. These students did not undergo any special training or coaching programme apart from their regular routine physical activity classes as a part of the curriculum in the school. They were attached at random, based on age in which 30 belonged to under 18 age group. Under 18 age group was divided into three equal group of ten for each experimental treatment. In the under 18 age group 10 students (Treatment group I) underwent calisthenics and special games participation, 10 students (Treatment group II) underwent aquatics and special games participation, 10 students (Treatment group III) underwent yoga and special games participation. The subjects were tested on selected criterion variables prior (pre-test) and after twelve weeks of training (post-test). The pre and post-test data collected from three groups on game performance (Bocce skill performance, Badminton skill performance, Table Tennis skill performance), were statistically examined for significant difference, by applying the analysis of covariance (ANACOVA). Computed 'T' ratio for find out significant improvement due to the training on game performance. When ever an 'F' ratio for adjusted test was found to be significant for adjusted post-test means, Scheffe's test was followed as a post-hoc test to determine which of the paired mean differences was significant.

The result of the study showed that under 18 age group there was a significant improvement on selected criterion variables such as, Bocce skill performance, Badminton skill performance, Table Tennis skill performance due to mobility exercises and participation in special games, however no significant differences among the groups.

**Keywords:** Mobility exercises, intellectual disability, special games, bocce

### Introduction

Mobility Exercise is an integral aspect of human life. Our daily lives are sustained and enriched when we are physically active and adapt active healthful life styles that will continue throughout the life span. The emphasis on fitness, wellness and health promotion through active living is highly sought now days <sup>[1]</sup>.

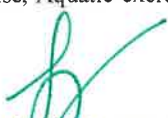
Physical Activity is for everybody. Exercise is a key factor in maintaining and improving overall health. In 1996, the Surgeon General of the United States reported that "significant health benefits can be obtained with a moderate amount of physical activity, preferably daily." These benefits are even more important in a disability, since people with disabilities have a tendency to live less active lifestyles. Yet, it is just as important for our body to get exercise. Physical activity and exercise programs of all sorts are indoor and outdoor, sports or recreational, solitary or team. It doesn't matter what we choose, so long as we choose to get a moderate amount of physical activity each day <sup>[2]</sup>.

Mobility exercise in the context of the study includes calisthenics exercise, Aquatic exercise and Yogasana (Dynamic).

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# CONSTRUCTION OF PHYSICAL FITNESS NORMS FOR VISUALLY CHALLENGED STUDENTS

Dr.J.JAMES

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## Abstract

*Physical education is a fine mixture of selection and application. Physical activity are so selected that they meet the needs, interest and capacities of the participants. However, physical education programs for visually challenged students is yet to get momentum. The investigator is interested to construct physical fitness test for visually challenged students. To achieve the purpose of this study, 50 visually challenged students from St. Louis school for the blind Chennai were assessed of their physical fitness standards. The physical fitness components selected for the study were: 30 meter run, sit and reach, Shuttle run, skipping, single leg stands. Based on the data collected from 50 visually challenged students, using Hull Scale, norms were selected and the norms found were presented from Tables I to VII Based on these norms the Physical fitness of visually challenged students were ascertained through gradation.*

**Keywords:** Physical Fitness, Visually Challenged Children, Physical Activity, Motor Skills, Norms.

## Introduction

Physical Education is a way of Education through physical activities that are selected and provide an environment conducive to human growth, development and behaviour, which in turn contribute to the development of better citizen. The field of physical education provide its record of integration, largely because skills in this subject area are understood and appreciated by a broad segment of the published. The motive of winning provides incentive for excellence and achievement in sports is easily measured and recognized. Therefore Physical Education can play a leading role in recognizing individuals of minority backgrounds and can lead they in acceptance of these individuals in other areas of education and society, psychologically bases for Physical Education to be adequately prepared psychologically for the future they face, children need more than a sound scholastic education. This historic professional advancement for primary teachers has resulted in a significance break through physical education and may signal a trend of major proportions and widespread implications. Physical Education at all level should initiated discussions with administrators and professionals associations and develop proposals that spell out the benefits of this plan.

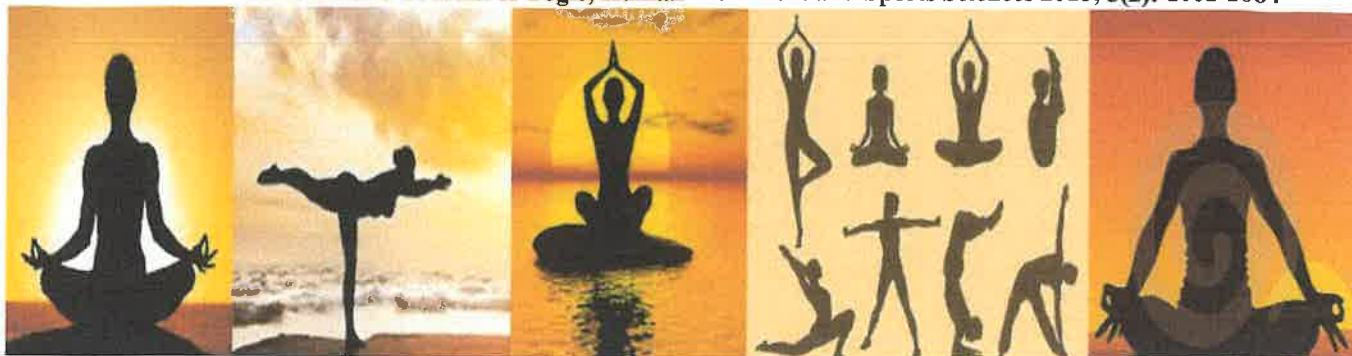
Physical fitness is a great importance for all human being irrespective of age. A given task may not be carried out if the required physical strength is not available, a boy possess extra ordinary skill in a football. But if he is not able to keep himself in the game till the expiry of the allotted time he may not find a place in the team. So fitness becomes the first and for most to enjoy life to the maximum. Bucher explains "Physical fitness is the ability of an individual to live a full and balanced life. It involves physical, mental, emotional, social and spiritual factors and the capacity for their whole form expression. According to Clark



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## Comparative study of competition anxiety stress and depression among judo players and other combat games players

Dr. G Bobby

DOI: <https://doi.org/10.22271/yogic.2018.v3.i2p.1413>

### Abstract

The main purpose of the study was to compare the study of competition anxiety, depression and stress among women judo players and other combat game players among the female students. For the purpose of the study, 40 college women will be selected from Tamilnadu State and National level players (Judo Players & Other Combat Game Players). The subjects were divided into two equal groups consisting of twenty (n =20) subjects each, from the randomly selected participants. The psychological variables like Anxiety, Depression, and Stress were measured through the standardized questionnaire. The DASS questionnaire was used to evaluate the 3 items simultaneously. 3 - Self-report scales are included in the (DASS-21 items) Depression, the results obtained 't' value of depression and stress was 0.994 and 1.6505 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that there was no significant difference between the groups and the hypothesis was accepted at 0.05 level. The obtained 't' value of 2.4479 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that there was a significant difference between the groups in anxiety and the hypothesis was rejected at 0.05 level. Athletes are susceptible to a variety of mental health problems that may be related to both sport-related and non-sport-related causes, according to data collected in this study about the prevalence of psychological discomfort in athletes. Additionally, the findings revealed that the analyzed mental health issues were dependent on Judo and Other Combat Game Players. Females were discovered to be a vulnerable subsample, particularly amateur female athletes rather than top ones.

**Keywords:** Judo players, combat game players, depression, anxiety and stress, DASS 21

### Introduction

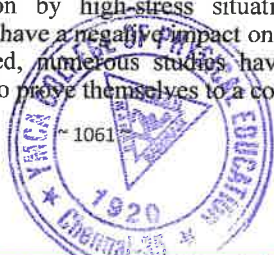
Judo is a form of sporadic combat that relies on both aerobic and anaerobic metabolism and is characterised by quick muscular movements (Sbriccoli *et al.*, 2007) [18]. The victor of the bout, which lasts a maximum of five minutes, is the judoka who scores the highest or Ippons, his opponent to the ground. It is an unpredictable sport that is divided into weight classes. In the days leading up to competition, judo female athletes frequently adopt quick weight-loss techniques in order to compete in a lower division. Higher self-esteem denotes a favourable self-evaluation, whereas lower self-esteem denotes a negative self-opinion, and this element is crucial in sport (Abalde & Pino, (2016) [1].

Although having good mental health is crucial for female athletes to perform well (Purcell *et al.*, 2019) [12], little is known about the mental health of female athletes, especially in terms of the prevalence of mental health concerns. Lack of research in this area has frequently been excused by the stereotypes that female athletes are just "stronger people" and that participation in sports automatically selects for individuals with good physical and mental health (Chang *et al.*, 2020) [3]. According to a number of studies, athletes are generally less depressed and worried than the general population, and they are also better at handling stress and have higher levels of self-esteem and positive body images (Rice *et al.*, 2016; Gouttebarga *et al.*, 2019) [13, 4]. It is overlooked, nonetheless, that the sports environment frequently contains particular stressors brought on by high-stress situations, ongoing mental efforts, demands, and constraints that may have a negative impact on mental health (Rice *et al.*, 2016) [13]. To support the a aforementioned, numerous studies have demonstrated that female athletes who are constantly required to prove themselves to a coach and/or teammates have better career

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### Section Articles

## Effect of skill Related Training on Co-Ordinative Ability Among Volleyball Players

Mr. S .SATHISH KUMAR

Dr.G.VINODKUMAR

Download



### Abstract

The modern volleyball is highly specialized in almost all the major skills of volleyball "It is a sport for young and old for men and women. Coordination is the capacity to incorporate separate motor frameworks with fluctuating tactile modalities into productive developments. The amicable cooperating of the synchrony, mood, and sequencing part of one's developments is essential to facilitated development. Eye-hand coordination is apparent in fine motoractivities, likebead stringing, clay modeling or in gross motor activities, likecatching, striking or volleying a ball. **Objective:** To find out the coordinative abilities of volleyball players.

**Methods:** For the purpose of the study totally40 volleyball players from YMCA College of Physical Education

  
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## INFLUENCE OF PROPRIOCEPTIVE, YOGA AND COMBINED TRAINING PROGRAMME ON SPEED AMONG KHO-KHO PLAYERS

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<sup>1</sup> Physical Education Director, Government First Grade College, Tumkur, Karnataka, India.

<sup>2</sup> Associate Professor, YMCA College of Physical Education, Chennai – 35, India.

### Abstract

This study was designed to investigate the influence of proprioceptive training yoga training and combined training programme on neuromuscular variable speed among school level kho-kho players. To achieve the purpose of the study sixty (N=60) male kho-kho players were randomly selected. The age group of the subject was 14 to 17 years. Selected subjects were equally divided into two groups namely control and experimental group. Control group was not given any type of training. Experimental group was given proprioceptive training, yoga training and combined proprioceptive and yoga training for a period of ten weeks. The pre-test and post-test data on speed was collected on both the groups before and after the experimental training. collected data was analysed by using ANCOVA to find significant difference among mean at 0.05 level of confidence. It was concluded that experimental group combined proprioceptive and yoga training group significantly ( $p \leq 0.05$ ) improved the speed when compared to control group of the school level kho-kho players.

**Keywords:** proprioceptive training, yoga training, combined training, speed and kho-kho players

### Introduction

The ancient game of Kho-Kho, played in divided India, is thought to have originated from the many strategies and tactics used by "Kurukshetra" in the Mahabharata. In the game of Kho-Kho, the construction of chain play, a defence skill, is indicated by the soldiers' fleeing paths and the chariot fifth throughout the conflict. Kho-Kho is a game that can be thoroughly learned by mastering the basic skills and strategies of pursuing, running from the pursuer, avoiding touch with the chaser, and not allowing the chaser to make contact with you or the sprinter's clothing. One efficient way to end the chase would be to leap at the sprinter and make contact with his back foot impact point as he ran. Without a question, this is the safest method for scoring a sprinter. Three core tactics that



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## Influence of Proprioceptive, Yoga and Combined Training Programme on Agility among Kho-Kho Players

\*<sup>1</sup>Manoj Kumar N and <sup>2</sup>Dr. S Gladly Kirubakar

<sup>1</sup>Director of Physical Education, Government First Grade College, Tumkur, Karnataka, India.

<sup>2</sup>Assistant Professor, YMCA College of Physical Education, Chennai, Tamil Nadu, India.

### Abstract

The purpose of the study was to find out the influence of proprioceptive training yoga training and combined training programme on neuromuscular variable agility among school level kho-kho players. To achieve the purpose of the study sixty (N=60) male kho-kho players were randomly selected. The age group of the subject was 14 to 17 years. Selected subjects were equally divided into two groups namely control and experimental group. Control group was not given any type of training. Experimental group was given proprioceptive training, yoga training and combined proprioceptive and yoga training for a period of ten weeks. The pre-test and post-test data on agility was collected on both the groups before and after the experimental training collected data was analysed by using ANCOVA to find significant difference among mean at 0.05 level of confidence. It was concluded that experimental group combined proprioceptive and yoga training group significantly ( $p \leq 0.05$ ) improved the agility when compared to control group of the school level kho-kho players.

**Keywords:** Proprioceptive training, yoga training, combined training and kho-kho players

### Introduction

Physical exercise has been an important part of Indian culture since ancient times. There are various indigenous games that were integral parts of Indian culture, such as Kabbadi and Kho-Kho, of which Kabaddi has been recognised at an international level, whereas Kho-Kho is an indigenous sport that originated in Indian villages and is appealing for its existence and exposure. To achieve peak performance, the game necessitates well-developed physical fitness components, energy, concentration, determination, hard work, and skills. Physical fitness components that lead to top performance in Kho-Kho include speed, agility, quickness, reaction time, strength, explosive strength, flexibility, and so on. Agility, as the term implies, is the ability of an individual to respond quickly and effectively to a stimulus. Because this game necessitates rigorous training, the researcher considered investigating the effectiveness of proprioceptor training, yoga training and combined training on agility for kho-kho players. Proprioception is a sensitivity mechanism found in mammals that communicates with the central nervous system via Mechanoreceptors found in joints, muscles, and tendons. As a result, it signals the body how to react and with how much tension to a specific message. Proprioception is initially unconscious, but it can be improved through training. The awareness of posture, movements, and changes in equilibrium, as well as knowledge of position, weight, and

resistance to objects in relation to the body, are all examples of proprioception.

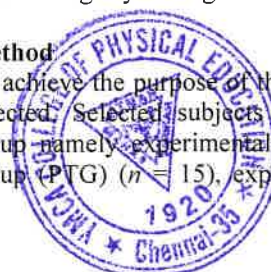
A well-rounded yoga practise that focuses on strength, flexibility, and balance will improve your agility. Moving dynamically in and out of poses with your breath or between linked poses in flow sequences allows you to practise quick, precise movements. Physical variables have become one of the most important aspects of sports sciences that deal with the improvement of sports performance in the modern sports world. Yoga and Kho-Kho require a high level of physical balance, which completely controls the mental, physical, motor-coordination, and physiological work outputs under high-intensity conditions. It is a game of continuous action with mental pressure that requires the team and individual players to constantly adapt to changing situations.

### Objectives

The main objective of the study is to find out the efficacy of a specific proprioceptive training, yoga training and combined proprioceptive and yoga training on selected neuromuscular variables agility among kho-kho players.

### Method

To achieve the purpose of the study 60 kho-kho players were selected. Selected subjects were equally divided into four group namely experimental group I proprioceptive training group (PTG) ( $n = 15$ ), experimental group II yoga training



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Authored by

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From

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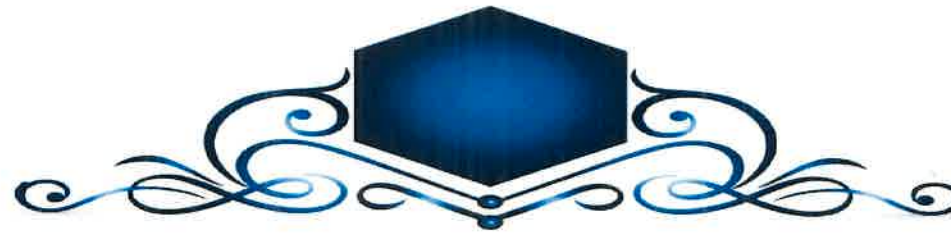


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