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Email:rajesh2sports@yahoo.co.in

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Basic Comparative Descriptions Among Field Hockey And Genna (Ethiopian Famous Traditional Game)

Amare Tigabu (BPEd, MPEd) Lecturer
Smarara University-Ethiopia
Tell - +251-919-193416
Email- ata8706@gmail.com

Introduction:

History of hockey: The origins of field hockey can be traced to ancient Egypt, Persia, and Greece. Hockey is the national sport of Pakistan, and is sometimes assumed to be India's national sport, but the game as we know it was developed in the British Isles in the late 19th century. In 1901, field hockey was brought to the United States by an English woman, Constance M.K. Applebee. She spread the game to Vassar, Wellesley, Holyoke, Radcliffe, and Bryn Mawr Colleges. Her influence helped field hockey grow in schools, colleges, and clubs. In 1920, the first US Touring Team set sail for England. However in other countries field hockey is widely played by both men and women. In 1993, the men's and women's associations merged into the USFHA, which is the official field hockey organization recognized by the Olympic Committee.

History of Genna: The Gregorian calendar celebrates Christmas on the 25th of December while Ethiopian Christmas falls on January 7th. The Ethiopian name for Christmas is Genna, which comes from the word Gennana (grand) and expresses the coming of the Lord to free mankind of its sins. Genna is also the name of a hockey-like game which is said to have been started playing by the shepherds with their sticks when they heard the birth Jesus Christi. Men and boys in villages now play the traditional Genna game with great enthusiasm in late afternoon of the Christmas day, a spectacle much enjoyed by village communities and elders by gathering in churches for mass. For the clergy it has begun much earlier, 43 days before, with the fasting period leading up to Genna or Christmas holyday. That is why the Ethiopian Christmas known by the name Genna. The game was attended by local community leaders all society.

Traditional Genna player

Modern Genna players

Previous time Ye-gena chewata was played by using a crude hockey like stick, and some kind of a small wooden ball (enkura). Whatever the origin, the game was very popular especially during the reign of Emperor Menelick, And, as the saying goes, (begenna chewata aykotum geta), meaning "the lords will not hold grudges if he gets hurt while playing Genna" which shows the different classes coming together and the rivalry being mild. After the game the winning team was celebrating and touring at evening time in the village.

General classification of Genna game in previous time

Qurquse: - it is a type of playing technique whoever the players can follows the rules and regulations of the game according to his duty and responsibility. Here kicking the ball (Ting) is strictly forbidden. The player play only by dribbling the ball.

Muche:- it is also the second type of technique that pushes the ball (Ting) by sweeping like action. Here even they can sweep players feet together so you have to be qualified high jump to protect your feet from injury.

Afso melgat:- is the combined and complex technique that every player can show his own individual talent and skill. Here no rule how to kick the ball. The player can use any kicking style without harming others. This game technique will applied during holly day.

Kelbo melgat:- also a technique that similar with Afso melegat but here the local community leader declare the rule how to play exclusive game.

Modern Genna

First modern Genna game is becoming famous at national level and some rule and regulations have been established. Like play ground size, stick, ball, number of players, and other necessary qualifications like, Play ground length = 300m, width = 200m and 2 goal areas and posts.

Major Equipments of Genna and Hockey are Stick and Ball:

Genna and Hockey sticks and balls are major equipments in both games. Hockey and Genna sticks are curved at one end. It is rounded at one side and flat-curved on the other. A player has to hit the ball only with the flat-curved side of the stick. A hockey and Genna sticks have a bow along its length.

Field Hockey ball general specs are; spherical, circumference of between 224 mm and 235 mm, weighs between 156 grams and 163 grams, made from any material, white colored and hard with a smooth surface.

Genna ball (Rur), (ting); Rur(ting) is the ball of Genna that can made from pattern, plastic or strap with sphere shape. Generally it is white color, 100gm weight, 25-30 cm circumstance.

Field hockey stick; Size and height depend on the player's individual height but it measures lengths 80-95cm with weight of 737grams. Sticks have grip, handle, face, head and other parts.

Genna stick; It has 1m length and 10cm flat - bended shape at the bottom end. Weight is 500-550gm and made form plastic, wood and bamboo.

Genna goal size and posts; With 1m height, 3m length and 50 width, Posts and bar width will be 10-15cm with net made from canvas or calico, goal posts should keep at the midpoint of back end lines.

Field hockey goal size and posts; goal area 2.14m height, 3.66m length and 1.20m width and It should keep at the midpoint of end, It contains net and also has its own post thickness.

Genna Court (playground); Genna pitch is 90-100m length and 45-50m width rectangular shape. Play ground should be prepared to roll the ball (Rur) easily while playing. The court involves visible border lines at least 3m free space from spectator seat and other objects. The penalty area is an ellipse shape with mark 6m away from both posts and 10m away from the midpoint of the posts. The Penalty kicking point will mark 9m away from the midpoint of in the court parallel to side line. Game starting point during first time and after scoring is the circle at the center of the half line with 4m radius. At the corner flag is compulsory. The Goal area is a half ellipse shape that marked 1.5m from outer side of both posts and away 6m from the midpoint of posts. In this area the goalkeeper can catch and defend Rur from being goal. Both teams not allowed playing inside goal area. If self team comes inside goal area it will be penalty and opposite team being inside it will be free kick for defender team. Duration of the game has two sessions and total 60 minutes' duration with 10 minutes break.

Field hockey court; It has generally 91.4 m Length and 55m width and built form rubber, wood, simply tighten ground or any other suitable materials. It involves different parts like border line, goal area, penalty point, starting circle, flags as its standard.

Basic Techniques of Genna and Hockey

All techniques listed below and others are visible in both games:

Dribble: - To control the ball with short strokes of the stick while on the move, alternating the ball from the right side of the body to the left side of the body in order to elude defenders.

Hit: - Any contact with the ball using a swinging motion of the stick. This stroke is used to make long passes or take shots on goal.

Scoop: - The lifting of a stationary or slower moving ball off the ground by placing the head of the stick slightly under the ball and shoveling the ball forward.
Tackling: - An attempt to steal the ball away from the opponent by using the stick.
Set Play: - Using a team tactic that has been prepared before the game (free hits, long corners, short corners).

General rules of Genna and Hockey

The rules listed below are mostly applied in both games:
The ball is played with the flat side of the stick only (1). When the ball goes over the side line, the opponent takes a side-in at the spot where the ball went out of bounds (2). The game may be re-started by passing the ball to teammate or by taking it on the dribble as a self-pass (3). A free hit is awarded to the opposing team when a foul occurs on the field and must be taken near the spot where the violation occurred (4). When the defending team fouls in the shooting circle, or if the defenders send the ball over the end line intentionally, a penalty corner will be awarded to the attacking team (5).
Fouls in Genna and field hockey
Those are more commend fouls in Genna and Field hockey
Using sticks in dangerous play (1). Play with rounded side of the stick (2). Stick interference, the player should attempt to play the ball not hit, hook, hold, or interfere with an opponent's (3). Undercutting, or raising the ball dangerously (4). Charging, pushing, tripping, or personally handling an opponent (5). Deliberate hitting balls to opponent (6). Field players not play the ball with their feet (7).

Number of players in Genna and field hockey

Players in field hockey: - A team shall be composed of 20 players max (18 skaters and 2 goalkeepers). During match 10 skaters and 1 goalie, totally 11 players involve in the pitch. Five benches also will be arranging for substitution.
Players in Genna:-The team includes captain with identification mark at his arm, coach and team leader just like modern hockey. During the match 9 skaters, 1 goalkeeper and 5 benches involved. The team can substitute all five benches once or turn by turn but one player cannot substitute again. Total maximum team members are 15.
Conclusion

s.no	Items lists	Genna	Field hockey
1	Playground	Length = 90-100m Width = 45-50m	Length = 91.4 m Width = 55 m
2	Stick	Length = 1m Width = 10cm flat bottom with 1cm thickness Av weight = 500-550gm Sticks have grip, handle, face, head and other parts.	Depends on the player's individual height but measures between 80–95 cm Weight = 737 grams Sticks have grip, handle, face, head and other parts.
3	No. players	In pitch = 10 including goalie substitutions = 5 Goalkeepers = 2 Total = 15	In pitch = 11 including the goalie Substitution = 5 Goalie = 2 Total = 16 – 20
4	Ball (Rur) or Ting	Circumstance = 25-30cm Weight = 100gm Nature = any suitable materials	Circumference = 224-235 mm Weigh = 156-163 gm. Nature = Any suitable materials
5	Goal posts	Height = 110cm Width = 50cm Length = 3m	Height = 2.14m Length = 3.66m Width = 1.20m
6	Time duration	Two equal 30mints with 10 minutes break.	Two equal halves of 35 mints with 5-10 minutes break it may be reduced to 25- to 30-minute for juniors.

According to all the above descriptions of these both games the main differences among them are chronological growth and development, the complexity and easiness of the games; equipment specificity, number of players, duration time, field measurements, and ball and stick weights etc. This all differences are very minor but not basic. As we know field Hockey is more complex and Olympic level game in all perspectives but Genna is still in traditional level but the nature these games are related. Therefore, will conclude that these games are almost similar rather than they are different.

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Approach Distance, Speed, and Jumping Power in Relation to Running Long Jump Performance

Gil M. Ebardo
College of Sports Physical Education and Recreation,
Mindanao State University, Marawi City – Philippines

Abstract
Different kinematic parameters such as approach distance, speed, and jumping power are the selected factors to improve running long jump performance. The main objective of this study was to determine the corresponding effects of approach distance, speed, and jumping power [the independent variables] on the overall running long jump performance [the dependent variable] and could the height and the weight[the moderating variables (MV)] influence both the independent variables [IVs] and the dependent variable [DV] in male senior high school students. This study included 55 males from Mindanao State University-Integrated Laboratory School [MSU-ILS], Marawi City. The samples were selected from the senior Physical Education classes [Athletics] composed of 3 sections. For 1 semester duration [almost 5 months] of attendance, the students participated in the training for conditioning, the acquisition of skills, and the practical exams of the different events prescribed for the subject including running long jump. At a critical value of 0.27 [CV = 0.27], the results reveal that weighthas significantly relationship to speed [r = 0.27] and jumping power [r = 0.31] while height showed no significant relationship to both the IVs and DV [rs< 0.27]. Further analyses disposed significant relationship between approach distance [r = 0.73], speed [r = 0.70], and jumping power [r = 0.66] and the running long jump performance.
Keywords: Approach distance, speed, jumping power, running long jump performance

Introduction

The running long jump had developed over the years. It is the oldest jumping event practiced at the ancient Olympic games as part of the pentathlon and identified as one of the most natural and simple events in track and field (Burrett,1974). Despite its simplicity which is to run down a runway, consistently hit the board, takeoff and land, there are still questions on:
What is the ideal distance of approach to be considered as run-up?
What is the right speed to be developed in the runway?
And what is the most appropriate vertical speed that should be executed at the takeoff board so that running long jump performance could be maximized?
The approach is between 30 to 40 meters and is progressively accelerated [Ballesteros, 1984]. The approach run is the most important part in long jump technique [Burrett, 1974].It may begin with a gradual acceleration rather than from an explosive start. Explosive start may cause an excessive force in the run way that may weaken the jumper during takeoff. Similarly, Weltzer [1958] stressed that one of the primary laws of long jump is to gain as much speed on the runway as possibly controlled for a proper takeoff. Whether the start is gradually accelerated or an explosive one, the main object of the run is to gain maximum speed if possible.Casady [1973] emphasized that successful long jump must develop speed for takeoff.
Speed therefore, is a prerequisite to successful long jumping. Bowerman and Freeman [1991] revealedthat long jumpers are sprinters first and jumpers second as it is the belief that slow runners will be slow on the runway. Though long jumpers may not as fast as the best sprinters, they will not be likely to be for behind, because long jumper has to be a sprinter too.

To run down a runway requires speed that will influence the horizontal push on the jumper at takeoff. To maximize the horizontal push, the jumper must developed the speed max on the runway prior to takeoff [Wetzler, 1958].At the instant of takeoff, the momentum is responsible in pushing the jumper forward to cover a distance [long jump performance]. Momentum is the product of mass and velocity [horizontal speed] of the body [Sears, et. al., 1987].

According to Gambetta [1981], the horizontal speed contributed more or less two parts, while lifting [vertical speed] contributed more or less one part to long jump performance.

Hay [1993] believed that the flight of the jumper is determined by the ideal combination of the horizontal speed in the run-up and the vertical speed gained at takeoff. According to Northrip, Logan, and McKinney [1983], in running long jump the jumper must compromise between achieving a high trajectory and which will give him a long time in the air and maintaining an accelerated horizontal speed and will carry him as far as possible linearly during the flight time. Howsoever, lifting [jumping power] at takeoff pushes the jumper upward so as to have vertical speed and will determine the span of time the jumper stays on air during flight before landing [Gambetta, 1981]. Thus, the purpose of this study was to investigate the relationship between the selected kinematic factors of approach distance, speed (horizontal), and jumping power (vertical speed) and the running long performance.

Methods

Samples

The research was conducted on the sample of 55 PE athletics class students, all males and composed of 3 sections [section A = 15, section B = 20, and section C = 20]. The range and the corresponding mean were:body height154-182 [167.91cm], body mass36.8-65.5 [51.34kg], approach distance 20-45 [27.91m], speed 5.29-7.71 [6.10 m/s], jumping power 40-73 [56.39 cm], and running long jump performance 2.53-5.00 [3.81 m].The principal of the high school department of the MSU-ILS approved the conduct of the study likewise with teacher-in-charge and the samples involved. The tests were part of their practical exam, so all the samples cooperated and participated in the different tests with all their abilities.All measurements and tests were conducted within the confines of the university and during physical education classes by the researcher himself with the aid of the trained research assistants.

Procedures

The body height was measured with a wall meter and the body mass was measured with a calibrated weighing scale.

The samples took part in a standardized protocol consisting of a vertical jump test and a sprint test that were only a fraction of the fitness test and part of the course requirements.

The jump test was conducted using the Sargent Jump Test. The test monitors the development of the sample's leg power. The sample then chalks the end of his fingertips. He stands side onto the wall, keeping both feet remaining in contact with the ground, reaches up as high as possible with one hand and marks the wall with the tips of the fingers [M_1]. From a static position, the sample jumps as high as possible and marks the wall with the chalk on his fingers [M_2]. Oneassistant measures the distance between M_1 and $M_2$and another one records the jump. The sample repeats the test 3 times [Catapang, 2000].

The sprint tests were performed on a standard 8 lanes track oval withline-marks on the starting and the finishof the 50 meter distance and 8 samples were to run at a time because 1 exclusive timekeeper was assigned per sample. The time keeping was synchronized with the smoke of the starting gun when fired. However, before the start of the test, some assistants were assigned to take charge of the warm-up and dynamic stretching exercises [Catapang, 2000].

The running long jump performance [1 of the practical exams of the course] was performed in the long jump area located inside the oval. Where samples established their respective distance of approach, took series of trials and then fixed the final approach distance [that the assistants measured using the measuring tape]. Every sample was given 3 jumps and the longest jump was included for statistical analyses. The running long jump performance was the measured distance from the nearest break of the jumper on the landing pit to the inside edge of the takeoff board [Ballesteros, 1984].

Statistical Analyses

The samples were described in according to included variables of the study. They were described using frequency and percentage distribution and the mean.

The Pearson r was utilized in identifying the relationship existed between the correlated variables. The coefficient of determination [r^2] was reinforced to provide the percentage contribution of a certain variable to the correlated one. The level of significance was set to α=0.05 at SD=0.01, the computed critical value (CV) was 0.27 [de Jesus, 1993].

Results

The deliberation concerning the sample's profile was sequenced according to: range, greatest percentage distribution(with the corresponding class interval), mean and cumulative percentage distribution above the mean. The demographic profiles of the samples were: Height 154-182 cm, 36.36% (163.34-168.00 cm), 58.18%, and 167.91 cm;Weight 36.8-65.5 kg, 32.73% (46.37-51.15), 50.91%, and 51.34 kg;Approach distance 20- 45 m, 43.64% (28.34-32.50), 56.37%, and 27.91m;Speed 5.29-7.71 m/s, 38.18% (6.1-6.5), 50.90%, and 6.1 m/s; Jumping power 40-73 cm, 40.00% (51.00-56.50 cm), 38.18%, and 56.39 cm; and Running long jump performance 2.53-5.00, 41.82% (3.77-4.17), 54.53%, and 3.81 m.

The relationships between variables were segregated into three:Relationships between the moderating variables and the independent variables; Relationships between the moderating variables and the dependent variable; andRelationships between the independent variables and the dependent variable. At n=55 and α=0.05, the CV=0.27 [de Jesus, 1993].

Relationships between the moderating variables and the independent variables

The moderating variable of height was not significantly related to approach distance (r=0.26), speed (r=0.19) and jumping power (r=0.18). But the moderating variable of weight (mass) was significantly correlated to speed (r=0.27) and jumping power (r=0.31) but not to approach distance (r=0.23)

Relationships between the moderating variables and the dependent variable

The moderating variables of height (r=0.22) and weight (r=0.22) were not significantly related to the dependent variable of running long jump performance.

Relationships between the independent variables the dependent variable

The independent variables of approach distance (r=0.73), speed (r=0.70), and jumping power (r=0.66) were all significantly related to running long jump performance.

Discussions

The shortest sample was 154 cm and the highest was 182 cm. The highest percentage distribution was 36.36% and contained within the interval 163.34-168.00 cm. 58.18% were above the mean height of 167.91 cm which connotes that more samples were considered tall.

The lightest sample weighed 36.8 kg while the heaviest was 65.5 kg. The highest percentage distribution of the samples'weights was 32.73% enclosed by the class interval 46.37-51.15 kg. 50.91% were above the average weight of 51.34 kg. This is just an indication that the samples were more likely equal in terms short and tall distribution.

The shortest approach being exercised was 20m with the longest of 45m. More samples (43.64%) were using distances between 28.34m-32.50m but 56.37% or more used approach distances greater than 27.91m (mean).5.29m/s was the slowest speed demonstrated but the fastest was 7.71 m/s. However many of the samples' speeds range from 6.1-6.5 m/s. But generally, the distribution of the speeds were nearly the same (50.90% were above the mean speed of 6.1 m/s.

The shortest vertical jump was 40cm and the highest was 73cm. From 51.00-56.50 cm jumps, 40% of the samples were enclosed. Howsoever, only 38.18% jumped high so many jumped poorly.

The performances of the samples in long jump ranges from 2.53m (the shortest) up to 5.00m (the longest0. Where 41.82% were grouped in the interval 3.77-4.17. But more (54.53%) of the samples jumped above the average long jump performance (3.81m).

The paired moderating variables (MV) versus independent variables (IV), only weight (mass) was significantly related to speed (r=0.27) and jumping power (r=0.31). Since r values were all positive, the relationships were linear and meant that heavier samples ran faster and jumped higher. Reinforcing statistical tool of r^2, weight contributed 7.29% to speed (r^2=0.0729) and 9.61% to jumping power (r^2=0.0961).

Height (r=0.22) and weight (0.22) were both not significantly correlated to the running long jump performance. Meaning, similar running long jump performances were shown by the short and tall or by the light and heavy samples.

Approach distance (r=0.73), speed (r=0.70), and jumping power (r=0.66) are linearly related to the running long jump performance. Those samples using longer approach distances, ran faster, and jumped higher demonstrated better running long jump performances. Furthermore; approach distance (r^2=o.5329) shared 53.29%, speed (r^2=0.49) contributed 49%, and jumping power (r^2=0.4356) influenced 43.56% of the running long jump performance.

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Health-related and Performance-related Components: A Correlational Study

Gil Martinez Ebardo
Nenita P. Samong
College of Sports Physical Education and Recreation,
Mindanao State University, Marawi City –Philippines

Abstract
Ten physical fitness components of flexibility, cardiovascular endurance, muscular strength, muscular endurance, and body composition, agility, balance, coordination, speed, and powerwere the selected kinematic and kinetic parameters subjected for correlation. The aim of this study is to determine the strength and predictive accuracy of relationship existing among health-related components [HRC] and performance related components [PRC], and between the HRC and PRC of physical fitness. A group of 73 [n] from 89 students [N] of the PE 4 [Volleyball] classes of the Mindanao State University, Marawi City, Philippines were selected as samples of the study. Body composition has no significant relationship to any of the HRC while flexibility has a weak positive linear relationship to muscular Endurance. Muscular Endurancehas weak positive linear significant correlations both to flexibility and muscular strengthand a moderate positive linear significant correlation tocardiovascular endurance. Besides, cardiovascular endurance has also a moderate linear positive relationship to both muscular endurance and muscular strength.Agility and speed are significantly relatedto all PRC. Power, besides agility and speed, is also significantly related to coordination. Cardiovascular endurance is significantly related to all PRC.Muscular strength has significant relationship to agility, coordination, power, andspeed. Muscular endurance is significantly related to agility, balance, and power.Howsoever, body composition and flexibility are not significantly related to any of the PRC.
Keywords: Health-related Components, Performance-related Components, Correlational Study.

Introduction

More and more people are attracted and motivated to participate in several physical fitness [PF} activities. The youths engage in PF training to stay in shape, raise fitness level, improve sports performance and strive for superiority and greatness among others. The adults on the other hand, participate in various fitness exercises to live longer and happy life, and to the many as prescribed by their physicians.

PF is characterized by the ability to perform occupational and recreational activities without becoming unduly fatigue and to have the capacity to handle unforeseen emergencies (Payne, et. al, 2005).

A physically fit person works without becoming over fatigued, accomplishes his work with a minimum stress and faces life in a relatively better outlook. He has the capacity to learn a variety of vigorous recreational pursuits and enjoys participating in outdoor and sports activities. His life is not all work but balanced and pleasurable experiences. His good PF status contributes to self-confidence and poise and enables him to mingle with people at work and in play (Oyco, 2007).

According to Catapang (2000), there are two components of PF, the HRC and the PRC. There are five HRC of PF of flexibility, cardiovascular endurance, muscular strength,muscular endurance and body composition. There are also five PRC of PF of agility, balance, coordination, powerand speed. (http://www.glorthopedics.com/blogs/the-sports-fitness-component-for-better-athletic-performance/).

HRC surely are related to health that have the most relevance to general population, while PRC (also known as skill-related components [SRC]) of PF surely are more associated with performance in motor skill such as those required in specific types of jobs and in sports (Corbin, et. al., 2000).

There are many sports that develop components of both skill and health related PF and include basketball, ice skating, and soccer. However, many sports such as baseball, table tennis, golf, volleyball, and bowling while demanding certain athletic skills, do little to promote the HRC. Most experts feel that PRC have little if any bearing on HRC (Nieman, 1996).

This study focused on the components of PF and established the precise strength of relationship existing between and among the HRC and PRC of fitness.

Methodology

Research Design :This study employed a correlation methods to determine the strength of relationships among and between the physical fitness components.Population:The population of this study were the male students officially enrolled and regularly attending PE 4 (Volleyball) male students of the Mindanao State University, Marawi City during the first semester AY 2014-2015. The population totaled to eighty nine (89) students and the break down were:thirty two (32) for PE 4 – Yy4, twenty eight (28) for PE 4 – XxYy4, and twenty nine (29) for PE 4 – Hh4.

SamplesandSamplingProcedures

The samples were selected and drawn from the population of eighty nine (89) male students. Using the formula by Garcia and Pagaso (1992), the computed sample size was seventy three [73]. Stratified and systematic random sampling was utilized and the samples were selected and identified as every 4th student (by tossing a die, excluding those who were dropped) of the master listper section. The selection continued until the computed number of samples were obtained and were summarized as: twenty six (26) for PE 4 – Yy4 (n1), twenty eight (28) for PE4 – XxYy4 (n2), and twenty nine for PE4 – Hh4 (n3).

Research Instrument Used

PF standardized tests were utilized in data gathering and were recorded in the Quantification of Data Form. The Body Mass Index (BMI) measured the Body Composition. Mass (in kilogram) was measured by a weighing scale while the height (in meter) was made available using a height measuring device.

The other tests were enumerated as: 1) Sit and Reach Test; 2) The 6-min Run Test,; 3) The Sargent Jump Test; 4) The Push Up Fitness Test; 5) The Stork Stand Test; 6) The Illinois Agility Test; 7) The Alternate Hand Wall Toss Test;8) The 50m Sprint Test; and 9) The Standing Jump Test.

Methods of Data Collections

The PF componentstesting were all required as part of the practical exam of the course PE4 (Athletics) for the PF evaluation of the students. All the tests were conducted and all the necessary data were gathered by the researcher himself and few trained assistants. All the samples underwent the tests. They were identified by administering the systematic random sampling by tossing a die and every 4th student of the class were drawn and collected until the desired number of samples per section were met.

Statistical Treatment

The Pearson Product-Moment for Correlation Coefficient [r] was used for the relationship analyses. It was originated by Karl Pearson about 1900 (Douglas, et. al., 2000). The descriptive labels for ranges of the magnitude of r (Evans, 1996) are as follows: $\pm$.80 to 1.00 [Very Strong]; $\pm$.60 to .79 [Strong]; $\pm$.40 to .59 [Moderate]; $\pm$.20 to .39 [Weak]; and $\pm$.00 to .19 [Very Weak].

Coefficient of Determination (r^2) (Dunn, 2001) was reinforced.

Results And Discussion

Correlation among Health-Related Fitness Components

Body composition has no significant relationship [p values > 0.05] to any of the Health-related fitness components. Flexibility has a very significant [p=.009] weak positive linear relationship [r=.303**] and shared 9.2% of muscular Endurance. Muscular Endurance has a significant weak positive linear correlations both to flexibility [p=.009, r=.303**] and muscular strength [p=.001, r=.373**] and a significant [p=.000] moderate positive linear [r=.453**] correlation to cardiovascular endurance. Muscular Endurance furnished 9.2% [r^2=.092] of flexibility, 13.9% [r^2=.139] of muscular strength, and 20.5% [r^2=.205] of cardiovascular endurance.Cardiovascular endurance has also a significant moderate linear positive relationship to both muscular endurance[p=.000, r=.453] and muscular strength [p=.000, r=.452]. Cardiovascular endurance influenced 20.5% [r^2=.205] of muscular enduranceand 20.4% [r^2=.204] ofmuscular strength.

Correlation among Performance-Related Fitness Components

Agility has a very significant [p=.000] moderate positive linear correlation [r=.417**} to speed and vice versa. Moreover, agility and speed were all significantly related to fellow PRC. Balance and coordination were not significantly related to each other [p=.565]. However, balance and coordination showed significant weak negative linear correlation to agility [p=.016, r= -.281* and p=.o38, r= -.244* respectively] and to speed [p=.025, r= -.262*, andp=.013, r= -.291* respectively]. That balance influenced 7.9% to agility [r^2=.0790] and 6.86% to speed [r^2=.0686] whereas coordination shaped 5.95% of agility [r^2=.0595] and 8.47% of speed [r^2=.0847]. Nevertheless, power revealed a very significant [p<.01] moderate negative linear relationship to agility [p=.000, r= -.615**] and speed [p=.000, r= -428**] and very significant weak positive linear relationship [p=.003, r=.339**]. Last of all, power contributed 37.82% [r^2=.3782] of agility, 18.32% of speed [r^2=.1832], and 11.37% of coordination [r^2=.1137].

Correlation between Health-Related and Performance-Related Fitness Components

Flexibility and body compositioninclined no significant relationship [p>.05] to all PRC. Oppositely, cardiovascular endurance predisposed significant relationships [p< .05] to all PRC; a significant weak positive linear relationship to both balance [p=.023, r=.266*] and coordination [p=.018, r=.275*], a very significant moderate negative linear relationship both to agility [p=.000, r= -.595**] and speed [p=.000, r= -.463**] and a very significant moderate positive linear relationship to power [p=.000, r=.467**]. Furthermore, cardiovascular endurance contributed 35.40% of agility [r^2=.3540], 7.08% of balance [r^2=.o708], 7.56% of coordination [r^2=.0756], 21.44% of speed [r^2=.2144], and 21.81% of power {r^2=.2181}. On the other hand, Muscular strength played a significant weak relationship to coordination [p=.012, r=.293], a very significant moderate negative linear relationship to agility [p=.000, r= -.485**] and speed [p=.000, r= -. 426**], and a very significant moderate positive linear relationship to power [p=.000, r=.563**]. Also, muscular strength shaped 23.52% of agility [r^2=.2352], 8.59% of coordination [r^2=.0859], 18.15% of speed [r^2=.1815], and 31.70% of power [r^2=.3170]. Lastly, Muscular endurance inclined a weak significant positive linear correlation to balance [p=.006, r=.319*] and power [p=.003, r=.347*], and a very significant moderate negative linear correlation to agility [p=.000, r= -.412**]. In the end, muscular endurance influenced 16.97% of agility [r^2=.1697], 10.18% of balance [r^2=.1018], and 12.04% of power [r^2=.1204].

Conclusion

Correlation among HRC:Muscular Endurance is a predictor of Flexibility, Muscular Strength, and Cardiovascular Endurance.Cardiovascular Endurance is a predictor of Muscular Strength and Muscular Endurance.Muscular Strength is a predictor of Muscular Endurance, and Cardiovascular Endurance.Flexibility is a predictor of Muscular Endurance.Body Composition is not a predictor of Health-Related Components.

Correlation among PRC:Agility is a predictor of Balance, Coordination, Speed, and Power.Speed is a predictor of Agility, Balance, Coordination, and Power. Coordination is a predictor of Agility, Speed, and Power. Power is a predictor of Agility, Coordination, and Speed. Balance is a predictor of Muscular Strength, and Muscular Endurance.

*Correlation between HRC and PRC:*Flexibility and Body Composition are not predictors of Performance-Related Components.Cardiovascular Endurance is a predictor of Agility, Balance, Coordination,Speed, and Power.Muscular Strength is a predictor of Agility, Coordination, Speed, and Power. Muscular Endurance is a predictor of Agility, Balance, and Power.

Recommendation for further studies

Similar study is recommended using samples of different fitness level.

Physical fitness components shall be correlated to other sports to evaluate their effects and contributions.

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Physical Fitness Components: Predictors Of Running Long Jump Performance

Gil Martinez Ebardo
College Of Sports Physical Education And Recreation,
Mindanao State University, Marawi City, Philippines

Abstract:
This research aimed to look into deeper analyses of the relationships and the extent of relationships between the independent variables of cardiovascular endurance, flexibility, muscular strength, muscular endurance, body composition [Health-Related Components (HRC)], agility, balance, coordination, speed and power [Performance-Related Components (PRC)] and the dependent variable of running long jump performance. Standardized physical fitness tests were employed in obtaining the data. The study also hoped to establish pertinent information and knowledge which of the physical fitness components are best predictors of the running long jump performance and more importantly would lead in developing meaningful training programs for the studied event.The study was conducted at Mindanao State University, Marawi City during the first semester, academic year 2014-2015. Included in the samples were the 63 [n] out of 74 [N] male PE 4 [Athletics] students selected through stratified and systematic random sampling procedures. The analytical method utilized was correlation and regression analysis.
The relationship between variables was analyzed using Moment-Product for Correlation Coefficient (Pearson r). The extent of relationship between variables on the other hand was obtained using Coefficient of Determination (r2). Moreover, the stepwise multi-linear regressionwas reinforced to determine the minimum and the most effective set of predictors for any criterion.There were three fitness components not significantly related to long jump performance; the flexibility (p=0.144), the balance (p=0.273), and the body composition (p=0.636).Agility, muscular strength, power and cardiovascular endurance disposed very significant (p< 0.01) and moderate strong correlation (0.39<r<.60) and contributed 33.29%, 29.90%, 29.05% and 20.43% (r2) to running long jump performance; respectively.
Speed, muscular endurance and coordination displayed very significant (p<0.01) but weak relationship (0.19<r<0.40) and contributed 15.29%, 14.67% and 10.50% to running long jump performance; respectively. The stepwise multi-linear regression analysis proceeds to an equation: Long Jump Performance = 5.736 – 0.189 (Agility) + 0.031 (Muscular Strength). Agility and muscular strength are the 1st and the 2nd best predictors to running long jump performance whose predictive accuracies summed up to 41.60% (r2=0.4160).
Keywords: Physical Fitness Components, Predictors, Running Long Jump Performance

Introduction

It is a very exciting event in athletics where the athlete feels like he is an airplane. He has to speed up along a runway, takeoff, fly on air as high as he could, then land.According to Gambetta [2.], it is one of the most simple and natural events in track and field and a great deal of skill and conditioning is required to run at full speed down a runway, consistently hit an eight-inch board, then take off and land, … the running long jump. Running long jump is the oldest jumping event in track and field and practiced at the ancient Olympic Games as part of the pentathlon [Burrett,1974].Studies on running long jump or long jumphas gone too far but correlated only for few selected variables such as: speed, power, strength, flexibility, mass, height, etc. But these variables mentioned are only part of the physical fitness components. It might give greater impact correlating running long jump to all the components of physical fitness.Physical fitness nowadays is very much popular and in demand to all citizens of the world both the young and the olds. The youth may engaged in physical fitness trainings to increase fitness level, improve performance in sports and strive for superiority and greatness among others. The elderly on the other hand, participated in several fitness activities to extend life and to the many as a requirement for their health and survival.

There are two major components of physical fitness; the health related components of flexibility, cardiovascular endurance, muscular strength, muscular endurance and body composition and the performance related components of agility, balance, coordination, speed and power (Catapang, 2000).
This study simply considers physical fitness components as the major factors perceived to affect, improve, and to predict the performances of the athletes in running long jump event.

Methodology

Research Design

This study employed correlation and regression methods. The correlational method was used to determine the extent of relationship existing between the physical fitness components (independent variables) and the running long jump performance (dependent variable).The regression method would try to identify from among the physical fitness components the best predictors of running long jump.

Population

The population of the study was the officially enrolled and regularly attending male students in the PE 4 (Athletics) ofof the Mindanao State University, Marawi City enrolled during the first semester AY 2014-2015. It comprised of the three (3) sections: (1) PE 4 – Aa4, (2) PE 4 – Bb4 and (3) PE 4 – Kl4.
The population summed up to seventy four (74) and segregated into: twenty seven (27) for PE 4 – Aa4, twenty three (23) for PE4 – Bb4 (Appendix B), and twenty four for PE4 – Kl4.

Samples and Sampling Procedures

The samples of this study were selected and drawn from the population of seventy four (74) male students. Using the formula by Garcia and Pagaso [1992], the computed sample size was sixty three (63)
Since the population were composed of three (3) sections, stratified and systematic random sampling methods were employed by die tossed (every fourth student) of the master per section were identified as samples of the study. And they were summarized to be twenty three (23) for PE 4 – Aa4 (n1), twenty (20) for PE4 – Bb4 (n2), and twenty (20) for PE4 – Kl4 (n3).

Research Instrument Used

This study gathered data through standardized tests and were recorded in the Quantification of Data Form. The Body Mass Index (BMI) measured the sample's body composition and was determined by the quotient of the mass over square of the height. Mass (in kilogram) was measured by a weighing scale while the height was made available using a height measuring device.
The other test were conducted successfully and enumerated as: 1) Sit and Reach Test that measured flexibility; 2) The 6-min Run Test for cardiovascular endurance; 3) The Sargent Jump Test for muscular strength; 4) The Push Up Fitness Test which measured the muscular endurance, 5) The Stork Stand Test, a test for balance; 6) The Illinois Agility Test, to monitor agility; 7) The Alternate Hand Wall Toss Test, to measure coordination; 8) The 50m Sprint Test, a test for speed; and 9) The Standing Jump Test, a test for power.
The running long jump performance was obtained by measuring the distance covered from the takeoff board to nearest mark made by the jumper on the landing pit. The best of the three (3) trial jumps was considered the performance.

Methods of Data Collections

The physical fitness components and the running long jump performances were all required as part of the practical exam of the course (PE4 Athletics) for pre-test physical fitness evaluation of the students. All the tests were conducted and all the necessary data were gathered by the researcher himself and few trained assistants. All of the population even underwent the tests: The samples were identified by administering the systematic random sampling by tossing a die and every 4^{th} student of the class (as reflected in the class master lists) were drawn and collected until the desired number of samples per section (as a result of ratio and proportion) were met.

Statistical Treatment

For the correlation part, the Pearson Product-Moment Correlation Coefficient or Pearson r was used. It was originated by Karl Pearson about 1900 and this statistical tool described and measured the strength of the linear relationship between two sets of interval-scaled and/or ratio-scaled variables (Douglas, et. al. 2000). The labels for ranges of the magnitude of r (Evans, 1996: 146) are as follows: $\pm$.80 to 1.00 [Very Strong], $\pm$.60 to .79 [Strong], $\pm$.40 to .59 [Moderate], $\pm$.20 to .39 [Weak], and $\pm$.00 to .19 [Very Weak].
The Coefficient of Determination (r^2)was provided in giving more precise meaning and interpretation of the findings (Dunn,2001).

Lastly, the Stepwise Multiple Regression Analysis was introduced. This approach employed statistical criteria to choose the smallest set of predictors which best predict the variation in the criterion (Howitt and Cramer, 2000).

Results And Discussion

Findings

Flexibility [p=.144], **bodycomposition** [p=.636], and **balance** [p=.273] had no significantly correlation to running long jump performance.

Coordination showed a very significant (p=0.010) weak positive linear relationship (r=0.324) and shared 10.50% [r^2=.105] of running long jump performance.

Muscular endurance has a very significantly [p=.002] weak positive linear correlation [r=.383] and contributed 14.67% [r^2=.1467] to running long jump performance.

Speedhas a very significant (p=0.002) weak negative linear relationship (r=-0.391) and furnished 15.29% (r^2=0.1529) of running long jump performance.

CardiovascularEndurancerevealed a very significant [p=.000] moderate linear relationship [r=.452] and contributed 20.43% of the running long jump performance (r^2=0.2043).

Powerdisposed a very significant (p=0.000) moderate direct relationship (r=0.539) and predicted 29.05% [r^2=.2905] of running long jump performance.

Muscular strength demonstrated a very significantly (p=0.000) moderate positive linear relationship likewise influenced 29.92% [r^2=.2992] of running long jump performance.

Agilityhad displayed a very significant [p=.000] moderate inverse relationship (r=-0.577) and aided33.29% of the running long jump performance [r^2=..3329].

***Long Jump Performance* = 5.376 – 0.189 (*Agility*) + 0.031 (*Muscular Strength*)**

The equation simply exposed that running long jump performance is determined by the sum of 5.376 and 3.1% of muscular strength and negative of 18.9% of agility. The two predict 41.6% (r^2=.416) of the running long jump performance.

Conclusion

Flexibility, body composition and balance are non-predictors of running long jump performance.

Cardiovascular endurance, muscular strength, muscular endurance, agility, coordination, speed power are predictors of running long jump performance.

Agility is the best predictor while muscular strength isthesecond best predictor of running long jump performance**.**

Recommendation

Performanceof running long jump can be optimized by developing training programs that give more emphasis to:*agility* (1st), *muscular strength* (2nd), *power* (3rd), *cardiovascular endurance* (4th*), speed* (5th*), muscular endurance* (6th) *and* coordination (7th) in addition to tactics and techniques in long jumping.

If the span of training is too short prior to competition, *agility* and *muscular strength* shall be given the top priorities of the training.

Since the samples are just PE 4 students and considered beginners, it is recommended that further similar researches shall be conducted involving skilled and highly skilled athletes.

It is also recommended that female samples shall be considered. Such study will provide missing information and can be utilized for comparison.

In addition, variables such as: leg strength, height, weight, angle of take-off, approach distance, reaction time and style in jumping shall be looked into for future studies.

Lastly, it is recommended that physical fitness components shall also be correlated to other sports performances.

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A Comparative Study on Vertical Jump Performances in Boxing and Wushu

Gobind Singh*, ** J S Soodan* Baljinder Singh**

***Principal, ACPE, Mastuana Sahib, Sangrur (Punjab**
****Assistant Professor, ACPE, Mastuana Sahib, Sangrur (Punjab)**
***** Junior Scientific Officer, Biomechanics Department, SAI NS NIS Patiala**
E-mail: drsoodan@gmail.com

Abstract
The present study was conducted on 30 male players (fifteen male boxing players; age: 16.27 ± 1.28 years & fifteen male wushu players; age: 16.53 ± 1.25 years) comprising of inmates of Sports Training Centre and Centre of Excellence scheme of Sports Authority of India, training at NS NIS Patiala (India). The experimental protocol developed by Bosco et al., 1983 and Mcguigan et al., 2006 were used to measure the vertical jump performance of male boxing and wushu players. Test of significance of the differences was applied and data was judged at 0.01 and 0.05 level of significance. The analysis of data shows that the male wushu players performed better in vertical jump test parameters like the squat jump flight time, squat jump height, counter movement jump height, counter movement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI), Peak Power (0-15sec), Peak Power (45-60sec) and Mean Power (0-60sec) then male boxing players.
Key words: Vertical jump Performance, Peak Power, Muscular Power.

Introduction:
Coaches and trainers are greatly interested in developing training techniques designed to improve power performance of the legs and vertical jump ability (Blattner & Stuart 1978). With the increasing popularity of boxing and wushu, only a few studies have been conducted on the biomechanics of these sports. Compared with athletes engaged in other sport disciplines, boxers and wushu players had similar explosive power as wrestlers and basketball players (Fleck 1983). Muscle force and lower extremity strength have a significant influence on executing competitive performance i.e. different technical-tactical demands in many sports (Ivanovic et al., 2011). As a result, adequate preparation of leg extensors is highly important especially in sports which involve different jumping techniques, frequent changes of direction in the frontal and lateral plane, numerous high and long jumps (Čoh, 2010). Strength is the ability to produce maximal force, which is considered a basic motor ability and contributes to high performance in most physical activities and sports for prevention of injury (Coyle et al. 1981, Pangrazi 1999). Power is the product of muscular force and velocity or as an instantaneous value during a given movement. The latter, often referred to as peak power (PP), is typically associated with explosive movements such as sprinting, jumping and may be an important variable associated with success in a given discipline. The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process. Changes in peak power throughout the annual plan may be indicative of training status or adaptation to the workload and could be used to plan or adjust the training program based on the athlete's performance. The knowledge of mechanical power components of lower extremities of athletes of selected game disciplines can be of great interest for coaches and sport scientists to optimize talent selection in many sports disciplines. Therefore, the main aim of the present study was to conduct a comparative the vertical jump performances of male boxing and wushu players.

Material And Method

Thirty male players (fifteen male boxing players; age: 16.27 ± 1.28 years & fifteen male wushu players; age: 16.53 ± 1.25 years) briefed for the purpose of the study and the experimental protocol (Bosco et al., 1983, Mcguigan et al., 2006) comprising of inmates of Sports Training Centre and Centre of Excellence scheme of Sports Authority of India, training at NS NIS Patiala (India). All the risks involved were also explained to each player and voluntary consent was taken from them. Each volunteer was first subjected to physical examination that include measurements of corporal data like date of birth, age, training age, height, body mass and sports discipline. The participants performed an adaptation process previous to the vertical jump test so that error could be minimized.The vertical jump test measurement system consisted of a portable hand-held computer unit connected to a contact mat (Swift Performance, New South Wales, Australia). It has been previously reported that the system is reliable compared with a force platform **(**Cronin et al., 2001).

Vertical Jump Tests:

Three jumps: Squat jump (SJ), Counter movement jump (CMJ) and Continuous vertical jump Test for 60 seconds (CVJT) were performed according to the experimental protocol (Bosco et al., 1983, Mcguigan et al., 2006).

Explosive strength and endurance variables:

In this study, Eccentric Utilization Ratio (EUR) was calculated from vertical jump height (CMJ/SJ) or peak power (CMJ/SJ) by using Sayers et al (1999) peak power formula. Muscle Elasticity index was calculated from the jump height reached in CMJ and SJ Jumps (CMJ – SJ *100 / SJ) (Sayers SP, et al., 1999). The explosive strength and endurance variables were power peak (PP), mean power (MP) and fatigue index (FI). Concerning the CVJT (continuous vertical jump test), the PP was estimated by the mechanical power produced in the first 15 seconds of a 60-second work. The MP was estimated by the amount of work during a 60-second continuous effort. For PP and MP, the results were expressed in watts/kg (W/kg), according to the equation described by Bosco et al. (1983). The fatigue Index (FI) was calculated as the difference between the power peak (work produced in the first 15 seconds) and the mean power generated in the last 15 seconds of a continuous vertical jump work of 60 seconds relative to first 15 seconds peak power. The result was expressed in percentage (%).

Test procedure and data collection:

The participants were told to perform a 15-minute routine warm-up before performing the tests through stretching, running, coordination exercises and consecutive jumps (two sets of five vertical jumps). Three squat jumps (SJ) and three counter movement jumps (CMJ) were performed in random order on a jump mat connected to an electronic timer without the aid of an arm swing; this was standardized by having participants hold their hands on their hips. Two minutes rest period between attempts was established. The SJ involved the subject flexing the knee to approximately 90 degree maintaining the position for 3 seconds, and then jumping on the command ‘‘go.’’ The CMJ was performed under the same conditions but involved flexion of the knee followed immediately by extension of the legs. Test was executed following the original protocol for both jumps (Sayers SP, et al., 1999). On the next day, again the participants performed a 15-minute routine warm-up before the tests through stretching, running, coordination exercises and consecutive jumps (two sets of five vertical jumps).The participants were told to perform the continuous vertical jump Test (CVJT) during a work performed at maximal effort, with no pauses between jumps for 60 seconds. The subjects were told to keep chest in vertical position, with no excessive advance to avoid influence in the results; as well as to keep knees in extension during the flight, remaining with hands around waist. The participants were given stimulus to jump the highest as possible during the tests.

Statistical Analysis:

Mean and standard deviation for all the attributes age, height, body mass and biomechanical transients related to vertical jump tests were calculated. Test of significance of the differences was applied and data was judged at 0.01 and 0.05 level of significance.

Results & Discussion

Table 1. Mean±SD of Age, height & body mass of male Boxing & Wushu players

Discipline	Statistics	Age (years)	Height (cm)	Mass (kg)
Boxing (N=15)	**Mean**	16.27	174.40	59.27
	S.D.	1.28	6.20	8.61
Wushu (N=15)	**Mean**	16.53	171.27	57.00
	S.D.	1.25	7.43	9.24

Table 2. Shows mean, S.D. and t-value of Vertical Jump performance variables of the three vertical jump tests of male Boxing & Wushu players

Groups	Statistics	Squat Jump (SJ)		Counter Movement Jump (CMJ)				Continuous Vertical Jump test 60 seconds(CVJT) Mechanical Power (w/kg)			
		JH (cm)	Flight Time (Sec)	JH (cm)	Flight Time (Sec)	EUR	EI	PP (0-15)	PP (45-60)	MP (0-60)	FI
Boxing	**Mean**	22.73	0.43	26.53	0.46	1.12	18.03	16.93	10.88	13.77	35.32
	S.D.	3.75	0.04	3.23	0.03	0.07	12.21	2.75	2.35	2.29	12.60
Wushu	**Mean**	29.40	0.49	32.93	0.52	1.10	12.47	20.83	11.97	15.71	42.37
	S.D.	5.03	0.04	5.04	0.04	0.05	5.72	4.10	3.43	2.76	12.80
	t-value	3.80**	3.62**	4.02**	4.31**	0.79#	1.55#	3.70**	1.00#	2.33*	1.29#

*****significant at the 0.05 level; ** significant at the 0.01 level; #non-significant
JH - Jump Height; FT-Flight Time; EUR-Eccentric Utilization Ratio; EI-Elasticity Index; PP- Peak Power; MP- Mean Power; FI - Fatigue Index

Significance difference was observed between the various vertical jump performance parameters of male boxing and wushu players.The Francisco et al., (2010) observed that the average squat jump height 15.8±4.2cm, flight time 357±44.4msec, countermovement jump height 16.9±4.8cm, flight time 369.0±49.9msec and elasticity index 7.1±3.2 for male table tennis players (age 11.32±1.82years). Whereas in the present study the average value of squat jump height 22.73±3.75cm, flight time 430±40msec for male boxing players & squat jump height 29.40±5.03cm, flight time 490±40msec for male wushu players, countermovement jump height 26.53±3.23cm, flight time 460±30msec for male boxing players & countermovement jump height 32.93±5.04cm, flight time 520±40msec for male wushu players was observed.

The Eccentric Utilization Ration (EUR) has been suggested as a useful indicator of power performance in athletes. McGuigan et al., (2006) observed the average value of Eccentric Utilization Ration (EUR) 1.03±0.20 for male soccer players, 1.00 ±0.17 for softball male players, 1.03±0.20 for football male players & 1.01±0.20 for rugby male players. In the present study the average Mean Power (0-60sec) recorded during the vertical jump test for boxing players was 13.77±2.29w/kg & for wushu players was 15.71±2.76w/kg whereas Bosco et al. 1983 found that average Mean Power (0-60sec) for school going Boys (age 17.3±0.8 years) was 22.2±1.8 w/kg. Jefferson et al., (2007) found the average Peak Power (0-15sec) 27.76±3.78w/kg, Mean Power (0-60sec) 19.56±2.59w/kg & fatigue index (%) (FI) 48.60±7.01 for male volleyball players (age 19.01±1.36 years). In another study by Jefferson et al., (2006) of the Intermittent vertical jump tests (IVJT) observed the average Peak Power (0-15sec) 24.68±2.70w/kg, Mean Power (0-60sec) 18.79±2.23w/kg & fatigue index (%) 57.50±9.51 for the male handball and basketball players (age of handball players 25.74±4.71years & basketball players 18.60±0.77years). In the present study the male wushu players performed better in vertical jump test parameters then the male boxing players.

Conclusion

The analysis of data shows that the male wushu players performed better in vertical jump test parameters like the squat jump flight time, squat jump height, counter movement jump height, counter movement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI), Peak Power (0-15sec), Peak Power (45-60sec) and Mean Power (0-60sec) then male boxing players which may be due to the differnce in length of training and effect of specificity of training in particular sport.Jumping test is possibly a useful tool in evaluating the mechanical power of the leg extensor muscles during explosive stretch-shortening type exercises in boxing and wushu players. The potential applications are to screen the changes in variables of mechanical power throughout the of monitoring the athlete's effectiveness of training and making the adjustments to the training program of individual player, depending on the test results.

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Assessment Of Resting Pulse Rate And Anxiety Profile Of The Players Belonging Different Ball Games

MR. SUMAN GHOSH
(Students of M. Phil. BVDU, Pune, Maharashtra)
DR. KUNTAL THAKUR
(Asst. Professor, Khejuri College, Purba Medinipur, West Bengal)

Abstract
Background: Anxiety and resting heart rate are inter-related psycho-physiological variable and they have adverse effects in sports performance. Purpose: The purpose of the present study was to find out that the significant difference among different ball games players in comparing resting heart rate and anxiety profile. The investigators also find out the relationship of resting pulse rate and anxiety profile of the players of different ballgames. Methodology: Total sixty (N=60) inter-versity players such as twenty footballers (n=20), twenty volleyballers (n=20) and twenty basket ballers (n=20) were selected at randomly as the subjects of the present study. The age limit of subjects was from 18 to 25 years. Sports competitive anxiety test (SCAT) developed by Rainer Martin, 1977 which was employed for all the subjects of all three groups. Heart rate was measured by pulse palpation. The pulse rate is measured by counting the beats in a set period of time. Analysis of varience was applied to determine the significant difference of the anxiety variable and resting pulse rate. Post Hoc test was applied in case of significant difference was obtained. Further person product movement correlation was applied to determine the relationship between the selected variables and ball games players. Result: The result of the present study revealed that there was no significant difference was found between resting heart rate and anxiety profile among three ballgames players. Conclusion: There was no significant difference was found between resting heart rate and anxiety profile among different ballgames players.
Keywords: Anxiety, Resting heart rate.

Introduction:

Today's modern era of sports, psychological aspects of the player play a major role in training and giving high performance. Anxiety is always present in sports. In simple words it is a type of emotional disturbance. The level of anxiety and pulse rate may differ from individual to individual even among the players of different ball games.Anxiety may be motivating force or it may interfere with successful athletic performance. As a positive motivating force it can be instrumental in motivating the athletes to work harder to find new and to help to set goals. As a negative motivation anxiety may interface with productive as well as constructive thinking. Athletes may attempt to handle anxiety by denying mistakes, denying their weakness and thus denying working hard. This can lead to the development of poor work habits, or athletic technique. These often lead to failure and in turn, lack of confidence and increased anxiety.

When an athlete is anxious, the heart rate increases; the blood pressure becomes elevated and the breathing becomes more rapid and oxygen consumption increases. He has feeling of fatigue or weakness etc., even he may yawn frequently, begin to tremble or engage in nervous activity (bite his nails wriggle his leg twin his hair act.) or he may sweat profusely, urinate frequently etc. The anxiety level of different people to the similar situation is entirely different.

Methodology:

Total sixty (N=60) inter-versity players such as twenty footballers (n=20), twenty volleyballers (n=20) and twenty basket ballers (n=20) were selected at randomly as thesubjects of the present study. The age limit of subjects was from 18 to 27 years. Sports competitive anxiety test (SCAT) developed by Rainer Martin, 1977 which was employed for all the subjects of all three groups. Heart rate was measured by pulse palpation. The pulse rate is measured by counting the beats in a set period of time. Analysis of varience was applied to determine the significant difference of the anxiety variable and resting pulse rate. Post Hoc test may applied in case of significant difference was obtained. Further person product movement correlation was applied to determine the relationship between the selected variables and ball games players.

Table-1, Statistical Significant Difference among the Ballgames Players on Anxiety and Resting Heart Rate

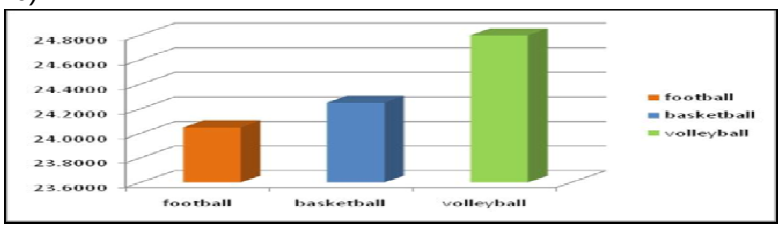
		Sum of Squares	df	Mean Square	F	Sig.
Anxiety	Between Groups	6.033	2	3.017	0.632	0.535
	Within Groups	271.900	57	4.770		
Resting heart rate	Between Groups	1.233	2	0.617	0.032	0.969
	Within Groups	1109.100	57	19.458		

Table- I, the statistical significant difference among the 60 ballgames player depicts that.

In case of anxiety variable the statistical results collating on the 60 ballgames players showed that the Sum of square between the groups is 6.03, where the degree of freedom is 2 and mean square is 3.017. The Sum of square within group the group is 271.90, where the degree of freedom is 57 and mean square is 4.770. The obtained F value for anxiety is 0.632 which is insignificant as significant value is less than (P>0.05).In case of resting heart rate variable the statistical results collating on the 60 ballgames players showed that the Sum of square between the groups is 1.23, where the degree of freedom is 2 and mean square is 0.617. The Sum of square within group the group is 1109.10, where the degree of freedom is 57 and mean square is 19.458. The obtained F value for resting heart rate is 0.032 which is insignificant as significant value is less than (P>0.05).

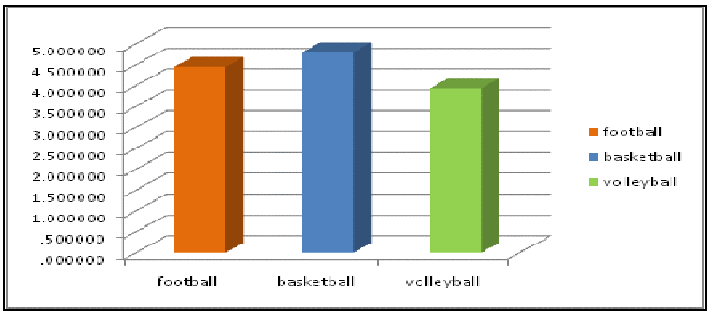
It is further interpreted that as the F value for anxiety (0.632) and resting heart rate (0.032) were found to be less to bring statistical significant difference among the ballgames players. Hence, the hypothesis constructed at beginning of the study that there would be*no significance difference among* the players of different ball games in relation to resting pulse rate and anxiety is retained.

Graph-1, The mean graph of anxiety variable of selected ballgames players *.i.e*. football (20), basketball (20) and volleyball (20).



Mean Difference of Ballgames Players on Anxiety Variable

Graph-2, The mean graph of resting heart rate variable of selected ballgames players *.i.e*. football (20), basketball (20) and volleyball (20).



Mean Difference of Ballgames Players on Resting Heart Rate Variable

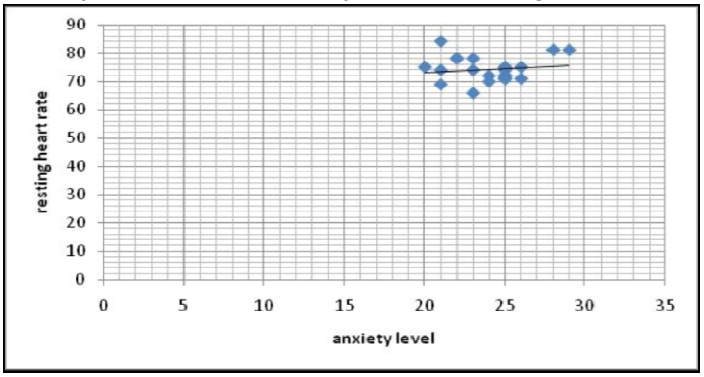
Table-II, Statistical Significant Correlation among the Ballgames Players on Anxiety with Resting Heart Rate

		Football players resting heart rate	Basketball players resting heart rate	Volleyball players resting heart rate
Footballer anxiety	Pearson Correlation Sig. (2-tailed) N	0.135 20		
Basketball anxiety	Pearson Correlation Sig. (2-tailed) N		-0.005 20	
Volleyball anxiety	Pearson Correlation Sig. (2-tailed) N			0.214 20

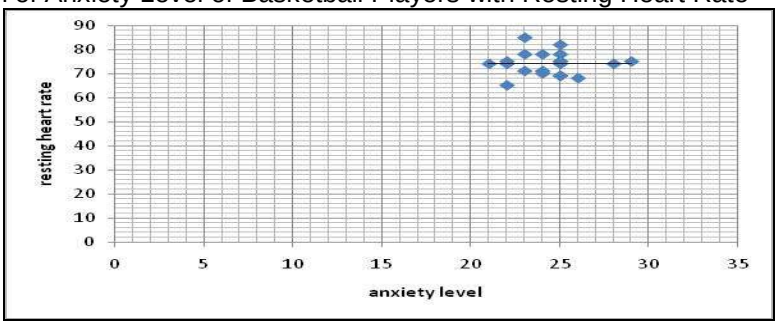
Table-1I of statistical significant correlation among the 60 ballgames player on anxiety with resting heart rate illustrates that the obtained correlation values between the anxiety level of 20 football players with the resting heart rate is 0.135 which is very less to bring the significant relation (P>0.05). The obtained correlation values between the anxiety level of 20 basketball players with the resting heart rate is -0.005 which is very less to bring the significant relation (P>0.05). The obtained correlation values between the anxiety level of 20 volleyball players with the resting heart rate is 0.214which is very less to bring the significant relation (P>0.05).

The correlation graphs between the anxiety level of selected ballgames players with their resting heart rate is present in graphical representation from 1-3.

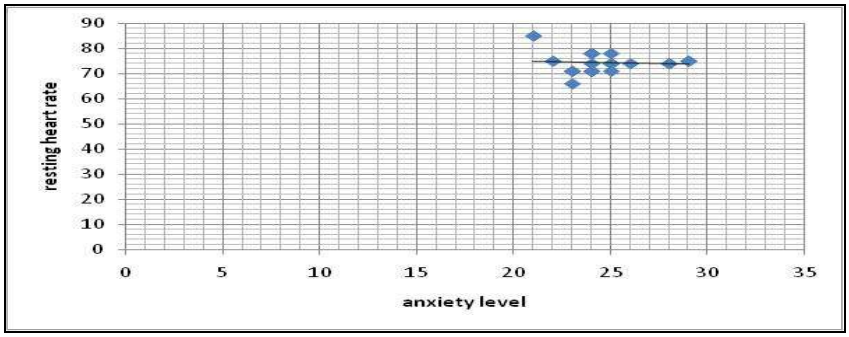
Graph-3, Correlation of Anxiety Level of Football Players with Resting Heart Rate



Graph-4, Correlation of Anxiety Level of Basketball Players with Resting Heart Rate



Graph-5, Correlation of Anxiety Level of Volleyball Players with Resting Heart



It is further discussed that as the correlation 'r' value for anxiety with the resting heart rate were found to be less to bring statistical significant relationship among the ballgames players. Hence, the hypothesis constructed at beginning of the study that there would be *no significance relationship* among the players of different ball games in relation to resting pulse rate and anxiety sustained.

Discussion Of Findings:

The study was carried out with the aim to compare the selected psycho physiological variables among the ball games players. The selected ball games were football, basketball and volleyball whereas; the variables were anxiety and resting heart rate. The previous studied revealed that players with lower resting heart rate were able to perform well in the competition due to their control on cognitive ability. Where ever players feel highly tense or nerves his heart rate increase dynamicity which is having negative effects on the performance and similar vice versa were found

In this study collating on 60 university ball games players shows that the F value for anxiety (0.632) and resting heart rate (0.032) were found to be less to bring statistical significant difference among the ballgames players. Hence, there was no difference were among the selected ball game players.

Conclusion:

Under the conditions of the present study the results seem to conclude that

There was no significant difference found among inter-versity footballers volleyballers and basketballers in comparing anxiety profile.

There was no significant difference found among inter-versity footballers volleyballers and basketballers in comparing resting heart rate.

The insignificant relationship was found between anxiety and resting heart rate among inter-versity football players.

The insignificant relationship was found between anxiety and resting heart rate among inter-versity basketball players.

The insignificant relationship was found between anxiety and resting heart rate among inter-versity volleyball players.

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Empowerment Of Women Through Sports And Physical Activity

Dr. Hema Ladha (M.A., M.P.Ed., Ph.D), Sports Officer,
Shri Cloth Market Girls Commerce College, Indore

Introduction:

The purpose of the research article is to shed light on the benefits which women and girls gain through participation in sports.The word Empowerment refers to increasing the spiritual, political, social, educational, gender, or economic strength of individuals and communities. Empowerment of women is necessary through any means, whether it is education, health, nutrition, social, economical or physical. A woman can be dynamic in many roles she plays. Self decision regarding education, participation, mobility, economic independency, public speaking, awareness and exercise of rights, political participation and many more factors ensure woman empowerment. Swami Vivekananda believed that women could excel in all fields of human activity, if treated at par with men, and proper education and training. He was sure that women could be empowered through education and by giving them equal opportunities in different walks of life. Woman is both Maha-Maya and Maha-Shakti, and holds the key to the world.

As Swami Vivekanand wrote that it is very difficult to understand why in this country so much difference is made between men and women, whereas the Vedanta declares that one and the same conscious self is present in all beings. In short, woman empowerment is the breaking of personal limitations. Sports and Physical Education play important and major role in all these segments of women empowerment.

We live in a world which changes so quickly that it is not at all a surprise that the image of women in sports is also changing quickly. However, it hasn't been that long since women were not even socially permitted to participate in sports or any kind of physical activity. In some places, women are not allowed to participate in the sport activities. For example, "In Afghanistan, women were allowed to participate in sports after the fall of the Taliban regime in 2001. In Saudi Arabia, women and girls are barred from participating in sports and physical education. Saudi Arabia is one of the countries never to have sent a female athlete to the Olympics but overall image of women in sports has changed. Now women can not only participate in sports, but they can also excel at them.

In recent years, sports and physical activity as a strategy for the empowerment of women has been gaining recognition worldwide. 'Women win' is the first international organization with a sole focus of providing support for innovative sports and physical activity programmes for empowerment and creating a social movement around sports for the advancement of women's rights. The topic of women and physical education has always been deeply researched. Everyone knows the issues which influence the women's participation in physical activity and sports and the potential benefits are also well known. The issues no doubt may be complex at strategies, professional level or even at personal and social levels. It is seen that girls and women as group experience inequality in relation to boys and men, although all females do not experience inequality to the same degree, so strategies need to be taken for some specific groups.

Sports belong to all human beings It is important to women and men as sports provide opportunity to learn, to experience success, team work and moments of excellence. Stress plays a big role in weight gain, so it is important that you practice stress reduction therapy such as Yoga, Aerobics, Deep Breathing and Meditation or play any sport or game. Physical Activity is of course the key. Regular exercise decreases the risk of Breast Cancer and Heart Disease by 50% and Colon Cancer by 60%.

Girls and women face disproportionate number of life challenges, which reduce their ability to achieve their full potential. Recent studies show that despite formal guarantees of equality, the overall rate of progress for women, particularly those from the poorest and most marginalized regions of the world has been slow.

Empowerment of women through games and sports helps in maintaining the physical, mental and social health of the women. Participation in games and sports makes them physically active; improve their health, positive feeling of well being, prevention of chronic disease, and prevention of osteoporosis.

Osteoporosis is the deterioration of bone tissue leading to loss of bone mass and a higher risk of bone fractures. Women are at higher risk for osteoporosis than men. The global lifetime risk of bone fracture in 50-year-old women is 40%, similar to the risk of coronary heart disease. In 1990, 1.7 million people worldwide experienced hip fractures. This number is expected to increase to six million by 2025. Physical activity, in combination with calcium and vitamin D, helps build bone mass. Physical activity increases force on bones and bones respond by increasing their mass so that the force is spread over a larger area. Physical activity has a positive effect on bone health across the age spectrum, but this effect is greatest in previously inactive individuals.Weight-bearing exercise, particularly resistance exercise, is the most effective form ofphysical activity for achieving this effect.Regular physical activity is also an effective secondary prevention strategy. Research indicates that exercise training is effective in improving bone density in older women (75–85 years) with low bone mineral density and slowing the rate of bone loss(osteoporosis) in early post-menopausal women.

Further, sports and games relieves emotional strain, makes them to think logically, reduces anxiety, depression and enhance decision making, organisational and management skill over time, foster self-esteem and empowerment offers more freedom in comparison to past opportunities for leadership and achievement, economic and social development, encourages women to form clubs and hence have a career in sports. One of the very important factors is that the Gender violence and discrimination can be reduced if more females participate in sports. Further, sports help in providing equal status to women.

Benefits of sports for girls and women:-

In recent years sports and physical activities as a strategy for the empowerment of girls and women has been gaining recognition worldwide.

Women who play sports or participate in physical activities have a more positive body image, build life skills, confidence and may create social networks than women who do not participate.

2. Women who participate in sports and physical activities have higher self esteem and pride in them. Sports involvement can play a significant role in promoting the physical and mental wellbeing of women, fostering opportunities for their leadership and achievement, initiating social inclusion and social integration of women and challenging gender norms.

3. Women involvement in sports can make a significant contribution to public life and community development.

4. Teenage sports participation may help prevent osteoporosis. “Four hours a week or more of such sports, played by men during their teens and 20s, increases bone mass and might provide some protection from developing osteoporosis later in life, according to a new study in the May, 2012 issue of the Journal of Bone and Mineral Research.”

5. Women who play sports have higher levels of confidence and self esteem and lower levels of depression. Women involved in sports feel better about themselves, both physically and socially. It helps to build confidence when you see your skills improving and your goals becoming reality.

6. Involvement of women in sports and physical activities creates merits of inspiration, faith, hope and courage.

7. Physical Exercises in the form of walking, playing or watching any game which they prefer may make a world of difference to their lives Experts agree that involvement in sports and physical activity can potentially offer a wide range of life benefits for women.

KIRAN BEDI, India”s first and highest ranking Officer who joined the Indian Police Service in 1972, who is also a social activist says, “Sports and education were the key pillars of our upbringing.”

THE WOMEN’S SPORTS FOUNDATION (WSF) is an educational non profit organization founded in 1974 by tennis legend Billie Jean king. Its stated mission statement is – “To advance the lives of girls and women through sports and physical activities.” Indian women have achieved great laurels for the nation in every sport. Some women sports icon of India, engine of sports are P.T. Usha (Athletics) Kunjarani Devi (Weightlifting), Dianaedulji (Cricket), Induprui (Table Tennis), Preetamrani (Hocky), Sania Mirza (Tennis), Karnam alleshwari(Weightlifting), Saina Nehwal (Badminton).

Success comes with ability, boldness and courage. Success, ultimately, essentially and above every thing, fully depends on the ability, boldness as well as courage. The starting point of success, truly then is positive thinking, faith in self with hope and optimism. We are bound to face obstacles in root to success, but with courage and boldness this could overcome smoothly. Faith, courage and boldness create ability and boost one ahead to achieve the ultimate goal.

Today, no doubt, women participate professionally in practically every major sport, though the level of participation typically lessens when it comes to the more violent contact sports. Moremeasures need to be taken to increase and improve the participation of women and girls in sports for their better enhancement and empowerment.

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Leadership and Management

Dr. G.Shyam Mohan Reddy, Associate Professor,
Department of Physical Education,
Chaitanya Bharathi Institute of Technology, Hyderabad.

Introduction:

Leadership involves influencing task objectives and strategies influencing commitment and compliance in task behavior to achieve these objectives, influencing group maintenance and identification and influencing the culture of organization. Leadership is an ability to get men to do what they don't like to do and like it.

Leadership is not gender specific

Leadership is nurtures with age and experience

Leadership can be developed through mentoring and training

Leadership as a Process:

First, the processes involved are such things as influence, exemplary behavior and persuasion.

Secondly, it involves interaction between actors who are both leaders and followers.

Thirdly, the nature of interaction is affected by the situation in which it takes place. For example, the interaction between a commander and troops on the battlefield is different in important respects from the interaction between a team leader and a group of scientists in a laboratory.

Finally, the process has various outcomes – most obviously the achievement of goals, but also intermediate outcomes such as the commitment of individuals to such goals, the enhancement of group cohesion and the reinforcement or change of organizational culture.

Understanding Leadership: People change, Situation change. So, should the leadership practices. Leaders are not just about management theory where situation do not largely change and mostly remain the same. Thus, u can not just harp on performance graphs and blame people for the change in trends. When situations are beyond influence, you need to make sure that the sailing is smooth when it comes to the productivity and performance of the team.

Leadership – "The process of influencing the activities of an individual or a group in efforts towards the achievement of goals in a given situation". The source of influence may be formal or in formal. It emerges from within a group as well as being formally appointed.

Leaders perform various roles such as planning and implementing, evaluating, monitoring, controlling, motivating, managing conflicts, organizing task groups, mobilizing human and financial resource and above all, setting an example to the group.

Leadership is sometimes viewed as head ship as in a formal position such as that of chairperson, director or politician. A person who lacks a leadership may still be appointed as leadership. In due course, this person may be replaced by the new leader if he/ she does not to exercise the functions of leadership in such a away as to satisfy the needs of the group or the community.

Spheres of influence: In our society different leader influence different spheres of activity. Some will be opinion-leader on only one topic (monomorphic leaders); other will be opinion-leaders as a variety of topics (polymorphic leaders). It is important to understand in which area of knowledge an individual commands trust, respect and credibility.

Another facet of influence is that of its geographical extent. A leader may be influential at a district, shire, region, state, national or even international level. In other words the influence can be specific to a topic or to a geographic region.

Today, leadership is on the agenda in a big way. Books on the subject are streaming on to the market, top industrialists are hailed as great leaders alongside the great military and political leaders of the age, and leadership 'gurus' have emerged from academic obscurity. Management is perfectly adequate when

things are routine and predictable; but when the organization hits turbulence and uncertainty, leadership is called for.
Seven attributes of leadership:
Technical competency
Conceptual skill
Track record
People skills
Taste
Judgment
Character
Special trait of Leadership
The trait approach basically states that you either have it or you don't, and the right person will be selected to fill formal positions. Some behavioral scientists however, have focused more on the behavior of effective leaders. May be there is something unique about leadership behavior; example is it more democratic than autocratic? This approach has been seen as more useful than the trait theory as it may provide more definitive answers on effective leadership, and suggests that people can be trained as leaders.
Five myths surrounding leadership:
Leadership is a rare skill
Leaders are born, not made. Not so
Leaders are charismatic
Leadership exists only at the top of the organization
The leader controls and directs. Again, not so.
Leadershipqualities:
The ability to build effective teams
The ability to listen
The capability to make decisions on his own
The ability to retain good people
The ability to surround himself with good people.
Leadership dependent or contingent on many factors:
The Styles and Roles Approach: This approach analyses the leadership roles and behavioral styles of successful leaders. It acknowledges that group situations are often different, and emphasizes the need foe flexibility in styles and roles. A person must play many roles and employ different styles in order to be an effective leader.
The Activator: When a person plays the part of an activator, the chosen behavior style is active and flexible. He is interested in involving other members of the group in a problem or situation and shares the decision making process, operating on the principle that "People support what they help create".
The Controller: When a leader plays this role, the source of power comes from rewards and punishments. He attempts to frighten the group into action and the leadership behavior is rigid but active.
The Martyr: In this role, the leader attempts to induce guilt feelings in the followers. Martyrs try to impose their own values and policies on everyone.
The Cacalier: In this role, the leader wins group support through fun and games. The behavioral style varies between active and passive and has too much flexibility.
The Abdicator: The abdicator avoids responsibility, postpones action, takes no risks, and often with draws from the group. The style is passive and usually rigid, but it can be flexible on occasions.

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Stress And Gender – Coping Mechanism

Ms. R.Rajeswari,
Assistant Professor,
Department of Physical Education,
Chaitanya Bharathi Institute of Technology, Hyderabad.

Introduction:

Stress is defined as a perturbation of the body's homeostasis. The common indices of stress include changes in: (i) Biochemical parameters such as epinephrine and adrenal steroids, (ii) Physiological parameters such as heart rate and blood pressure and (iii) Behavioral effects such as anxiety, fear and tension. In essence, stress is an umbrella term that encompasses physical trauma, strenuous exercise, metabolic disturbances and anxiety as they produce challenges to the body's homeostasis. The wear and tear that stressors subject our body too is termed as stress.

Stress is how people react to demands placed on them, and arises when there is worry about one's capacity to cope. Seventy-five to 90 percent of adult visits to primary care physicians are for stress-related problems. Stress occurs when you are incapable of handling a given situation. For instance, for soldiers constantly at the border, the situation is no longer so stressful. But for others, it would be. Stress is an agitated mind, a state that's caused by unfulfilled desire. Stress has nothing to do with an external situation.

Primary Causes: Although the causes of stress are myriad, we could loosely categorize these in to common and uncommon stressors. Common stressors comprise disease, academic stress, marital discord, separation or divorce, career stress, bereavement and unemployment. The uncommon ones include overcrowding, commuting, sleep deprivation, shifts, malnutrition, drug abuse, phobias, excessive exercise, noise pollution, etc.

Insidious Effects : Stress can be the culprit in palpitations, heart attacks, migraine and tension headaches, eating disorders, ulcers, irritable bowel syndrome, colitis, diabetes, backache, chronic fatigue syndrome, dermatitis, allergies, colds and coughs, asthma, insomnia, stammering, phobias, depression, premature aging …. The list is endless.

Stress can be subdivided into constructive stress and destructive stress:The former is positive and a good motivator. It increases productivity and efficiency, besides providing stimulation. Destructive stress is counterproductive and detrimental to both psyche and body. Needless to say, stress affects a negative person's performance in a well-defined manner. This effect is referred to as the Yerkes-Dodson law, which states that as arousal increases, performance improves, and with further increase in arousal, performance drops. Stress also affects their behavior by boosting the activity level. Besides, the individual attempts to engage in coping behavior.

Stress and Gender:Does stress tend to affect the male more than the female? Opinions vary, since there are differentiating factors between the sexes. AU parameters being equal, however, the preponderant view is that women are more adept at handling stress, thanks to better coping mechanisms.

Females handle stressors better than man do, opines – Dr.Chugh.

Ex-journalist AnandiIyer echoes similar sentiments: "Women tend to have more stress because they have to manage two worlds, home and career. So they are stretched and stressed a little more. But women manage to balance both worlds and have more tenacity. Men tend to flap, while women deal with stress more rationally."

Malvika Joshi, a general manager at Fibcom India, thinks otherwise: "I feel men handle stress equally well as women. Men are more composed and don't show stress. Women show it." But Janki Chopra perceives no gender benders: "Whoever has a mind that's not within control will have stress.

Coping strategies: Understanding stress-causing attitudes is crucial to determining the coping mechanisms to use. Perfectionism, idealism and control could be major causes of stress not only for an individual but also for people around him. It is imperative to replace a stress-building attitude with a stress-busting one.

If you constantly seek to control the situation and achieve a 'perfect ten', don't. Delegate tasks to subordinates. Strive for excellence, not perfection. Excellence is a positive aspiration. Except in a high-perception industry, perfectionism can be a very negative attribute that induces stress in oneself and others.

A positive attitude can be dramatically reduce stress and transform an individual's life. Redefine priorities, reassess abilities and potential, have realistic and flexible expectations, regular exercise, ahealthy lifestyle and a balanced diet.

According to Joe Rodrigues, the Director of Breakthrough Communication Services in Mumbai: "The pillars of stress management are meditation, physical exercise and proper eating habits." In daily life, people use two kinds of coping strategies – positive or negative. Positive coping includes time management, proper nutrition, healthy relationships and social support, regular exercise, recreational activities, sufficient sleep, vacations, meditation, relaxation techniques, a sense of humor, auto-suggestion, self-hypnosis, creative visualization, massage and yoga, to name a few.Negative coping includes smoking, drinking, drugs, food, tranquilizer and stimulants like tea and coffee.

At the fag end of this piece, we wouldn't labor the point as to which strategies a reader should use. The choice is yours. And if making choices is a stressful activity for you, learn to view things backwards.

Remember: STRESSED spelt backwards is DESSERTS! Happy distressing!

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The Effect Of Selected Yoga Asana Training On Mental Health And Endurance Of College Male Students

Dr.Kunjikannan.R
HOD & Asst Professor
Dept Of Physical Education
Government Arts And Science College, Kulathoor, Neyyatinkara
Trivandrum

Abstract
Yoga has the characteristics particularly in their efforts to improve the human condition. Also, they aim to heal community members and the practitioners act as religious mediators. It works on all aspects of the person: the physical, mental, emotional, psychic and spiritual .The purpose of the study was to find out the effect of yoga on college level male to know the changes in mental health, physical fitness health related- endurance shown by both the groups. And in-order to serve this purpose 120 sedentary youth males who were selected from participating in one month yoga training programme from University College. They were divided into two groups of 60 youth male each. Group "A "underwent Training and Group" B "acted as Control Group. The yogic exercises showed highly significant improvement in the mental health variable from pre to post test of experimental group compared to control group.The yogic exercises showed significant improvement in the endurance variable from pre to post test of experimental group compared to control group.

Introduction
Yoga is a science of right living and it works when integrated in our daily life.. The word yoga means 'unity' or 'oneness' and is derived from the Sanskrit word 'yuj' which means 'to join'.We might already have an idea of what Yoga is but to understand it better, we have to know what it has become as well as its roots and beginnings. A quick look at the history of Yoga will help us appreciate its rich tradition and who knows, it might help us incorporate Yoga into our lives. Earliest archaeological evidence of Yoga's existence could be found in stone seals which depict figures of Poses. The stone seals place Yoga's existence around 3000 B.C .Scholars, however, has a reason to believe that For a better discussion of the history of Yoga, we could divide it into four periods: the Vedic Period, Pre-Classical Period, Classical Period, and Post-Classical Period. Still many sports scientists are finding different effects of yoga thorough experimental way.

STATEMENT
The purpose of the investigation was to examine the effect of yoga training on the mental health and endurance of college male students'

Definitions
Cardio respiratory fitness /Endurance are the ability to exercise the entire body for extended periods of time without undue fatigue. Endurance is the ability to do sports movements, with the desired quality and speed under the conditions of fatigue

Mental health- It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to her or his community.

Method

The purpose of the study was to find out the effect of yoga on college level male to know the changes in mental health, physical fitness health related- endurance shown by both the groups. And in-order to serve this purpose 120 sedentary youth males who were selected from participating in one month yoga training programme from University College. The importance of the study was explained to the subjects before getting their consent for the study. They were divided into two groups of 60 youth male each. Group "A "underwent Training and Group" B "acted as Control Group.

A) MENTAL HEALTH - TEST

For finding mental health of subjects mental health battery of Dr. Alpana sen gupta and Dr. Arun Kumar Singh are used, values are collected through (yes /no) procedure.. This questionnaire consists 130 asset of items were retained for test. Generally normal examine having average mental health takes about 25 minutes in giving complete answers. Scoring the answers of those items which tally with the answers given in the scoring key would be given a score. If they don't tally they will be given a score of zero.

B) 1.5 MILLE RUN FOR ENDURANCE

The endurance (Cardiovascular) test measured by 1.5 mile run Health related physical fitness test of was taken to determine the cardiovascular efficiency of the subjects. (Cardiovascular fitness) The purpose of these distance runs is to measure maximal functions and endurance of the cardio respiratory system. Students are instructed to run the required distance. A signal, "Ready, go, "or a whistle is used to begin the test. Endurance running is widely accepted as a valid method of measure cardio respiratory fitness. (AAHPERD,1984).. The 1.5 mile runs are scored to the nearest second.

STATISTICS AND CALCULATIONS

In this session each variable's data were first analyzed through Anova, then Ancova and t- test. the analysis report including. Level of Significance chosen was 0.05 for Anova, Ancova. Abbreviations of tables are CG-control group, EG-experimental group, SV-source of variance, MS- mean square.SS- Sum of squares, MS-Mean square.

A) MENTAL HEALTH - TEST

Table 1

Mental health	CG	EG	MD	SV	SS	df	MS	F value	P value
Pre test	68.44	68.43	4.37	Between	4.03	1	4.033	.056	.811
				With in	8274.33	118	70.121		
				Total	8278.37	119			
Post test	68.43	80.43	13	Between	5070.00	1	5070.00	78.45	.000
				With in	7537.47	118	63.88		
				Total	12607.47	119			
Adjusted post test	68.60	80.27	12.67	Between	4814.46	1	4814.46	635.24	.000
				With in	885.50	117	7.57		
				Total	5699.96	118			

*Significantat0.05 level

F0.05 (119) =3.92

Post test scores f value is 78.45> f 0.01(1,118) ,therefore there is a statistically significant difference of post test mean mental health score of control and experimental group at 1% level (P < 0.01).The f value obtained from a ANCOVA is 635.24,which also shows that the adjusted post test mean difference is statistically significant at 1% level (P<0.01).

B) 1.5 MILLE RUN FOR ENDURANCE

Table-3

EN	CG	EG	MD	SV	SS	DF	MS	F value	P value
Pre test	26.47	26.61	.20	B	1.20	1	1.21	.187	.665
				W	757.00	118	6.42		
				T	758.20	119			
Post test	26.50	26.53	-.05	B	.094	1	.094	.016	.902
				W	725.68	118	6.15		
				T	725.77	119			
Adjusted post test	26.71	26.46	-.24	B	1.89	1	1.89	31.69	.000
				W	6.98	117	.06		
				T	8.87	118			

*Significantat0.05 level

F0.05 (119) =3.92

From f-table the 5% level critical value for f distribution with (1,118) df is 0.05=3.92 and that at 1% level f 0.01 is 6.85.since f<f0.05(1,118),there is no statistical significance in the difference between mean pre scores of experimental and control groups (p>0.05). To examine whether there is any statistically significant pre test to post test mean difference of endurance scores in the experimental group, paired t test was carried out. The results are shown in table

Pre test	Post test	t value	P value
26.61	26.54	1.98	.053

*Significantat0.05 level

F0.05 (119) =1.97

From table-4 the calculated t value for pre test and post test endurance scores between experimental groups is 1.97. The central value obtained from t- distribution with 59 degrees of freedom at level 0.01, t (59) = 2.58 and at level 0.05, t (59) = 1.96. Since t>01 t (59), there is a statistically significant pre to post test mean difference score.

SELECTED YOGA ASANAS

1	Suryanamaskar	2	Svasana	3	Trigonasana.	4	Vajrasanasukasana,
5	Garudasana.	6	Padmasana	7	Simhasana.	8	Matsyasana
9	Gomukhasana,	10	Ushtrasana.	11	Viparithakarni	12	Halasana
13	Bujangasana.	14	Salabasana	15	Veebareetasalabasana.	16	Makrasana
17	Dhanurasana	18	Chakarasna	19	Paschimothasana	20	Matsyendrasana

Results And Disscussion

In mental health the yogic asana showed highly significant improvement change shown in experimental group they were significant at 1 %percentage level also.

In the case of endurance the post test results had shown very low level significant improvement .

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Prediction Of Football Playing Ability Through Selected Motor Fitness Components Among School Boys

Dr. S. CHIDAMBARA RAJA
Associate Professor,
Department of Physical Education and Sports Sciences, Annamalai University

Abstract
The study was confined to the school level male football players those who were participating in the Inter School Zonal Football Tournament held around Thanjavur district during the year 2013 – 2014. One hundred and twenty school male football players from ten schools (n = 12), with age group between 16 and 18 years, were selected. The selected criterion variables, such as, passing ability, agility and coordinative ability were selected for the present study. The passing ability was assessed by Mor-Christian General soccer ability skill test battery, agility was assessed by shuttle run and coordinative ability was assessed by Hexagonal Obstacle test. The Pearson Product Moment correlation and multiple regression equation were used to find out the relationship between the selected football playing ability such as, passing ability and motor fitness components such as, agility and coordination. The result of the study shows that there was a significant relationship between the passing ability and selected motor fitness components such as, agility and coordination.
Key Words: Football playing ability, motor fitness components, passing, agility, coordinative abilities and Pearson Product Moment Correlation

Introduction

The origin of football / soccer can be found in every corner of geography and history. The Chinese, Japanese, Italian, Ancient Greek, Persian, Viking, and many more played a ball game long before our era. The Chinese played "football" games date as far back as 3000 years ago. But it was in England that soccer / football really begin to take shape. It all started in 1863 in England, when two football association (association football and rugby football) split off on their different course. Therefore, the first Football Association was founded in England.

Passing allows your team to keep possession of the ball and find holes in the opposing team's defence. As a team, try to keep the ball moving and spread the defence, taking advantage of open spaces. The best way to accomplish this is to play one and two touch soccer. Strike the ball with pace so that your team-mate doesn't have to wait on the ball. A firm pass is more likely to arrive at its destination. In terms of teamwork, the player who is the intended target of your pass must go to the ball. At the same time though, make your team-mate look good by digging out a bad pass and keep possession.

Agility is generally defined as the ability to change the direction quickly and effectively while moving as nearly as possible at full speed. It is depended primarily on strength, reaction time, speed of movement and specific muscle co-ordination.

Coordination makes an important contribution to sports and games. It makes the precision and economy of any motion or sequence of motion involved in muscular activity. These engaged practically in physical education, sports and dance, either as teachers or as participants, often maintain that the development of coordination is an important factor in the accomplished performance of wide range of physical activities.

Methodology

To achieve this purpose of the study, various football teams participated in the Inter School Football Tournament (Zonal Level) for boys were selected. One hundred and twenty school male football players from ten schools (n = 12), were selected. The selected schools were, The Town Higher Secondary School, Kumbakonam, Banadurai Higher Secondary School, Kumbakonam, Native Higher Secondary School, Kumbakonam, Don Bosco Higher Secondary School, Kumbakonam, Al Ameen Matriculation Higher Secondary School, Kumbakonam, Little Flower Boys Higher Secondary School, Kumbakonam, St. Patrick Higher Secondary School, Kodavasal, Government Boys Higher Secondary School, Kodavasal, Government Boys Higher Secondary School, Kumbakonam and Government Boys Higher Secondary School, Dharasuram were selected as subjects and the age of the subjects were ranged between 16 and 18 years. The selected criterion variables, such as, passing ability, agility and coordinative ability were selected for the present study. The passing ability was assessed by Mor-Christian General soccer ability skill test battery, agility was assessed by shuttle run and coordinative ability was assessed by Hexagonal Obstacle test. The Pearson Product Moment correlation and multiple regression equation were used to find out the relationship between the selected football playing ability such as, passing ability and motor fitness components such as, agility and coordination.

Analysis of Data

The data on passing, agility and coordination are analyzed and presented in table – I.

Table – I

Descriptive Statistics for all Selected Variables

Variables	Mean	S.D.
Passing	5.91	0.820
Agility	12.3028	0.22591
Coordination	14.70	2.069

Table – II

Correlation Between Selected Criterion Variables of Male School Football Players

	Passing	Agility	Coordination
Passing	1.00	- 0.415*	0.608*
Agility	- -	1.00	- 262*
Coordination	--	--	1.00

From the scores exhibited in Table – IV following inferences were drawn:

The correlation between passing and agility was positive and r = 0.238 and it was as much as higher than the – 0.415 (p > 0.01) and found to be statistically significant.

The correlation between passing and coordination was positive and r = 0.608 (p > 0.01) and it was as much as higher than the 0.000001 and found to be statistically significant.

The correlation between agility and coordination was positive and r = - 0.262 (p > 0.01) and it was as much as higher than the 0.004 and found to be statistically significant.

It is evident from the table – II that there is a significant relationship between passing and agility and coordination of male football players in each variable separately. Multiple correlations were computed by backward selection method on data obtained for the male football players in passing and the results were presented in Table - III.

Table – III

Multiple Correlation Co-efficient for the Predictors of Passing Ability of Male School Football Players

S. No	Variables (Backward Selection)	R	R Square	Adjusted R Square	R Square Change
1.	Agility and Coordination	0.663	0.440	0.430	0.440

From the table – III is found that the multiple correlation co-efficient for predictors, such as, agility and coordination is 0.663, which produces highest multiple correlations with passing ability of the male school football players. R square values show that the percentage of contribution of predictors to the passing ability (dependent variable) is in the following order.

1. About 66% of the variation in passing ability was explained by the regression model with two predictors, such as agility and coordination.

Further, multiple regression equation was computed and the results are presented in table – IV

Table – IV

Regression Co-efficient for the Predicted Variables with Passing Ability of Male School Football Players

Sl. No.	Variables	B	Std. Error	Beta Weightage
	Constant	15.028	3.336	
	Agility	- 0.995	0260	- 0.274
	Coordination	0.12	0.028	0.536

From Table - VII, the following regression equations were derived for school level football players with dependent variables.

1. Regression Equation in obtained scores form $= X_C$

$X_C=(- 0.995)X_1+ (0.12) X_2 + 15.028$

Where, X_c = Passing ability, X_1 = Agility and X_2 = Coordination.

The regression equation for the prediction of passing ability of male football players includes agility and coordination was predictive. As the multiple correlations on passing ability with the combined effect of these independent variables are highly significant, it is apparent that the obtained regression equation has a high predictive validity. Thus, this equation may be successfully utilized in selecting school male football players.

Conclusions

Based on the results of the study the following conclusions were drawn:

The correlation between passing and agility was high.

There was a high correlation between passing and coordination.

The correlation between agility and coordination was also high.

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Effects of Selected Yogic Exercises on Flexibility among Secondary School Students.

Vinodita R. Shivanagol.
Research Scholar K S W U Bijapur (Karnataka)

Abstract:
Yoga is an age-old traditional Indian psycho–philosophical–cultural method of leading one's life, that alleviates stress, induces relaxation and provides multiple health benefits to the person following its system. Commonly practiced yoga methods are 'Pranayama (controlled deep breathing), 'Asanas' (physical postures) and 'Dhyana' (meditation) admixed in varying proportions with differing philosophic ideas. The Sanskrit word "yoga" comes from the root *yug* (to join), or yoke (to bind together or to concentrate). The word "hatha" can be divided into two words: *ha* (sun) and *tha* (moon). The common interpretation of hatha yoga is a union of the pairs of opposites. Hatha yoga, the yoga of activity, addresses the body and mind and requires discipline and effort.The purpose of the study was to find out "Effect of Selected Yogic Exercises on Flexibility among Secondary school Students." To achieve this purpose 30 male students studying in Government High School K K. Koppa Belgaum, in the age group of 14 to 16 years were randomly selected as subject. The subjects were subjected to an six weeks yoga asana training programme which included: Paschimotanasana,Uttanasana, Eka Pad Rajakapotasana, Trikonasana, Chakrasana, Hanuman Asana, Baddha Konasana, Janushirasana, Padmasana, And Dhanurasana and Pranayamas, The 't' test was employed to know the difference in the mean of each group for selected variable. The level of significance was set at 0.05.The result of all performance components of post test indicates improvement in. It shows the Positive effect on six weeks Yogic exercise training. Selected Yogic exercises may improve Flexibility.
Key Words- Yogic Exercises, Flexibility.

Introduction

Yoga is an ancient system of exercise from India. Yoga comes from the Indian word yuj, which means to bind together, to join or to unite. It is the union of the mind, body and spirit- a holistic approach to your physical and mental wellbeing. It is a system of exercise that combines stretching and breathing with a relaxed awareness, resulting in a beautiful, toned body, complexion and positive attitude towards life.
Yoga has many benefits in comparison to many other exercises. It is an exercise that can be the done by any age group and even by the most unfit people. Yoga is also the most comprehensive of all exercises as it benefits each part of the body.

Methodology

Purpose of the study

The purpose of this study is to find out "Effect of selected yogasanas on Flexibility among secondary school students of Govt. High School K K Koppa of Belgaum district.

Selection of the subjects

The purpose of the Study "Effect of selected yogasanas on flexibility among secondary school male students". To achieve this purpose 30 male students in Govt. High School K K Koppa of Belgaum district in Karnataka.

Selection of the Variables

The Physical fitness variable selected for the present study will be flexibility.

The test items and Measurements

Physical Fitness Component:	**The test item**	**Measurements**
: Flexibility	Shoulder Stretch Test	Measure the minimum distance between the fingertips of the right and left hands. The score is recorded as either a YES or NO, for each side.

Selected Yogasana for Training

- Paschimotanasana
- Uttanasana,
- Eka Pada Rajakapotasana
- Trikonasana,
- Chakrasana,
- Hanuman Asana,
- Baddha Konasana,
- Janushirasana, Padmasana, And Dhanurasana

Sample size of the study

- In the present study single group design procedure was followed. A group of 30 students was selected from Govt. High School K. K. Koppa, Belgaum district students
- The selected subjects were under gone six weeks yogasanas training.
- The researcher was adapted Pre-test and Post-test procedure to see the differences.

ANALYSIS OF THE DATA

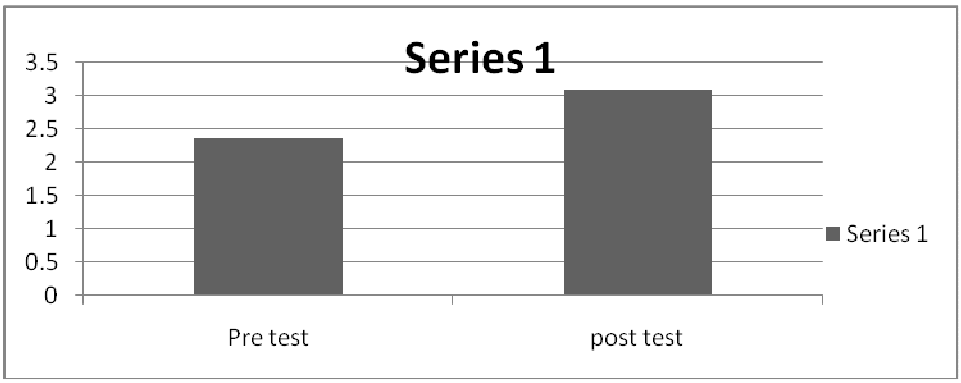
- The purpose of the study was to see the Experimental "Effect of selected yogasana on Flexibility among secondary school students. The obtained data was calculated as per the norms using such as Mean, Standard deviation and t value for the obtained pre-test and post-test.

Table 1 showing the pre-test and post–test for Flexibility performance.

Test	Sample size	Mean	SD	t_c	t_t
Pre- Test	30	2.36	0.41		
Post-Test	30	3.10	0.21	5.36	1.96

- The level of significant 0.05=Table value=1.96
- The above Table indicates that the t value is more than the table value that is 1.96 hence it is significant.
- The pre-test Mean value is 2.36 and the post-test Mean value 3.10. The post-test Mean value is greater than pre-test Mean value. It shows significant improvement in the flexibility performance of males owing to the six weeks yogasanas training the same as displayed in the figure.1(a)

Figure no.1 (a) showing the pre-test and post–test for flexibility performance.



The above Figure clearly indicates that the six weeks yogasanas training improved the flexibility in the subjects.

SUMMARY

The purpose of this study was to examine the effects of yogasanas training on flexibility among secondary school students. Pre-test as been conducted then the six weeks yogasanas training program organized to the secondary school students, after the six weeks training post-test conducted, the researcher found that the effect of physical fitness. The post-test results indicate significant improvement in the physical fitness.

CONCLUSION

- The six weeks yogasanas training improve the flexibility.

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Physical Activity Induced Changes On Glutathione And Vitamin-E Among Middle Aged Men

Dr. K. Sreedhar
Associate Professor, Department of Physical Education and Sports Sciences, Annamalai University, Annamalainagar-608002, Tamil Nadu. sreedhar101@yahoo.co.in

Abstract
The balance between beneficial and potentially harmful effects of exercises is of much importance especially when we age. Over the past few decades, free radicals, highly reactive and thereby destructive molecules, are known increasingly for their importance to human health and disease. Many common and life threatening human diseases, including atherosclerosis, diabetes, and cancer, have free radical reactions as an underlying mechanism of injury. To find out the relationship between physical activity and oxidative stress during aging, twenty middle aged male subjects were selected and equally assigned to experimental (10) and control group (10) after physical examination and medical checkup. Both the groups were tested before and after a session of exercise (12 min run/walk) to assess the exercise induced changes on the selected dependent variables of Glutathione (GSH) and Vitamin E (Vit-E) , which are the markers of antioxidants on two occasions before the start of the training and after 12 weeks of training. The experimental group underwent low intensity aerobic training for twelve weeks and the control group was kept sedentary. The independent variables were classified into (1) exercise (twelve minute run/walk) and (2) the regular aerobic training given by the investigator for twelve weeks. The data were statistically analyzed by ANCOVA. Based on the results of the study it was concluded that the exercise induced level of Glutathione(GSH) and Vitamin E(VIT-E) has increased The resting levels of Glutathione(GSH) and Vitamin E(VIT-E) shows significant variation and this shows that there is a positive influence of training on Glutathione(GSH) and Vitamin E(VIT-E).

Introduction

Regular exercise seems to decrease the incidence of a wide range of reactive oxygen species (ROS0-associated diseases, including heart disease, type II diabetes, rheumatic arthritis, Alzheimer and Parkinson diseases, and certain cancers. The preventive effect of regular exercise, at least in part, is due to oxidative stress-induced adaptation (Radak et al., 2008). On the other hand there is increasing evidence indicating that exercise, especially when performed strenuously, is associated with muscle damage and inflammation and with free radical overproduction. Free radicals are chemically reactive species that may increase during exercise as a result of higher mitochondrial oxygen consumption and electron transport flux (Hanninen and Atalay, 1998). Free radicals, despite being physiologically produced by the organism during normal metabolic reactions, may exert dangerous effects when not detoxified or when produced in excessive amounts. In these cases they are able to react with and damage biological components critical for the normal functioning of the cell, including nucleic acids, proteins, and lipids, leading to a condition known as “oxidative stress”(Sies, 1985). Oxidative stress is an imbalance between the antioxidant (AOX) and pro-oxidant processes that occur in metabolism; an imbalance that causes excessive production of free radicals and taxes the systemic AOX defenses (Elsayed, 2001). Performance of strenuous physical activity can increase oxygen consumption by 10- to 15-fold over rest to meet energy demands. The resulting elevated oxygen consumption produces an "oxidative stress" that leads to the generation of free radicals and lipid peroxidation (Clarkson, 1995). Exercise may lead to an increase in antioxidant defenses of the organism both in young and in old subjects (Lawler and Powers, 1998). But the balance between exercise-related free radical production and antioxidant induction in the elderly could be more delicate than in young subjects. This is due to the fact that, according to the “free radical theory of aging” (Harman, 1956), oxidative stress already plays an important role in resting, normal aging organisms and in many age-related diseases (Mecocci et al., 1998). Furthermore, although age-associated trends in antioxidant defenses and repair mechanisms in humans are not yet fully understood

(Beckman and Ames 1998), many studies suggest a decrease of the major antioxidants of the organism during aging (Pinzani et al., 1997). In order to defend themselves from the attack of free radicals, aerobic organisms have developed detoxifying, intercepting, and damage-preventing mechanisms, largely distributed in the organism and consisting of various enzymatic (superoxide dismutase, catalase, glutathione peroxidase) and non-enzymatic molecules (vitamin C, vitamin E, glutathione) that may play a role in exercise-and age-related oxidative changes to cellular components. Antioxidant enzymes are present and active at an intracellular level, and it has been shown that an acute bout of exercise increases their activities in skeletal muscle, heart, and liver with a threshold and magnitude of activation that differs among enzymes, tissues (Ji et al., 1998), and type of exercise in young and aging organisms (Navarro and Sancez, 1998). The antioxidant enzyme response to an acute bout of exercise seems to be similar in old and young animals (Feibig et al., 1994, Ji, 1996), and also endurance training has been shown to increase antioxidant enzyme activities in the senescent muscle (Ji et al., 1991). The preventive effect of regular exercise, at least in part, is due to oxidative stress-induced adaptation. The oxidative challenge-related adaptive process of exercise is probably not just dependent upon the generated level of ROS but primarily on the increase in antioxidant and housekeeping enzyme activities, which involves the oxidative damage repair enzymes. The failure in adaptation is particularly notable in older individuals. Our skeletal muscles become smaller and weaker as we age. This loss of muscle bulk results in a reduced capacity to generate force and results the ability to undertake everyday tasks.

Methodology

The purpose of the study was to find out the effect of aerobic training on changes in selected markers of oxidative stress among middle aged men. The study was conducted on 20 middle aged male subjects and the number of subjects in the control group and the experimental group were limited to ten each. The study was confined to the following dependent variables; Glutathione(GSH) and Vitamin E (VIT-E) which were estimated before the commencement and after completion of training for twelve weeks under two conditions; at rest and immediately after exercise (twelve minute run). The independent variables were classified into (1) exercise (twelve minute run/walk) and (2) the regular aerobic training given by the investigator for twelve weeks. 10 ml of venous blood sample was collected from each individual (first pre test). After blood collection the subjects were asked to run or walk for twelve minutes and immediately after the run or walk 10 ml of venous blood was again drawn (first post test). The same procedure was repeated after the twelve weeks of aerobic training (second pre and post tests). Glutathione (GSH) and Vitamin-E were estimated from plasma. The training protocol was planned keeping in the mind the subject's age, fitness level, the environmental and climatic conditions. The duration of the training sessions varied with progress of the training program. At the start of the program it was 30 min and at end of the program it was 55 min per session. This includes a 5 min warm up and flexibility routine and a 5 min warm down phase. So excluding this 10 min the duration of training session ranged from 20 min through 45 min during the 12 weeks periods of experimentation.

Results

TABLE-I

EXERCISE-INDUCED CHANGES AND THE EFFECT OF TRAINING ON GLUTATHIONE(GSH) AND VITAMIN E(VIT-E)

(GSH is measured in mg/dl plasma and VIT-E is measured in mg/dl Plasma)

GLUTATHIONE(GSH)						
		EXPERIMENTAL GROUP		CONTROL GROUP		'F'
		BEFORE EXERCISE	AFTER EXERCISE	BEFORE EXERCISE	AFTER EXERCISE	
BEFORE TRAINING	MEAN	17.19	18.77	17.14	18.72	
	SD	±0.50	±0.72	±0.50	±0.68	
t - RATIO		11.26		11.47		
MEAN DIFFERENCE	MEAN	1.59		1.58		0.00
	SD	±0.45		±0.44		

AFTER TRAINING	MEAN	18.82	21.47	17.28	18.88	
	SD	±0.59	±0.62	±0.56	±0.77	
t - RATIO		39.19		11.45		
MEAN DIFFERENCE	MEAN	2.65		1.60		45.50*
	SD	±0.21		±0.44		
ADJ MEAN DIFFERENCE		1.27		1.91		36.80*
VITAMIN E(VIT-E)						
		EXPERIMENTAL GROUP		CONTROL GROUP		'F'
		BEFORE EXERCISE	AFTER EXERCISE	BEFORE EXERCISE	AFTER EXERCISE	
BEFORE TRAINING	MEAN	1.58	1.11	1.56	1.09	
	SD	± 0.07	±0.07	±0.05	±0.06	
t - RATIO		82.68		46.36		
MEAN DIFFERENCE	MEAN	0.47		0.46		0.00
	SD	±0.04		±0.03		
AFTER TRAINING	MEAN	1.40	1.27	1.58	1.13	
	SD	±0.11	±0.10	±0.06	±0.06	
t - RATIO		30.83		36.22		
MEAN DIFFERENCE	MEAN	0.13		0.45		628.70*
	SD	±0.01		±0.04		
ADJ MEAN DIFFERENCE		0.57		0.37		43.65*

* Significant at 0.05 level of confidence

TABLE-II

RESULT OF THE PAIRED 'T' TEST FOR GLUTATHIONE(GSH) AND VITAMIN E(VIT-E)

(Level of GSH is measured in mg/dl plasma)

GLUTATHIONE(GSH)			
Experimental group at rest	Before training	After training	't'
	17.19±0.50	18.82±0.59	6.24*
VITAMIN E(VIT-E)			
Experimental group at rest	Before training	After training	't'
	1.58±0.07	1.40±0.11	4.26*

*Significant at 0.5 level of confidence. Table value of 't' required for significance at df 9 is 2.26

Glutathione(GSH) : The level of GSH before commencement of training for the experimental group at rest and immediately after exercise shows a significant difference (17.19±0.50 Vs 18.77 ± 0.72: p>0.05) with a mean difference of 1.59 ± 0.45 which shows that in the case of the experimental group, the level of GSH had increased due to exercise. The level of GSH before commencement of training for the control group at rest and immediately after exercise shows a significant difference (17.14±0.50 Vs 18.72 ± 0.68: p>0.05) with a mean difference of 1.58±0.44 which shows that the level of GSH of the control group had increased due to exercise.

The level of GSH at the end of training for the experimental group at rest and immediately after exercise shows a significant difference (18.82±0.59 Vs 21.47 ± 0.62: p>0.05) with a mean difference of 2.65±0.21which shows that the level of GSH of the experimental group had increased due to exercise. The level of GSH at the end of training for the control group at rest and immediately after exercise shows a significant difference (17.28 ±0.56 Vs 18.88 ± 0.77: p>0.05) with a mean difference of 1.60±0.44 which shows that the level of GSH of the control group had increased due to exercise. The exercise induced change in the levels of GSH of experimental group and control group was analyzed further using one way analysis of variance (ANOVA) to know whether there was any significant difference between the two groups due to exercise from the mean difference values of pre and post exercise GSH values. The resultant 'F' ratio for the mean difference of experimental and control group before training was 0.00 which was not significant at 0.05 level of confidence. This indicates that no significant difference existed between the control group and the experimental group in the exercise induced GSH level before commencement of training. The exercise - induced rise in the level of GSH after training for the experimental group and the control group resulted in a 'F' ratio of 45.50 and it was significant at .05 level of confidence. In order to understand the effect of training on exercise induced oxidative stress with regard to GSH, the initial mean differences (before commencement of training) between the control group and the experimental group were nullified and the final changes in the level of GSH after training were adjusted using analysis of co-variance (ANCOVA). The adjusted mean for the experimental group was 1.27 and control group was 1.91 with an 'F' ratio of 36.80, which was significant at .05 level of confidence. In order to understand whether adaptation has occurred due to training data on GSH of the experimental group at resting state before and after training were analyzed using paired 't' test. Level of GSH of the experimental group at resting state before training was 17.19 ±0.50 and after twelve weeks of training was 18.82±0.59. The obtained 't' value of 6.24 was significant at .05 level of confidence. This indicates that the given twelve weeks of training has resulted in significantly altering the resting state blood level of GSH in the experimental group.

Vitamin-E (VIT-E) : The level of VIT-E before commencement of training for the experimental group at rest and immediately after exercise shows a significant difference (1.58±0.07 Vs 1.11 ± 0.07: p>0.05) with a mean difference of 0.47 ± 0.04 which shows that in the case of the experimental group, the level of VIT-E had decreased due to exercise. The level of VIT-E before commencement of training for the control group at rest and immediately after exercise shows a significant difference (1.56±0.05 Vs 1.09 ± 0.06: p>0.05) with a mean difference of 0.46±0.03 which shows that the level of VIT-E of the control group had decreased due to exercise. The level of VIT-E at the end of training for the experimental group at rest and immediately after exercise shows a significant difference (1.40±0.11 Vs 1.27 ± 0.10: p>0.05) with a mean difference of 0.13±0.01 which shows that the level of VIT-E of the experimental group had decreased due to exercise. The level of VIT-E at the end of training for the control group at rest and immediately after exercise shows a significant difference (1.58 ±0.06 Vs 1.13 ± 0.06: p>0.05) with a mean difference of 0.45±0.04 which shows that the level of VIT-E of the control group had decreased due to exercise. The exercise induced change in the levels of VIT-E of experimental group and control group was analyzed further using one way analysis of variance (ANOVA) to know whether there was any significant difference between the two groups due to exercise from the mean difference values of pre and post exercise VIT-E values. The resultant 'F' ratio for the mean difference of experimental and control group before training was 0.00 which was significant at 0.05 level of confidence. This indicates that significant difference existed between the control group and the experimental group in the VIT-E level before commencement of training. The exercise induced rise in the level of VIT-E after training for the experimental group and the control group resulted in a 'F' ratio of 628.68, which was not significant at .05 level of confidence. In order to understand the effect of training on exercise induced oxidative stress with regard to VIT-E, the initial mean differences (before commencement of training) between the control group and the experimental group were nullified and the final changes in the level of VIT-E after training were adjusted using analysis of co-variance (ANCOVA). The adjusted mean for the experimental group was 0.18 and control group was 0.57 with an 'F' ratio of 0.37, which was not significant at .05 level of confidence. In order to understand whether adaptation has occurred due to training data on VIT-E of the experimental group at resting state before and after training were analyzed using paired't' test. Level of VIT-E of the experimental group at resting state before training was 1.58 ±0.07 and after twelve weeks of training was 1.40±0.11. The obtained 't' value 4.26 was significant at .05 level of confidence. This indicates that the given twelve weeks of training has significantly altered the resting state blood level of VIT-E in the experimental group.

Discussion

The results of the study on GSH indicate that exercise caused significant elevation for control and experimental groups before and after training. The level of increase of the GSH after exercise for control group was almost identical before and after twelve weeks. For experimental group, after training the increase of GSH level due to exercise was higher as compared to the increase before training. This may be because, during low intensity exercise, free radicals are not formed in greater amounts; GSH itself might acts as an antioxidant. Hence level of GSH is higher after exercise and the results are in conformation with earlier findings (Ji, 1993; Ji et al., 1992; Sastre et al., 1992). Exercise induced significant reduction in the levels of Vit.E both for control and experimental group, before and after training. Significant reduction in Vit.E levels due to exercise is indicative of excessive free radical generation over and above the natural antioxidant defense system of the body and hence increased lipid peroxidation. Exercise results in an increase in the production of neutrophil generated oxygen radicals and causes the exercise-induced increase in lipid peroxidation (Davis et al., 1982, Dillard et al., 1978). Vit. E concentration has been shown to decrease in skeletal muscle, liver and heart after endurance training as reported by (Packer et al., 1989 ; Tiidus et al., 1993; Shing et al., 2007).

Conclusions

Based on the results of the study it was concluded that the exercise induced level of Glutathione(GSH) and Vitamin E(VIT-E) has increased The resting levels of Glutathione(GSH) and Vitamin E(VIT-E) shows significant variation and this shows that there is a positive influence of training on Glutathione(GSH) and Vitamin E (VIT-E).

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A Study Of Sports Achievements In Relations To Sports Facilities

Meenu[1] (Research scholar)
Department of Physical Education, Sirsa, Haryana,India
E-mail meenumanjeet88@gmail.com
Ramniwas[2] (Research scholar)
Department of Physical Education, Sirsa, Haryana,India
E-mail ramniwassheokand@gmail.com

Abstract
The purpose of the study was to study the sports achievements in relations to sports facilities. The study was limited to the age group of 12 to 18 years. which fulfill all necessary information for this research study. In this study four schools was selected from the sirsa districts. In the study the researcher find out the sports achievements levels among high and low program, middle and low program and high and medium program provided by schools. For the study there was self made questionnairewhich fulfill all necessary information for the study. To analyze the study means and standard deviations of achievement scores were calculated, for the three groups having maximum, medicore and minimum sports facilities.
Keywords: Sports achievements, boys, Sirsa

Introduction
The role of sports including recreational activities in national and international affairs is becoming more and more important to promote the image of a nation. Sports are also helpful to develop international friendship, mutual understanding,to build character and health which are very essential for healthy and happy living. It is. Therefore, in the national interest to promote programme and to maintain an environment which will encourage excellence in all sports/athletic endeavours. A real fact available in a literature that every physical education and recreational activity including games provides a new experience and unique body movements, leading to developments of different personal, and social characteristics, physical and physiological functioning among participants in various sports and recreational activities. Sports, including some recreational activities, also provide competitive situations in which participants desire to win and to be recognised. So, in order to avoid failure, frustration and ultimately the disintegration of personality and personal characteristic patterns and disturbance in physiological functioning, one needs either a changed mode of action which may result in the satisfaction of some need or desire. It is pointed out by educators and psychologists that mostly individuals learn and grow by interaction imitation and observation. This can be systematic or unsystematic. But the environmental factors of suitable facilities and coaching do play a very dominant role in shaping up the growth of the personality, level of achievement, either single or collective, through interaction with each other. If the environment is congenial and programme is well through the growth may be fullest, so, high achievement, otherwise it may be hampered.

Review of related literature
Parkash (1995) conducted a survey of physical education facilities and facilities in Hoshiarpur district. He found that out of forty one schools, majority of them were even without average faculties required for effective physical education activities including games. He also observed that the achievement in the field of sports was higher of those schools which had better coaching, physical and equipment facilities.

Objectives of the Study:- The proposed objectives of the present research were follows.
To obtain and record the achievements of the schools in the field of sports.
To evaluate the effect of sports facilities provided in the schools.
To examine the sports facilities in sports.

Hypothesis of the study
Having a view of objectives of the study, null hypothesis is framed for the present investigation.

Delimitation of the study
The present study was delimited on the following aspects such as:
Different school from sirsa district was selected for the study.

The age of the subjects were ranged from 12 to 18 years.
The study was delimited to the sports programme before & after the year 2006.

Method and Procedure

Selection of the Subjects

The subjects were selected in following basis:
He should be school level student between the age group of 12-18 Years and studying in Sirsa.

Criterion Measures

In the study the researcher find out the sports achievements levels among high and low program, middle and low program and high and medium program provided by schools.

Tool used

For the study there was self made questionnaire which fulfill all necessary information for the study.

Statistical Techniques Used:

To analyze the study means and standard deviations of achievement scores were calculated, for the three groups having maximum, mediocre and minimum sports facilities.

Results and Discussion

TABLE 8.1

Comparison of Mean score of sports achievement of high and medium facilities povided school

Variable	High facilities		Medium facilities		SEd.	t-ratio	Level of significant
	Mean	S.D.	Mean	S.D.			
High and Medium sports facilities	48.40	6.23	39.80	5.26	3.65	2.36	Significant

***Significant at .05 level**

The mean score (48.40) of the high facilities provided by school is high than than the mean score (39.80) of medium facilities provided by school. However, the t-ratio is 2.36, which is significant at 0.05 level. High facilities score was batter than the low facilities provided by school.

Figure 8.1

Comparison of means score of sports achievement of high and medium facilities provided school

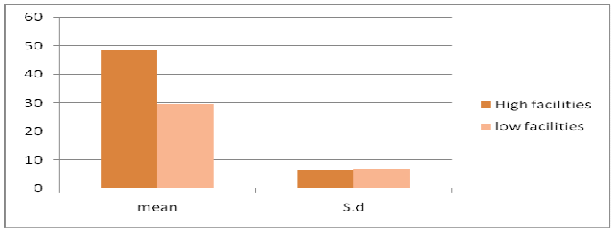


TABLE 8.2

Comparison of Means of sports achievement of high and low facilities provided sports

Variable	High facilities		Low facilities		SEd.	t-ratio	Level of significant
	Mean	S.D.	Mean	S.D.			
High and low facilities	48.40	6.23	29,60	6.77	4.11	4.57	Significant

***Significant at .05 level**

The mean score (48.40) of the high facilities provided by school is high than than the mean score (29.60) of low facilities provided by school. However, the t-ratio is 4.57, which is significant at 0.05 level. High facilities score was batter than the low facilities provided by school.

Figure 8.2
Comparison of Mean score of sports achievements of high and low facilities provided schools

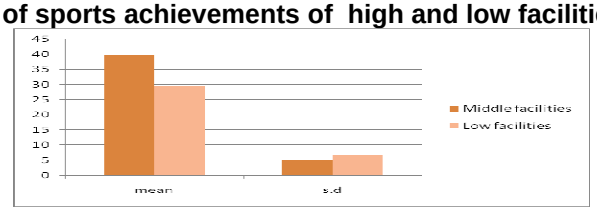
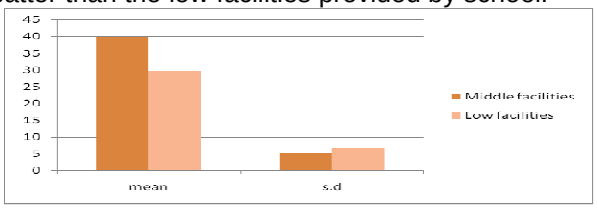


TABLE 8.3
Comparison of Mean score of sports achievement of middle and low facilities provided schools

Variable	Middle facilities		Low facilities		SEd.	t-ratio	Level of significant
	Mean	S.D.	Mean	S.D.			
Middle and Low facilities	39.80	5.26	29.60	6.77	3.83	2.66	Significant

*Significant at .05 level

The mean score (39.80) of the middle facilities provided by school is high than than the mean score (29.60) of low facilities provided by school. However, the t-ratio is 2.66, which is significant at 0.05 level. Middle facilities score was batter than the low facilities provided by school.



Conclusion

On the basis of the analysis of data the the researcher find out that the mean scores of sports achievement of high facilities provided schools was highest among the three categories.

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Effects Of Interval Training, Circuit Training And Combined Trainings On Selected Physical Fitness Variable And Performance Variable Among Football Players

*Dr. Y.Kalyan Kumar, Physical Director, Govt. Degree College, Nandikotkur, Kurnool, A.P.
**Dr. A.Kaleemulla, H.O.D., K.L.University, Vaddeswaram, Guntur, Andhra Pradesh.
***V.Jagannatha Reddy, P.D., G.D.C. Banaganapalle, Kurnool, A.P.
****M.Ravinder Rao, Research Scholar, Dept. of Phy.Edn. Osmania University, Telangana.

Introduction

Soccer requires peak physical conditioning of its players to be played at the highest level. The only way to achieve this level of conditioning is training specifically for soccer and the amount of running done in a match. Interval training is a type of physical training that involves bursts of high-intensity work interspersed with periods of low-intensity work. The high-intensity periods are typically at or close to near-maximum exertion, while the recovery periods may involve either complete rest or activity of lower intensity. Interval training provides benefits to any healthy person such as improving fitness, health, speed and stamina; it's a very demanding type of activity and certainly not one you would want to fly into without adequate preparation. Circuit training is a form of conditioning combining resistance training and high-intensity aerobics. It is designed to be easy to follow and target strength building as well as muscular endurance. An exercise "circuit" is one completion of all prescribed exercises in the program. When one circuit is complete, one begins the first exercise again for another circuit. Circuit training is an arrangement of exercises that requires the athlete to spend some time completing each exercise before moving on. It is an excellent way to improve mobility and, at the same time, build strength and stamina.

The purpose of the present study was to analyze the effects of interval training, circuit training and combined trainings on selected physical fitness variables and performance variables among intercollegiate level junior college football players.

A well designed and well supervised interval, circuit and combined training programs will be beneficial to the Junior college football players. The aim of the present study is to contribute to the training methods, which are listed below:

1. The ultimate aim of research in physical education is to help the physical education and sports professionals to train their sports persons based on the new concepts in improving their performances.
2. The study would add knowledge in the area of interval, circuit and combined training.
3. The results of the study may provide the standards of the football players in various selected physical fitness and performance parameters.
4. The conclusions of this study will pave a way to train football players with interval, circuit and combined training.
5. This study might motivate other professionals and scholars to take up similar studies.

Methodology

For the present study, 60 football players studying in the degree colleges of Rayalaseema University, Kurnool of Andhra Pradesh were randomly selected as subjects during the academic year 2013-2014. The selected subjects were divided into three experimental groups and a control group with fifteen subjects (n=15) in each group. Experimental group I (ITG=15) underwent interval training, Group II (CTG=15) underwent circuit training, Group III (COMG=15) underwent combined training and Group IV served as control group (CG=15). All subjects were informed about the nature of the study and their consent was obtained to co-operate till the end of the experiment and testing period. Pilot study groups and experimental groups (namely, ITG, CTG and COMG) were trained-up in which three modes of training were given independently with separate subjects in each group. The subjects were free to withdraw their consent in case they felt any discomfort during the period of their participation, but there were no dropouts. A qualified physician examined the subjects medically and declared them fit for the study.

The variables were selected after considering the feasibility and availability of proper techniques and instruments. In this experimental study, three experimental (IGT, CTG, and COMG) groups with different loads of training were given while one group was kept as control group to assess the difference.

Criterion Variables

DEPENDENT VARIABLES

Variables	
Physical Fitness Variables	Speed
	Agility
	Explosive Power
	Balance
	Co-ordination
	Cardio-respiratory endurance
Performance Variables	Kicking
	Dribbling
	Passing

Independent Variables

The following training methods were selected as independent variables.

1. Interval training 2.Circuit training 3. Combined interval and circuit training.

Selection of Tests

Variables		**Test**	**Unit of Measurement**
Physical Fitness Variables	Speed	50 meters dash	In Seconds
	Agility	30' shuttle run	In Seconds
	Explosive Power	Sargent vertical jump	In Centimeters
	Balance	Stroke stand	In Seconds
	Co-ordination	Alternate Hand Wall Toss Test	In Number of Catches in 30 Seconds
	Cardio-respiratory endurance	9minutes run/walk	In Meters
Performance Variables	Kicking	Mor. Christian Skill Test	In Meters
	Dribbling	Punt for distance	In Seconds
	Passing	Mor. Christian Skill Test	In Points

Training Programme

During the training period, the experimental groups underwent their respective training programmes three days per week on alternate days for twelve weeks in addition to their regular physical education activities. Experimental Group I (ITG) underwent interval training and Group II (CTG) underwent circuit training and group III (COMG) underwent combination of interval and circuit training. Before the commencement of the experimentation and at the middle of the training period (after fifth week), the investigator recorded the target heart rate for interval training, 1RM tests for circuit and target heart rate and 1RM for combined training subjects.

Collection of Data

The data on selected dependent variables for pre-tests and post-tests were collected two days before and after the training programme respectively. On the first day speed, agility, balance, co-ordination and explosive power were tested whereas cardio respiratory endurance, kicking, passing and dribbling were tested on the second day.

Experimental Design

The experimental design used for this study was pre-test and post-test random group design involving sixty subjects, who were divided at random into four groups of fifteen each. This study consisted of three experimental groups. Group I underwent interval training and Group II underwent circuit training and Group III underwent combined training, and Group IV acted as control group. All the subjects were tested prior to and after the experimentation on physical fitness and performance parameters.

Results Of The Study

The results of the study revealed that there existed significant difference among the football players of experimental groups such as interval training, circuit training and combined interval and circuit training and control group on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing. It is found that the experimental groups performed better on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing than the control group. This might be due to the effect of specified training given to the experimental groups.

When compared with interval training and circuit training group, circuit training group performed better on physical fitness variables such as speed, agility, explosive power, balance, and coordination and performance variables such as kicking and passing than that of interval training group.

When compared with interval training and circuit training group, interval training group performed better on physical fitness variable **cardio respiratory endurance** and performance variable **dribbling** than that of circuit training group.

Further, the analysis of the study revealed that the football players of combined interval and circuit training group performed better on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing than the football players of interval training, circuit training groups and control group.

Conclusions

From the results of the present research work, the following conclusions were drawn.

There was significant difference among the football players of experimental groups such as interval training, circuit training and combined interval and circuit training groups and control group on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing. The result of the present study showed that the interval training, circuit training and combined interval and circuit training groups performed better on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing than the control group. This might be due to the effect of specified training (interval training, circuit training and combined interval and circuit training) were given to the experimental groups. Further, this study also revealed that the football players of combined interval and circuit training group performed better on physical fitness variables such as speed, agility, explosive power, balance, coordination and cardio respiratory endurance and performance variables such as dribbling, kicking and passing than the football players of interval training, circuit training groups and control group.

When compared interval training with circuit training group, the football players of circuit training group performed better on physical fitness variables such as speed, agility, explosive power, balance, and coordination and performance variables such as kicking and passing than that of interval training group, and the football players of interval training group performed better on physical fitness variable cardio respiratory endurance and performance variable dribbling than that of circuit training group.

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Effect Of Resistance Training Endurance Training And Combined Training On Selected Physical Fitness Variables

S. CHIDAMBARA RAJA
Associate Professor,
Department of Physical Education and Sports Sciences,
Annamalai University.

Abstract
The purpose of the study was to find out the effect of resistance training, endurance training and combined training on selected physical fitness variables. Sixty male students aged between 17 and 22 years were selected for the study. They were divided into four equal groups, each group consisting of fifteen subjects in which Group I underwent resistance training, group II underwent endurance training, group III underwent combination training, three days per week for twelve weeks and group IV acted as control, which did not participate in any training. The subjects were tested on selected criterion variables such as back strength, strength endurance and cardio-respiratory endurance at prior to and immediately after the training period. For testing the back strength, the dynamometer was used, strength endurance was assessed by administering sit-ups test and to test the cardio-respiratory endurance, the Cooper's 12 minutes run/walk test was administered. 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 separately. Since there were four groups involved in the present study, the Scheffé *S* test was used as post-hoc test. The selected criterion variables such as back strength, strength endurance and cardio-respiratory were improved significantly for all the training groups when compared with the control group and the leg and strength endurance were improved significantly for combined training group and resistance training group, and in cardio-respiratory endurance, the endurance training group and combined training groups were significantly improved.
Key Words: Resistance training, endurance training, physical fitness, back strength, strength endurance and cardio-respiratory endurance.

Introduction

Resistance training helps maintain and combat the loss of muscle mass by increasing muscular fitness. (http://www.acsm.org/docs/brochures/resistance-training.pdf) Resistance training - sometimes called weight training or strength training - is a "specialized method of conditioning designed to increase muscle strength, muscle endurance and muscle power," according to the American Sports Medicine Institute (ASMI) (Edward G. Mcfarland, www.google.com).

Endurance is a term widely used in sport and can mean many different things to many different people. In sports it refers to an athlete's ability to sustain prolonged exercise for minutes, hours, or even days. Endurance requires the circulatory and respiratory systems to supply energy to the working muscles in order to support sustained physical activity (www.busywomenfitness.com).

Back strength plays a vital role in the daily activities of man. It is an essential factor for including in almost all games and sports. Cardio-respiratory endurance is the ability to work close to one's maximum aerobic capacity for a prolonged period of time. To increase one's endurance is to depend upon increasing the ability to work at high, relative work load for extended periods of time.

Methods

In this study it was aimed to find out the effect of resistance training, endurance training and combined training on back strength, strength endurance and cardio-respiratory endurance.

To achieve the purpose sixty male students from various faculties of Vivekananda College (Residential and Autonomous), Tiruvedakam West, and Tamil Nadu were selected as subjects at random from the total population of 275 students. They were divided into four equal groups of fifteen each and further divided as three experimental groups and one control group, in which the group I (n=15) underwent resistance training, group II (n = 15) underwent endurance training and group III (n = 15) underwent the combination training for three days per week for twelve weeks, and group IV (n=15) acted as control which did not participate in any special training apart from the regular physical education programme of the curriculum.

For every training programme there would be a change in various structure and systems in human body. So, the researchers consulted with the experts and then selected the following variables as criterion variables: 1. Back strength, 2. Strength endurance and 3. Cardio-respiratory endurance.

Analysis of the Data

Analysis of covariance was used to determine the differences, if any, among the adjusted post test means on selected criterion variables separately. Whenever the 'F' ratio for adjusted post test mean was found to be significant, the Scheffé *S* test was applied as post-hoc test. The level of significance was fixed at .05 level of confidence to test the 'F' ratio obtained by analysis of covariance.

Table – I

Analysis of Covariance and 'F' ratio for Back strength, Strength endurance and Cardio-respiratory Endurance of Resistance Training Group, Endurance Training Group and Combined Training Group and Control Group

Variable Name		Resistance Training Group	Endurance Training Group	Combined Training Group	Control Group	'F' Ratio
Back strength	**Pre-test Mean ± S.D.**	66.88 ± 3.236	65.97 ± 2.976	65.87 ± 2.029	64.899 ± 3.109	0.997
	Post-test Mean ± S.D.	69.73 ± 3.167	68.79 ± 3.879	69.56 ± 2.513	64.399 ± 2.167	8.312*
	Adj. Post-test Mean	70.979	69.893	69.973	64.169	50.369*
Strength endurance	**Pre-test Mean ± S.D.**	65.13 ± 1.552	64.47 ± 1.807	64.13 ± 2.560	64.87 ± 2.356	0.654
	Post-test Mean ± S.D.	71.93 ± 2.434	66.13 ± 2.10	66.00 ± 2.591	64.87 ± 2.031	28.74*
	Adj. Post-test Mean	71.506	66.295	66.456	64.675	70.125*
Cardio-respiratory Endurance	**Pre-test Mean ± S.D.**	1596.67 ± 45.93	1598.67 ± 68.02	1626.00 ± 40.32	1626.00 ± 73.659	1.167
	Post-test Mean ± S.D.	1618.67 ± 41.725	1742.67 ± 59.217	1696.00 ± 35.817	1624.67 ± 71.00	18.40*
	Adj. Post-test Mean	1630.76	1753.17	1684.70	1613.37	82.605*

* Significant at .05 level of confidence. (The table value required for significance at .05 level of confidence with df 3 and 56 and 3 and 55were 2.77 and 2.78 respectively).

Table - II

Scheffĕ S Test for the Difference Between the Adjusted Post-Test Mean of Back strength Strength endurance and Cardio-respiratory Endurance

Adjusted Post-test Mean for Back strength					
Resistance Training Group	**Endurance Training Group**	**Combined Training Group**	**Control Group**	**Mean Difference**	**Confidence Interval at 0.05 level**
70.979	69.893			1.086*	1.00239
70.979		69.973		1.006*	1.00239
70.979			64.169	6.81*	1.00239
	69.893	69.973		0.008	1.00239
	69.893		64.169	5.721*	1.00239
		69.973	64.169	5.804*	1.00239
Adjusted Post-test Mean for Strength endurance					
71.506	66.295			5.211*	1.4364
71.506		66.456		5.05*	1.4364
71.506			64.675	6.831*	1.4364
	66.295	66.456		0.161	1.4364
	66.295		64.675	1.62*	1.4364
		66.456	64.675	1.781*	1.4364

* Significant at 0.05 level of confidence.

Adjusted Post-test Mean for Cardio-respiratory Endurance					
Resistance Training Group	**Endurance Training Group**	**Combined Training Group**	**Control Group**	**Mean Difference**	**Confidence Interval at 0.05 level**
1630.76	1753.17			122.41*	28.1677
1630.76		1684.703		53.943*	28.1677
1630.76			1613.37	17.39	28.1677
	1753.17	1684.703		68.467*	28.1677
	1753.17		1613.37	139.8*	28.1677
		1684.703	1613.37	71.33*	28.1677

* Significant at 0.05 level of confidence.

Results

Table – I shows that there was a significant difference among resistance training group, endurance training group, combined resistance and endurance and resistance training group and control group on back strength, strength endurance and cardio-respiratory endurance.

Table – II shows that the Scheffĕ *S* Test for the difference between adjusted post-test mean of resistance training group and endurance training groups (1.086), resistance training group and combined training group (1.006), resistance training group and control group (6.81), endurance training group and control group (5.721) and combined training group and control group (5.804), which were significant at .05 level of confidence. But there was no significant difference between endurance training group and combined training group (0.008) on back strength after the training programme.

Table – II also shows that the Scheffĕ *S* Test for the difference between adjusted post-test mean difference in strength endurance between resistance training group and endurance group (5.211), resistance training group and combined training group (6.831), resistance training group and control group (1.62) combined training group and control group (1.781) were significant at .05 level of confidence. But there was no significant difference between endurance training group and combined training groups (0.161) on strength endurance after the training programme.

Table – II shows that the Scheffĕ *S* Test for the difference between adjusted post-test mean difference in cardio-respiratory endurance between resistance training group and endurance group (122.41), resistance training group and combined training group (53.943), endurance training group and combined training group (68.467), endurance training group and control group (139.8) combined training group and control group (71.33) were significant at .05 level of confidence. But there was no significant difference between resistance training group and control group (17.39) on cardio-respiratory endurance after the training programme.

Conclusions

It was concluded from the results of the study that the leg and strength endurance have improved significantly after the respective training programme. But in the cardio-respiratory endurance, resistance training group has not improved significantly.

When compared with the control group, all the training group has significantly differed in both the criterion variables, except in cardio-respiratory endurance, the resistance training has not differed from the control group significantly.

It was also concluded that the resistance training group has improved their leg and strength endurance better than the endurance training group and combined training group significantly. But the endurance training group and combined training group have also improved their performance significantly.

There was no signficant improvement in cardio-respiratory endurance for the resistance training group when compared with the control group. But all the remaining training groups have improved on cardio-respiratory endurance significantly.

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Effect Of Yogic Practice And Aerobic Exercise On Breath Holding Time And Blood Pressure Among School Boys

Dr. S. CHIDAMBARA RAJA
Associate Professor, Department of Physical Education and Sports Sciences, Annamalai University, Tamilnadu.

Abstract
The purpose of the study was to find out the effect of yogic practices and aerobic exercise on breath holding time, flexibility and muscular endurance. Thirty school boys aged between 15 and 17 years were selected for the study. They were divided into three equal groups, each group consisted of ten subjects, in which Group I underwent yogic practice and group II underwent aerobic exercise (walk-jog-walk programme), five days per week for twelve weeks and group III acted as control, who did not participate in any training. The subjects were tested on selected criterion variables such as breath holding time, flexibility and muscular endurance at prior to and immediately after the training period. Breath holding time was assessed by counting the pulse at resting condition. Flexibility and muscular endurance was measured by conducting sit and reach test and sit-ups test. 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 separately. Since, there were three groups involved, the Scheffé *S* test was used to find out which of the adjusted post test mean was differ significantly. The selected criterion variables such as breath holding time was reduced significantly for both the training groups when compared with the control group and the flexibility and muscular endurance were improved significantly for yogic practice group and aerobic exercise group. The aerobic exercise group has reduced the breath holding time and improved the flexibility and muscular endurance significantly than the yogic practice group and control group.
Key words: *yogic Practices, Aerobic Exercises, Breath holding time, Flexibility, Muscular Endurance*

Introduction

Yoga is an ancient philosophical and religious tradition, which is thought to have originated in India in at least 1000 B.C. It refers to a large body of values, attitudes and techniques whose primary objective is the pursuit of enlightment or self-knowledge. The word yoga is probably derived from the Sanskrit word “Yuj” which means to “unite” or “connect” and, in the higher levels of yoga, this is often said to mean the experience of union of the individual self with the universal self.

Yogasanas are Indian’s unique contribution to physical education. Yoga and physical education may be compared to two bullocks hitched to shaft as they are for the judicious blending of the education of body and the mind. There is no denial of the fact that yoga and physical education attach importance by gaining the benefits of physical health, mental health, physical fitness and peace of mind through their regular practices. Physical education concerns with anatomical aspects of the physique with its physiological reactions for a given activity. The ultimate aim of which is to enjoy a good health and optimum fitness. Yoga is providing a multidimensional development and it has now become an adjunct to physical education.

Aerobic exercise uses continuous, rhythmic movement of large muscle groups to strengthen your heart and lungs (cardiovascular system). When you exercise, your muscles demand more oxygen-rich blood. This makes your heart beat faster to keep up. When you follow a program of regular aerobic exercise, your cardiovascular system grows stronger and can meet the muscles' demands without as much effort. In addition, your muscles adapt and become more efficient at performing activity.

Aerobic exercise includes any type of exercise, typically those performed at moderate levels of intensity for extended periods of time, that maintains an increased heart rate. In such exercise, oxygen is used to "burn" fats and glucose in order to produce adenosine triphosphate, the basic energy carrier for all cells.

Initially during aerobic exercise, glycogen is broken down to produce glucose, but in its absence, fat metabolism is initiated instead. The latter is a slow process, and is accompanied by a decline in performance level. The switch to fat as fuel is a major cause of what marathon runners call "hitting the wall." There are various types of aerobic exercise. In general, aerobic exercise is one performed at a moderately high level of intensity over a long period of time. For example, running a long distance at a moderate pace is an aerobic exercise, but sprinting is not.The pulse is a decidedly low tech/high yield and antiquated term still useful at the bedside in an age of computational analysis of cardiac performance. Pressure waves generated by the heart in systole moves the arterial walls.Flexibility which is considered as range of motion around a joint is the base for any movement. To pick up a small object, to sit, stand and to plant a nail into the well one should have flexibility though other factors like strength are also essential. Muscular endurance is very important for people playing sports and who have to sustain an activity for long periods of time. Muscular endurance is determined by how well your slow twitch muscle fibers are developed.

Methodology

The purpose of the study was to find out the effect of yogic practices and aerobic exercise on breath holding time, flexibility and muscular endurance. To achieve this purpose of the study, thirty school aged boys ages between 15 and 17 years were contacted and randomly selected as subjects. They were divided into three equal groups, each group consisted of ten subjects in which Group I underwent yogic practices and group II underwent aerobic exercises (walk-jog-walk) five days per week for twelve weeks and group III acted as control, who did not participate in any training. The subjects were tested on selected criterion variables such as breath holding time, flexibility and muscular endurance at prior to and immediately after the training period. The selected criterion variables such as breath holding time was assessed by counting the pulse at resting condition, flexibility was measured by conducting sit and reach test and muscular endurance was measured by conducting sit-ups test. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, between the experimental groups on selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate.

Table - I

Analysis of Covariance and 'F' ratio for Breath holding time, Flexibility and Muscular Endurance for Yogic Practice, Aerobic Exercise and Control Groups

Variable Name	Group Name	Yogic Practice Group	Aerobic Exercise Group	Control Group	'F' Ratio
Breath holding time (Seconds)	**Pre-test Mean ± S.D**	23.7 ± 0.237	24.89 ± 0.471	22.17 ± 0.87	0.187
	Post-test Mean ± S.D.	25.57 ± 0.813	26.33 ± 0.597	22.86 ± 0.971	8.643*
	Adj. Post-test Mean ± S.D.	26.313	27.223	22.765	10.223*
Flexibility (Inches)	**Pre-test Mean ± S.D**	7.95 ± 0.6852	7.75 ± 0.4249	8.25 ± 0.791	1.49
	Post-test Mean ± S.D.	9.4 ± 0.5677	8.45 ± 0.497	8.15 ± 0.8515	9.869*
	Adj. Post-test Mean ± S.D.	9.421	8.596	7.983	18.464*
Muscular Endurance (Numbers/min)	**Pre-test Mean ± S.D**	34.4 ± 0.9661	34.0 ± 0.8165	34.7 ± 1.1595	1.257
	Post-test Mean ± S.D.	36.0 ± 1.333	35.8 ± 0.7888	34.3 ± 1.0594	7.353*
	Adj. Post-test Mean ± S.D.	35.814	35.855	34.431	4.483*

* Significant at .05 level of confidence.

(Table value required for significant at .05 level of confidence with df 2 and 27 and 2 and 26 are 3.35 and 3.37).

Table – II:Scheffĕ S Test for Difference Between the Adj. Post-Test Mean of Selected Criterion Variables

Adjusted Post-test Mean on Breath holding time				
Yogic Practice Group	**Aerobic Exercise Group**	Control group	**Mean Difference**	**Confidence interval at .05 level**
26.313	27.223		0.91	1.9362
26.313		22.765	3.548*	1.9362
	27.223	22.765	4.458*	1.9362
Adjusted Post-test Mean on Flexibility				
Yogic Practice Group	**Aerobic Exercise Group**	Control group	**Mean Difference**	**Confidence interval at .05 level**
9.421	8.596		0.825*	0.60775
9.422		7.983	1.439*	0.60775
	8.596	7.983	0.613*	0.60775
Adjusted Post-test Mean on Muscular Endurance				
Yogic Practice Group	**Aerobic Exercise Group**	Control group	**Mean Difference**	**Confidence interval at .05 level**
35.814	35.855		0.041	1.2671
35.814		34.431	1.383*	1.2671
	35.855	34.431	1.424*	1.2671

* Significant at .05 level of confidence.

Results:

Table – I showed that there was a significant difference among yogic practice group, aerobic exercise group and control group on breath holding time, flexibility and muscular endurance. Table – II showed that the Scheffĕ *S* Test for the difference between adjusted post-test mean difference in breath holding time between yogic practice group and control group (3.548) and aerobic exercise group and control group (4.458) which, were significant at .05 level of confidence. But there was no significant difference between yogic practice group and aerobic exercise groups (0.912) on breath holding time after the respective training programme.Table – II showed that the Scheffĕ *S* Test for the difference between adjusted post-test mean flexibility of yogic practice group and aerobic exercise group (0.825), yogic practice group and control group (1.439) and aerobic exercise group and control group (0.613), which were significant at .05 level of confidence. Table – II also shows that the Scheffĕ *S* Test for the difference between adjusted post-test mean difference in muscular endurance between yogic practice group and control group (1.383) and aerobic exercise group and control group (1.424) which, were significant at .05 level of confidence. But there was no significant difference between yogic practice group and aerobic exercise groups (0.041) on muscular endurance after the respective training programme.

Conclusions:

It was concluded from the result of the study that there was a significant decrease in breath holding time for experimental groups when compared with control group. Yogic practice group and aerobic exercise group showed significant improvement in flexibility as compared to control group. The yogic practice group showed significant improvement in flexibility than the aerobic exercise group and control group.

It was concluded from the result of the study that there was a significant improvement in muscular endurance for experimental groups when compared with control group. But there was no significant difference between the experimental groups on breath holding time.

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Management Of Tribal Welfare Residential Junior Colleges – Opinions Of Lecturers

Dr.D.Rambabu
Institute of Advanced Study in Education,
Osmania University, Hyderabad-500 007.

Abstract
The investigator conducted a study to know management of Andhra Pradesh Tribal Welfare Residential Junior Colleges of Warangal District in Andhra Pradesh. For this purpose the investigator administered a questionnaire, which consist 25 questions, to the lecturers. The data was collected from 24 male and 6 female respondents, analysed using SPSS-17 and interpreted the results using percentages and χ^2 values. The findings of the study revealed that the opinions between male and female lecturers are significant with regard to difficulty in pronunciation when the class strength is more, hostel students are provided with nutritious food, college has suitable audio-visual aids, orientation programmes for students related to study skills is helpful and comfortable with their hostel duties. It is suggested that more comparative studies may be conducted to identify the functioning of APTWRJC by using different management techniques in future.
Key words**:**Management, Physical facilities, Lectures Opinions, Tribal development

Introduction

Scholars, policy makers and practitioners in education unanimously recognise the dire need for effective and efficient management of educational institutions. Effective management becomes a necessity if most of the developing countries are to realise their national goals of education. Translating the foregoing goals of education into a reality calls for planning at both the policy level and institutional level. Planning and educational standards at both institutional and national level have been unsatisfactory in majority of the cases as attested to by a number of studies. Given the foregoing scenario, a need exists to determine trends in educational management practices in secondary schools.The first contribution to the study of the educational problems of scheduled tribes in India was made as early as 1944 by Professor Furer-Haimendorf (Indian Journal of Social Work, 5, 2, September, 1944). The author has described the outlines of educational schemes he had drawn up for the Gonds of Adilabad district in the then Nizam's Dominion of Hyderabad. The scheme had been drawn up against the background of the culture and environment of the Raj Gonds who are the dominant tribe in that region. The author discusses problems of language, script and teachers. The scheme paid rich dividerds for the tribals of that area and even now forms the basis of educational planning for tribals there. This was the first time it was pointed out that an educational programme for tribals has to be in consonance with their habitat, economy and culture.

Significance of the study: Now-a-days, government taking care for improving the scheduled tribes in addition to other major efforts for their welfare and education. Despite all these efforts scheduled tribes education not attained considerable extent, however, the present study is an attempt to understand this need.

Objective of the study: To study the opinions of lectures about the working of the tribal welfare residential junior colleges in Warangal district.

REVIEW OF LITERATURE

Ravinder Donthi (2014) overviewed the tribal development programmes conducted by Government Andhra Pradesh. The study is mainly focused on functions of the APSW department such as: (i) constitutional functions, (ii) developmental functions, (iii) coordinating functions and (iv) educational programmes. Suryakant S. Sonnad and Shivakumar S. Sangan (2014) analysed welfare, development and empowerment of tribal women in India. Devender Bhukya (2014) concluded by arguing for an educational policy to adequately respond to essential education in Andhra Pradesh.

Methodology

The investigator has selected normative survey method for the present study. In the present study, the sample comprised of 30 lecturers, who were selected through simple random sampling technique that comes under the purview of the tribal welfare residential junior colleges in the Warangal district of Andhra Pradesh.

Variables: Independent variables:- Physical facilities, human resources and gender are independent variables. Dependent variables:- Opinions of lecturers and management of the Tribal Welfare Residential Junior College.

For the present investigation the researcher selected the opinionaire for data collection from tribal welfare residential junior college lecturers. The researcher visited to the tribal welfare residential junior colleges in Warangal district and collected the data from the lecturers. They were also given sufficient time to prepare themselves score their responses. Confidentiality of the data was assured to use for the research purpose only. The information collected through opinnionaire was aggregated and for interpretation of variables, the percentages were calculated. The information collected through the opinionnaires was presented.

Statistical Techniques: To find out the results the collected data was analysed using statistical techniques such as percentages and χ^2-test.

Findings And Conclusions

There is significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about facing difficulties in pronunciation when the class strength is more. It can be concluded that the male lecturers does not face difficulties in pronunciation when the class strength is more, but the female lecturers face difficulties in this regard more when compared to male lecturers.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about the attendance percentage is low in their class.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about using the teaching aids in their class-room.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about the students complete their homework regularly.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they think that the students are getting their parents support adequately.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about think the number of class-rooms available are sufficient.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they want any changes in contents of the text books.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they have any problems in their profession.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about the higher officials are visiting their college.

There is significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their co-Lecturers are friendly with them. It can be concluded that male lecturers said that the co-lecturers are friendly with them, where as the female lecturers said that some of the co-lecturers are not friendly with them compared to male lecturers.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college premises has good hostel accommodation.

There is a significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about the hostel students are provided with nutritious food. It can be concluded that male lecturers said that they consider hostel students are provided with nutritious food in this regard more when compared to male lecturers.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college provide sufficient number of tables and fans.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college provides cots and bed-sheets to their hostel students.

There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college provide soaps, clothes in time.

There is significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college has suitable audio-visual aids. It can be concluded that some of the male lecturers said that their college has no suitable audio-visual aids, but none of the female lecturers responded in this regard.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college allot time for students to participate in sports is sufficient.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their college conduct educational tours regularly.
There is no significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about the medical services are available in their college premises for students' health care.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their students shows interest in their class-room teaching.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they like to teach lessons in mother tongue.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about their parents attend parents-teachers meetings.
There is significant difference at 0.01 level of significance between male lecturers and female lecturers in their opinion about they feel orientation programme for students related to study skills is helpful. It can be concluded that all male lecturers said that they feel orientation programmes for students related to study skills in this regard. Half of the female lecturers responded positively.
There is not significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they consider that their teaching is most effective.
There is significant difference at 0.05 level of significance between male lecturers and female lecturers in their opinion about they comfortable with their hostel duties.

Suggestions For Further Research

The following are the major educational implications:
Further study can be taken up by drawing a large sample spread across various districts of Andhra Pradesh.
A similar study can taken up to know the comparative status of management of the Andhra Pradesh Tribal Welfare Residential Junior College and other residential junior colleges such as Andhra Pradesh Residential and Private Corporate Residential Colleges.
Another related study can be taken up looking into the schemes and programmes meant for the education of tribal students in relation to its impact on the management of Tribal Welfare Junior Colleges.
A similar study may be carried out with reference to tribal residential schools.

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National Anti Doping Agency and its role in India

Dr. V. Shri Ram Naik
Asst. Professor MG Law College,
Hyderabad, Telangana, India.
Email: vsriramnaik@gmail.com, Mobile: 9652005337.

Introduction:

It has been decided to separate the administrative set-up of the Dope Control Centre (DCC) from NADA.The NADA has the power to hear and determine all issues arising from any matter which is referred to it pursuant to the anti-doping rules. The Union Government has constituted the National Anti Doping Agency (NADA) under the Societies Registration Act as an autonomous body under the Union Sports Ministry.It is learnt that the body has persons from Government and non-governmental agencies as members of its governing board. It includes scientists and a representative from the Indian Olympic Association (IOA). The formation of NADA, as had been planned for a few years now, assumes added significance in the light of the repeated doping controversies involving Indian sportspersons during the past four years at major international events. The formation is as envisaged in the 2004 Copenhagen Declaration on Doping in Sports to which India is a signatory.NADA will be the central anti-doping agency in the country, authorised to carry out `in competition' and `out of competition' testing. On the advice of the World Anti Doping Agency (WADA) it has been decided to separate the administrative set-up of the Dope Control Centre (DCC) from NADA, though initially there was a plan to link the two. DCC, which is in the process of getting accreditation from WADA, will function as an independent agency.The hurdles for NADA will not be, however, overcome by just severing connection with DCC. The new body will have to bring the IOA and the National federations into the picture and get them to accept the rules and regulations not only about NADA's supremacy in testing but also about the roles of the National Anti-Doping Disciplinary panel and the National Anti-Doping Appeal panel, both independent in their functioning.

The federations would be expected to incorporate the rules directly into their constitutions or to make a reference to them in their constitutions. It is learnt that the federations have not been taken into confidence about the provisions in the NADA rules nor have they been requested to incorporate them in their constitutions.

Two key points that emerge from the model rules framed by WADA for the setting up of National anti-doping organisations that are of great significance in the Indian context are: The National sports federations will need to recognise the authority and responsibility of NADA for implementing the National anti-doping programme and authorise NADA to carry out doping control.

The NADA has the power to hear and determine all issues arising from any matter which is referred to it pursuant to the anti-doping rules. "In particular, the Anti-Doping Disciplinary Panel has the power to determine the consequences of anti-doping rule violations... "

Legal perspective

From a legal perspective, the following clause dealing with the right to appeal can also lead to hurdles: "No final decision of, or consequences of anti-doping rule violations imposed by, the National Anti-Doping Disciplinary panel shall be quashed, varied or held invalid, by any court, arbitrator, tribunal or other hearing body other than the Anti-Doping Appeal panel or CAS for any reason, including for reason of any defect, irregularity, omission or departure from the procedures set out in these anti-doping rules, provided there has been no miscarriage of justice."Though the above clause is not mandatory, without some provision to tackle litigations arising out of anti-doping rule violations, NADA would have lost much of its teeth.

There is yet no clear-cut view about having a National hearing panel. The alternative would be to allow individual federations to have their own hearing panels. Most of them have such panels now or they are formed from time to time. The federations have so far been asked to form anti-doping commissions by the IOA but are not aware of the implications of NADA and its associate panels.
There has been a spate of doping scandals hitting the Indian sports scene. The response of the Indian sports administration has been criticised for being adhoc at best and the National Anti Doping Agency's motto of dope free sport in India has not yielded any significant results so far. Against this background Dr. Lovely Dasgupta, an Assistant Professor at The West Bengal National University of Juridical Sciences, has written a feature on anti-doping policy in India.

Doping in sports in India
In India doping in sports started on a large scale prior to the 1982 Asiad games. Since India was hosting the games, it became a prestige issue to win medals. Amongst the pioneers who advocated drug abuse were the Bulgarian weightlifting coaches. They openly supplied Indian lifters with dangerous drugs. Doping was not merely confined to the lifters but came into the athletics as well. Major (retd.) Joginder Singh (twice Asian gold medalist), who was closely associated with the training of the team for the '82 Asiad observed that the Indian athletes in the 1982 games were taking drugs in a big way during the training camps. It was remarked jokingly at that time that the athletes were breaking records on a big ration of drugs with no one to check them.

Once the taste of performance enhancing drugs were introduced in the Indian sporting fraternity, it became a free for all. The doping scandal hitting the 2010 Commonwealth Games adds on to the timeline of doping in sports in IndiaBetween 2009 to 2012 reportedly 48 Indian athletes that compete in athletics had been caught for doping. Further reports of doping in sports training institutes of India continue to appear in the national media. For instance at the National Institute of Sports in Patiala, the premier sports training center of the country, empty bottles, syringes and packets of banned drugs were allegedly found, in the hostel rooms of the sports persons, who came to attend the coaching camps.

Doping and the Indian sports administration
The response of the Indian sports administrators, that includes the Ministry of Youth Affairs and Sports, has, so far been adhoc. While the establishment of the National Anti Doping Agency (NADA) in 2009 increased the level of detection, it has not had a significant impact many expected. Notwithstanding that until 2011, 366 sports persons have been found to have tested positive by NADAthere has not have been any independent investigation commissioned by the Government to analyze the extent of doping within different sports in India. This is in contrast for example to the investigation commissioned by the Australian Government, resulting into the findings of the Australian Crime Commission. Furthermore NADA being controlled by the Government does not inspire confidence of impartiality. Decisions involving culpability of both the sports persons and government appointed coaches creates a conflict of interest. Mere dismissal of coaches in the face of doping scandal can be at best regarded as a kneejerk reaction on the part of the Government. Till date no steps have been taken to instill accountability amongst the sport governing bodies in view of the doping scandals.

The challenges
Since majority of Indian sports persons come from rural background, with no formal education, the awareness level regarding performance enhancing drugs is next to nothing. Again the primary reason for taking up sports in India is personal than professional. One has to understand the unique incentive that taking up sports in India has. There are Government jobs on offer against sports quotas and with a billion plus population and limited job opportunities, the competition to do as the coach or other official instructs is great. The lack of awareness of the dos and don't of the WADA code thus runs through all the levels of sport and results in a hight number of Indian sports persons being easily caught.

The lack of aggressive awareness programme at the grass root level adds on to the problem. With the legal age of consent not being achieved the young sports persons are at the mercy of the informed decision of their parents. However in a country where a job and not glory is the incentive most parents are not made aware of what their wards consume. Finally when the sportspersons are caught there is no sustained national debate by the public.

This is due to the fact that except for cricket, India is not a sports super power. Accordingly the goings on in other sports really does not excite the public imagination. The lack of sustained public debate also means there is a no pressure placed on the sports administrators to design an effective anti-doping policy.

Moving forward

The expertise required in developing and executing an effective anti-doping policy in India may take a while to come into existence. Nonetheless things cannot be left untouched on the grounds of inexperience. It is therefore suggested that the coach/officials nexus in aiding and abetting doping within sports in India be strongly dealt with by conducting an independent inquiry. Secondly mandatory testing at all levels of sport should be introduced. While understandably resource crunch may be an issue for NADA. Hence the testing should be introduced in all professional sports, at all levels. The expertise developed in testing within the professional sports can later be transplanted to amateur sports. Thirdly aggressive educational programme on performance enhancing drugs needs to be introduced at all levels. Fourthly the NADA should be made a complete non-governmental body to ensure impartial detection and sanctioning of all involved. Finally the sports persons need to be trained in a manner that they are confident of performing at the highest level without the use of any banned substance. This would essentially mean investing in better training methods and techniques. Appointing proficient coaches, who can guide the athletes and not dupe them into taking banned substance.

Anti-doping regulations on sportspersons

The Minister of State (Independent Charge) for Skill Development, Entrepreneurship, Youth Affairs and Sports Shri Sarbananda Sonowal has said that Anti Doping Rules 2010 of National Anti Doping Agency (NADA) are in place in India to regulate anti-doping activities of sportsperson in the country.

In a written reply in the Rajya Sabha today he said, the regulations of National Anti Doping Agency (NADA) are in accordance with World Anti Doping Agency (WADA) Code 2009 which came into operation with effect from 1st January, 2010. The Minister said, the Government and National Anti Doping Agency (NADA) are working towards “Dope Free” Sports in the country in co-ordination with stakeholders to rid sports of this menace and create a clean and healthy environment for sports in India. NADA is taking stringent measures against doping in sports by conducting dope tests during in-competition and out-of-competition on sportspersons. The Government has repeatedly announced zero tolerance for violator of the anti doping regulations.

He said, NADA has conducted outreach programs at various centres and over 10,000 sports persons, including supporting staff attended such programs. The technical officials of NADA are regularly visiting Sports Authority of India (SAI) Regional Centres and other places (wherever training camps are held) and educating the athletes on doping in sports and harmful side effects of the dope substances by conducting lectures/seminars/workshops etc. on regular basis with the help of dope control hand books printed in English, Hindi, Tamil, Telugu, Malayalam, Bengali and Punjab.

Shri Sonowal said, NADA has constituted a panel of experts comprising of medical doctors, legal members and eminent sports-persons to advise on Information, Education and Communication (IEC) Campaign. The expert group will formulate anti-doping education plan in line with the objectives of the Campaign. The group will develop the education-cum-awareness materials for various stakeholders in sports. The experts will customize all relevant awareness materials developed by World Anti Doping Agency (WADA) to meet Indian clientele and to develop education material through print and electronic media. He said, to help the competing athletes, need-based awareness-cum-education materials will be prepared in association with National Sports Federations. In addition, NADA has proposed to conduct 50 anti-doping awareness workshops/seminars for all stakeholders in current financial year. Out of this, 13 workshops are already conducted till date.During International tournaments, results of dope tests conducted on sportspersons are managed by concerned International Federations or Tournament Organizing Committees, the Minister added.

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Effect Of Resistance Training On Vo_2 Max Among Netball Players

***Dr G. Swaminathan and **Dr P. V. Shelvam**

***Assistant Professor, Department of Physical Education and Sports Sciences, Annamalai University, Annamalainagar, India**
*** *Professor, Department of Physical Education and Sports Sciences, Annamalai University, Annamalainagar, India**

Abstract:
The purpose of the study was to find out the effect of resistance training on vo_2 max among netball players. To achieve this purpose of the study, thirty netball players were selected as subjects who were studied Annamalai University, Annamalainagar. The selected subjects were aged between 18 to 25 years. They were divided into two equal groups of fifteen each, Group I underwent resistance training programme and Group II acted as control that did not participate in any special training apart from their regular curricular activities. The subjects were tested on selected criterion variable such as vo_2 max prior to any immediately after the training period. The selected criterion variable such as vo2 max was measuring by using treadmill. Pre test data were collected before the training program and post data were collected after the training program. The analysis of covariance (ANCOVA) was used to find out the significant differences if any, between the experimental group and control group on selected criterion variable. In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as an appropriate. The result of the present study has revealed that there was a significant difference among the experimental and control group on vo_2 max.

Introduction

Training and conditioning are the best known ways, to prepare the players for efficient performance and healthful living. Efficient performance is possible only through a carefully planned programme of progressive practice which will perfect the co-ordination, eliminate unnecessary movements and accomplish result at the expense of minimum energy as well as conditioning the muscle structure and the circulation to withstand without harming the intensive demands made upon them. Fitness is the ability to meet the demands of a physical task. Basic fitness can be classified in four main components: Strength, Speed, Stamina and Flexibility. However, exercise scientists have identified nine components that comprise the definition of fitness: Strength, Power, Agility, Balance, Flexibility, Local Muscle Endurance, Strength Endurance and Co-ordination. All the nine elements of fitness Cardiac Respiratory qualities are the most important to develop as they enhance all the other components of the conditioning equation. Resistance training should be an integral part of an adult fitness program and of a sufficient intensity to enhance strength, muscular endurance and maintain fat-free mass (FFM). Resistance training should be progressive in nature, individualized and provide a stimulus to all the major muscle groups. “adding strength training to a program of regular physical activity will help to decrease the risk of ‘chronic diseases’ while improving quality of life and functionality, allowing people of all ages to improve and maintain their health and independent life style. Resistance training involves exercise in which the muscles exert a force against an external load. It is most commonly referred to as weight training. It is perhaps the most common method of training program should be individualized, progressive and specific in terms of the way the muscles are likely to be used in the chosen sport. The primary goals of resistance training as improving muscular strength and endurance, while other health related benefits derived from resistance training include increases in bone mass, reduced blood pressure, increase muscle and connective tissue cross-sectional area (CSA), reduced body fat and it may relieve low back pain.

Although modern technology has reduced much of the need for high levels of force production during activities of daily living, it is recognized in both the scientific and medical communities that muscular strength is a fundamental physical trait necessary for health, functional ability and enhanced quality of life. The development of an athletic profile requires a detailed battery of testing to thoroughly analyze all the components of athletic performance. (e.g., strength, anaerobic power, speed, agility, maximal aerobic capacity and endurance, and body composition). Test results help determine the relevance and importance of each fitness component to a particular sport and permit the appropriate emphasis on that variable in the athlete's training program. Resistance-training program has different goals, exercises, and variables. The first step for training is to determine personal needs. The second step is to find a training program to meet those needs. This requires a "needs analysis" and the development of training goals. Body builders, like fitness enthusiasts, are training for general muscular development. On the other hand, body builders are looking to develop larger muscles with symmetrical balance. The only real difference between fitness enthusiasts and body builders is that body builder's train with greater loads, volumes, and at higher intensities.

VO_2 max (also maximal oxygen consumption, maximal oxygen uptake, peak oxygen uptake or maximal aerobic capacity) is the maximum rate of oxygen consumption as measured during incremental exercise, most typically on a motorized treadmill. Maximal oxygen consumption reflects the aerobic physical fitness of the individual, and is an important determinant of their endurance capacity during prolonged, sub-maximal exercise. The name is derived from V - volume, O_2 -oxygen, max - maximum. VO_2 max is expressed either as an absolute rate in (for example) litres of oxygen per minute (L/min) or as a relative rate in (for example) millilitres of oxygen perkilogram of body mass per minute (e.g., mL/(kg·min)). The latter expression is often used to compare the performance of endurance sports athletes. However, VO_2max generally does not vary linearly with body mass, either among individuals within a species or among species.

Methodology

The purpose of the study was to find out the effect of resistance training on vo_2 max variable among netball players. To achieve this purpose of the study, thirty netball players who were studied Annamalai University, Annamalainagar. The selected subjects were aged between 18 to 25 years. They were divided into two equal groups of fifteen each, Group I underwent resistance training programme and Group II acted as control that did not participate in any special training apart from their regular curricular activities. The experimental group underwent the training programme for three days per week for four weeks. The vo_2 max was measuring by using treadmill. Pre test data were collected before the training program and post data were collected after the training program.

Testing Procedure

VO_2 max (maximal oxygen uptake) was predicted using a sub maximal treadmill test on a motor driven treadmill. The test began at a speed with which each subject could jog comfortably. After 3 minutes when a steady state heart rate (HR) was achieved, the speed and heart rate was recorded VO_2 max was predicted using the following formula.

Scoring

The estimated VO_2 max can be calculated in ml/kg/min.

VO_2 max = 54.07 – 0.1938 × Body weight + (4.47 × Speed/1.6) – 0.1453 × heart rate + 7.62 × gender

where: speed = km/h
gender = 1 for men, 0 for women
body weight = kg.

Statistical Procedure

The data were collected at prior and immediately after the training programme for the criterion variable. Analysis of covariance (ANCOVA) was applied for analyze the data. In all the cases, 0.05 level was used to test this significance.

Results

Findings: The mean and standard deviation scores of pretest, posttest and adjusted posttest of vo_2 max on resistance training programme and control group are given in table.

Table: MEAN STANDARD DEVIATION AND 'F' RATIO OF RESISTANCE TRAINING AND CONTROL GROUP ON VO_2 MAX

Variable	Test	Resistance Training Group		Control Group		F ratio
		Mean	SD	Mean	SD	
Vo_2 max	Pretest	37.25	1.25	38.47	1.18	1.46
	Posttest	41.21	1.47	38.33	1.26	19.27*
	Adjusted posttest	41.65		37.70		124.88*

Table shows the analyzed data of vo_2 max. The vo_2 max pre means were 37.25 ± 1.25 for the resistance training group and 38.47 ± 1.18 for the control group. The resultant 'F' ratio of 1.46 was not significant at .05 levels indicating that the two groups were no significant variation. The post-test means were 41.21 ± 1.47 for the resistance training group and 38.33 ± 1.26 for the control group. The resultant 'F' ratio of 19.27 at .05 level indicating that was a significant difference. The difference between the adjusted post-test means of 41.65 for the resistance training group and 37.70 for the control group yield on 'F' ratio 124.88 which was significant at.05 level. The results of the study indicate that there is a significant difference among resistance training and control groups on the vo_2 max.

Discussion/Conclusions

The findings of the study showed that there was no significant difference between the pretest of vo_2 max. The findings of the study showed that there was a significant difference between the posttest and adjusted posttest of vo_2 max. The results of the study have shown there was a significant difference among resistance training group and control group on vo_2 max reference to the past studies on selected variable such as vo_2 max in accordance with Mughal and others (2001) and Zabihoiah Tarasi and others (2011).

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Influence Of Low To Moderate Intense Training Betweentype 1 And Type 2 Diabetic

***A.Sadhesh**
Ph.D Scholar, Dept. Of Physical Education And Sports, Pondicherry University, Pondicherry
****Dr.G.Vinod Kumar,**
Associate Professor, Dept. Of Physical Education And Sports, Pondicherry University,India

Abstract
Background: The life style for a diabetic depends upon the activity in which the definite improvement can be achieved by appropriate training. The basic training procedure were severe better when utilized with modification suited to the individual or a group deals with best training program in that increases insulin supply to the body the decide quality at a higher rate without causing unwanted effects. The present study is one of the effects to suggest a method for developing of health status. Aims and Objectives: The main objective of the study was to assess the influence of low to moderate intense training on type 1& type 2 diabetes. Materials and Methods: The study started with the help of diabetes specialist with 40 subjects; some of them not having diabetics, some of them have very low level of diabetics. From the doctor report 15 subjects were type 2 diabetes; 5 were type 1 diabetes. All subjects have been selected from the Puducherry region, India. These 15 diabetic people were selected on the basis of doctoral report. The age group is ranges between 40-50 years of type 2 diabetes and 25-40 years of type 1 diabetes. All subjects were tested with medical assessment and prove the diabetes. According to their health conditions low to moderate intense exercise training consisting of warm up, mobility exercises, strength training, aerobic exercise, flexibility exercise, warm down with stretching program was administered on type 1 & type 2 diabetes for 7 weeks. This experiment group were tested pre-test and post-test on blood sugar, blood pressure, body mass index (BMI) and Body Weight. Results: The result of study shows clearly that both type 1 and type 2 diabetic individual are improved well in secretion of insulin through low to moderate intense physical exercises. The study further proved that the low to moderate physical activities were reduced on Blood sugar (fasting) level, BMI, and Body weight for both type 1 and type 2 and systolic blood pressure was reduced only for type 2 diabetes.
Keywords: Type 1 & type 2 diabetes, Blood sugar, Blood pressure, BMI, Body weight.

Introduction

Diabetes mellitus, or simply diabetes, is a group of metabolic diseases in which a person has high blood sugar, either because the pancreas does not produce enough insulin, or because cells do not respond to the insulin that is produced. This high blood sugar produces the classical symptoms of polyuria (frequent urination), polydipsia (increased thirst) and polyphagia (increased hunger).

Diabetes can cause many complications. Acute complications include diabetic ketoacidosis and nonketotic hyperosmolar coma. Serious long-term complications include cardiovascular disease, chronic renal failure, and diabetic retinopathy (retinal damage). Adequate treatment of diabetes is thus important, as well as blood pressure control and lifestyle factors such as stopping smoking and maintaining a healthy body weight. (Dolores 2011)

There are two main types of diabetes mellitus (DM). Type 1 DM results from the body's failure to produce insulin, and currently requires the person to inject insulin or wear an insulin pump. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes". Type 1 diabetes mellitus is characterized by loss of the insulin-producing beta cells of the islets of Langerhans in the pancreas, leading to insulin deficiency.

This type can be further classified as immune-mediated or idiopathic. The majority of type 1 diabetes is of the immune-mediated nature, in which beta cell loss is a T-cell-mediated autoimmune attack. There is no known preventive measure against type 1 diabetes.Type 2 DM results from insulin resistance, a condition in which cells fail to use insulin properly, sometimes combined with an absolute insulin deficiency. This form was previously referred to as non insulin-dependent diabetes mellitus (NIDDM) or "adult-onset diabetes". Type 2 diabetes mellitus is characterized by insulin resistance, which may be combined with relatively reduced insulin secretion. The defective responsiveness of body tissues to insulin is believed to involve the insulin receptor. However, the specific defects are not known. Diabetes mellitus cases due to a known defect are classified separately. Type 2 diabetes is the most common type. (Bingley, P. J. 2002)

Materials And Methods

Subjects

The study started with the help of diabetes specialist with 40 subjects who are come for testing diabetes to health problem at the JIPMER hospital; some of them not having diabetics, some of them have very low of diabetics. The doctor recommended 20 subjects without any coronary disease. All subjects were tested with medical assessment and prove the diabetes. From the doctor report 15 subjects were type 2 diabetes; 5 were type 1 diabetes. All subjects have been selected from the Puducherry region, India. Their age group is ranges between 40-50 years of type 2 diabetes and 25-40 years of type 1diabetes.

EthicsA code was provided to the subjects at the time of pretest to keep their personal identity closed. Their diabetic levels were exclusively used for the research purpose and were not disclosed to their family and friends. The project was approved by the Institutional Ethics Committee, and the signed informed consent was obtained from the subjects as well as consultant doctor. These 15 diabetes people were accepted the training schedule and they were voluntarily participated.

Assessments

The blood sample test was used to test the blood sugar (fasting) level. This test was tested with the lab technicians from JIPMER hospital, Puducherry. The blood sugar measured in mg/dl unit.

The blood pressure monitors on test. The mercury sphygmomanometer is considered to be a gold standard measurement tested both systolic and diastolic pressure with expert technicians. It is measured in mmhg unit.

The BMI rating tested with the World Health Organization BMI classification system. The WHO BMI calculation was used to test the body mass index. BMI is calculated by taking a person's weight and dividing by their height squared.

The Body weight was tested with electronic weighing machine. It is measured in kg unit.

Intervention

To find out the influence of dependent variables on independent variable four set of exercise programme frame for the diabetes. Before given the training all subjects were tested medically to find the cardiovascular diseases. The subjects selected for this study were nil of cardiovascular diseases. According to their health conditions the following training programmes are scheduled for the 7 weeks. The physical exercises module warm up 5 mins., mobility exercises 2 mins. with 30 secs. rest b/w exercises, strength training (body weight training) 10 mins. with 30 secs. rest b/w exercises, aerobic exercise 10 mins. with 2 mins. rest after aerobic exercise, flexibility exercise 10 mins. with 30 sec. rest b/w exercises, finally 10 min. warm down with stretching exercises, was shared daily for an hour in the morning with the experimental group for 7 weeks. 5% intensity was increased every 2 weeks. The pre test and post test was administered for both type 1 & type 2 diabetes on blood sugar (fasting), blood pressure (systolic and diastolic), body mass index (BMI) and body weight.

Statistical analysis

To find out the difference between before training and after training of type 1 diabetes and type 2 diabetes paired ‘t’ test was used as a statistical tools. All tests are fixed with 0.05 level of confident. Physical exercises module, taken as treatment variable, was given to the experimental group. Data are displayed in Tables.

Table 1
Summary of Mean, Standard Deviation and t-ratio of type 2 diabetes in relation to Physical Exercises intervention

Variables	Test	Mean	Std. deviation	Std. Error	t-ratio	Sig.(2-tailed)
Blood Sugar (fasting) (mg/dl)	Pre test	103.67	15.76	4.55	3.636*	0.004
	Post test	91.92	8.64	2.49		
	Paired Sample test	11.75	11.19	3.23		
Blood Pressure Systolic (mmHg)	Pre test	116.17	3.07	.886	6.191*	.000
	Post test	110.17	4.30	1.24		
	Paired Sample test	6.00	3.36	.969		
Blood Pressure Diastolic (mmHg)	Pre test	74.50	3.91	1.13	.000	1.000
	Post test	74.50	3.80	1.09		
	Paired Sample test	.000	.426	.123		
Body Mass Index (BMI)	Pre test	29.20	4.80	1.39	4.305*	0.001
	Post test	27.66	3.75	1.08		
	Paired Sample test	1.55	1.24	.359		
Body Weight (kg)	Pre test	82.18	15.86	4.58	4.871*	.000
	Post test	77.60	13.33	3.85		
	Paired Sample test	4.58	3.26	.941		

*Significant at 0.05 level of confidence with df 11 and the table value is 2.201

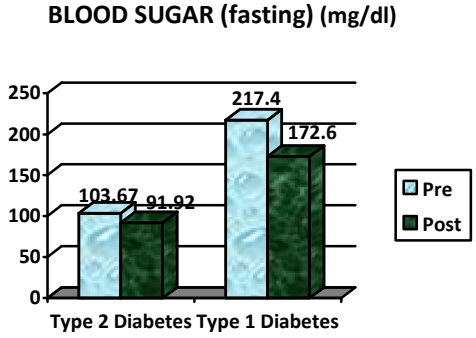
Table 1 reveals that t-ratio for the difference between pretest and posttest means of type 2 diabetes on blood glucose on fasting before and after training on paired sample mean values are 11.75, standard deviation are 11.19 and standard error mean are 3.23. The t calculated value 3.636 is found to be significant at the 0.05 level of confidence, hence calculated value is greater than the table value (2.201). Which indicates that blood glucose is significantly reduced for type 2 diabetics after 7 weeks of physical exercises. Similarly the t-ratio for the difference between pretest and posttest means of type 2 diabetes on systolic blood pressure before and after training on paired sample mean values are 6.00, standard deviation are 3.36 and standard error mean are .969. The t calculated value 6.191 is found to be significant at the 0.05 level of confidence, hence calculated value is greater than the table value, which indicates that systolic blood pressure is significantly reduced for type 2 diabetics after 7 weeks of physical exercises. In BMI the paired sample mean values are 1.55, standard deviation is 1.24 and standard error mean are .359. The t calculated value 4.305 is found to be significant at the 0.05 level of confidence. In body weight the paired sample mean values are 4.58, standard deviation are 3.26 and standard error mean are .941. The t calculated value 4.871 is found to be significant at the 0.05 level of confidence. This indicates that the BMI and body weight are reduced after low to moderate intense physical exercises. But there is no significant difference found to diastolic blood pressure because it was normal to the subjects.

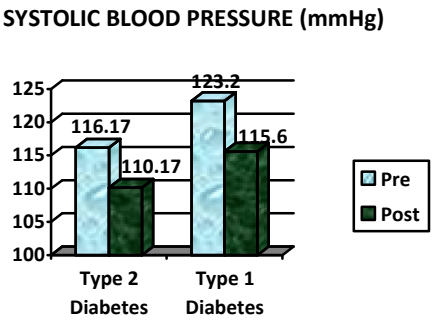
Table 2:Summary of Mean, Standard Deviation and t-ratio of type 1 diabetes in relation to Physical Exercises intervention

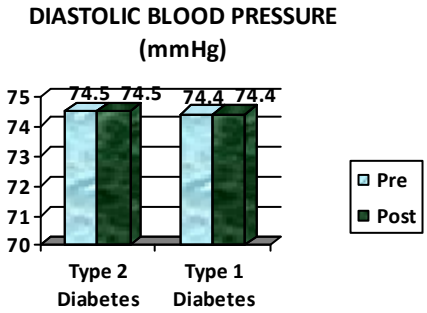
Variables	Test	Mean	Std. deviation	Std. Error	t-ratio	Sig.(2-tailed)
Blood Sugar (fasting) (mg/dl)	Pre test	217.40	19.50	8.72	26.128*	.000
	Post test	172.60	22.22	9.94		
	Paired Sample test	44.80	3.83	1.71		
Blood Pressure Systolic (mmHg)	Pre test	123.20	3.03	1.36	1.693	.166
	Post test	115.60	13.07	5.84		
	Paired Sample test	7.60	10.04	4.49		
Blood Pressure Diastolic (mmHg)	Pre test	74.40	5.17	2.32	-1.000	.374
	Post test	74.40	5.46	2.44		
	Paired Sample test	-.200	.447	.200		
Body Mass Index (BMI)	Pre test	29.23	1.14	.509	14.327*	.000
	Post test	27.25	1.25	.557		
	Paired Sample test	1.99	.310	.139		
Body Weight (kg)	Pre test	84.40	4.34	1.94	7.076*	.002
	Post test	79.20	3.83	1.71		
	Paired Sample test	5.20	1.64	.735		

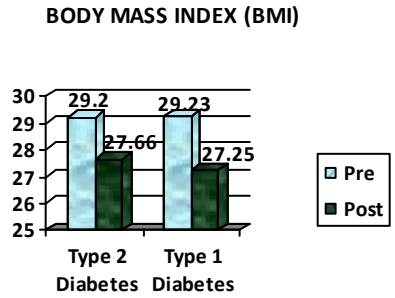
*Significant at 0.05 level of confidence with df 4 and the table value is 2.776

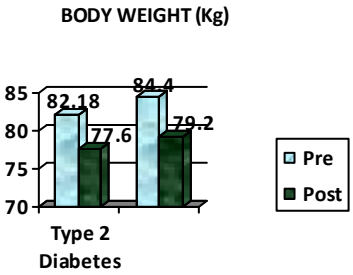
Table 1 reveals that t-ratio for the difference between pretest and posttest means of type 1 diabetes on blood glucose on fasting before and after training on paired sample mean values are 44.80, standard deviation are 3.83 and standard error mean are 1.71. The calculated t value 26.128 is found to be significant at the 0.05 level of confidence; hence t-ratio is greater than the table value (2.776). This indicates that blood glucose is significantly reduced for type 1 diabetics after 7 weeks of low to moderate intense physical exercises. Similarly the body mass index (BMI) the paired sample mean values are 1.99, standard deviation is .310 and standard error mean are .139. The t value 14.327 is found to be significant at the 0.05 level of confidence. In body weight the paired sample mean values are 5.20, standard deviation are 1.64 and standard error mean are .735. The t calculated value 7.076 is found to be significant at the 0.05 level of confidence. This indicates that the BMI and body weight are reduced after low to moderate intense physical exercises. But there is no significant difference found in systolic and diastolic blood pressure because it was normal to the subjects.











Discussion

The findings of this study reveal that the type 1 and type 2 diabetic patients who experienced low to moderate intense physical exercises module performed better in overall reduced blood sugar level and also improvement in systolic blood pressure, body mass index and body weight. The results are in tune with the earlier studies, which found that exercise is frequently recommended in the management of type 1 and 2 diabetes mellitus and can improve glucose uptake by increasing insulin sensitivity and lowering body adiposity (Peirce, 1999). Exercise will have a long-term beneficial effect on the metabolic control of diabetes or prevent the development of the complications of diabetes remains to be established (Zinma 1985). Regular exercise may be prescribed as an adjunct to caloric restriction for weight reduction and as a means of improving insulin sensitivity in the obese, insulin-resistant individual (Horton 1988). The purpose of this study was to evaluate whether a combined resistance and aerobic training program would improve insulin sensitivity compared with aerobic training alone in postmenopausal women with type 2 diabetes (Darcie 2004).

Conclusions

It may be concluded from the finding of the study that with the intervention of low to moderate intense physical exercises improves blood sugar levels. So it is suggested that low intense physical exercise module should practice by the type 1 and type 2 diabetes for betterment.The type 1 and type 2 diabetes has been affected blood pressure and body composition. The result of this study also indicated that the physical exercises truly reduced the systolic blood pressure and body mass index level.

The age is the factor for increasing body weight above 40 years. The diabetes has normally increased their body weight because of their food habit. This study was proved that the low to moderate intense physical training it reduce the body weight of the type 1 and type 2 diabetes.The result of the study showed that there were unique. Dramatic change in the insulin secretion needed for type 1 and type 2 diabetic individuals through exercises. It is very clear that diabetic individuals need to perform exercise so that they could run a positive health without any mental hazards.

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Motor Fitnessof Basketball And Volleyball Female Players

Ashwini B.K.*, Virupaksha N D**
***Research Scholar, Department of Physical Education,**
Kuvempu University, Shankaraghatta, Karnataka
****Co-ordinator, Department of Physical Education,**
Kuvempu University, Shankaraghatta, Karnataka

Abstract
The Purpose of the Study was to compare the selected Motor Fitnessvariables between Basketball and VolleyballFemalePlayers. For the Purpose of the study 40 female Players who have represented university in the respective games were randomly selected as the subject for this Study. The subject's age was ranged between 18 to 25 years. The data of Speed (50 mtrs dash), Endurance (12 minutes Cooper aerobic test), Strength (modified pushups), Agility (10x4mtrs shuttle run) and Power (Standing board Jump) was collected by using standardized procedure. In order to find out the difference in the selected Motor Fitnessvariables between Basketball and Volleyball femaleplayers't' test was applied and the level of significance was set at 0.05. The study reveals that there were significant difference found in Speed, Endurance, Strength, Agility and Power between Basketball and Volleyball Players.
Keywords: Motor fitness**,** Speed, Endurance, Strength, Agility and Power.

INTRODUCTION

Successful participation in these sports requires from each player a high level of technical and tactical skills and suitable anthropometric characteristics. All ball games require comprehensive abilities including physical, technical, mental, and tactical abilities. Among them, physical abilities of the Players are more important as these have marked effects on the skill of Playersand the tactics of the teams because ball games require repeated maximum exertion such as dashing and jumping. Such physical abilities are important for both Volleyball and basketball Playersto achieve higher levels of performance. The physical demands placed on sports persons from current performance schedules make their physiology and fitness just as important as skill development.

In sports players playing sports can perform similarly in actual games but may exhibit different physical and physiological attributes. For example, one can have a tall stature but lack vertical jumping skills, and the other can have a short stature but exhibit great jumping ability. Players are different physically andphysiologically, but at the same time perform very similarly. If there are large variations of physical and Physiological attributes among athletes, then more emphasis should be placed on individual performance.

Purpose of the Study

The main purpose of the study is to compare the selectedMotor Fitness variables such as Speed, Endurance, Strength, Agility and Power between Basketball and VolleyballFemalePlayers.

Materials And Methods

For this studyeighty (80) players who have participated in the Inter University Tournament wereselectedas subjects for the present study. In which forty subjects were from Volleyball and forty from Basketball game. The subject's age ranged from 18 to 25 years.

Variable

The following Motor Fitnessvariables were selected for this Study:

Speed – Speed was measured by 50 yard dash.

Endurance –Endurance was measured by Cooper's 12 minute run/walk test.

Strength- It was measured by using Modified floor pushups.

Agility – Agility was measured by using 4 × 10 yard shuttle run.

Power – Explosive Strength was measured using standing broad jump.

Statistical Analysis

To compare the selectedMotor Fitnessvariables between the Basketball and Volleyball Players, 't' test was used. The level of significance was set at 0.05 level.

Results: To achieve the purpose of the study data collected was analyzed with statistical technique 't' test and results are presented in the following tables.

Table – 1:**Showing the Mean value, Standard deviation and't' score of Speed between Basketball and VolleyballPlayers**

Sl. No.	Players	Sample Size	Mean	Standard. deviation	't' value
1.	Basketball	40	6.86	0.43	6.37*
2.	Volleyball	40	7.59	0.58	

* Significant at 0.05 level

The above table shows the mean value, standard deviation and't' value of Speedof Basketball and Volleyball Players . The't' value has shown significant difference between Basketball and Volleyball Players . BasketballPlayers are having more Speed than the VolleyballFemalePlayers.

Table – 2:**Showing the Mean value, Standard deviation and *'t'* score of Endurance between Basketball and VolleyballPlayers**

Sl. No.	Players	Sample Size	Mean	Standard. deviation	't' value
1.	Basketball	40	2832.50	233.58	9.53*
2.	Volleyball	40	2152.75	383.08	

* Significant at 0.05 level

The above table shows the mean value, standard deviation and't' valueofEndurance of Basketball and Volleyball Players. The 't' value has shown significant difference between Basketball and Volleyball Players . BasketballPlayers are having more Endurance than the VolleyballFemalePlayers.

Table – 3:**Showing the Mean value, Standard deviation and *'t'* score of Strength between Basketball and VolleyballPlayers**

Sl. No.	Players	Sample Size	Mean	Standard deviation	*'t'* value
1.	Basketball	40	40.00	7.10	7.74*
2.	Volleyball	40	21.41	10.93	

* Significant at 0.05 level

The above table shows the mean value, standard deviation and 't' value of Strength ofBasketball and Volleyball Players . The 't' value has shown significant difference between Basketball and Volleyball Players . BasketballPlayers are having more Shoulder StrengththantheVolleyballfemalePlayers.

Table – 4: **Showing the Mean value, Standard deviation and *'t'* score of Agility between Basketball and VolleyballPlayers**

Sl. No.	Players	Sample Size	Mean	Standard deviation	*'t'* value
1.	Basketball	40	16.24	0.96	5.67*
2.	Volleyball	40	17.46	1.08	

* Significant at 0.05 level

The above table shows the mean value, standard deviation and 't' value of Agility of Basketball and VolleyballPlayers . The 't' value has shown significant difference between Basketball and VolleyballPlayers. BasketballPlayers are more agile than the Volleyball Players.

Table – 5:**Showing the Mean value , Standard deviation and *'t'* score of Power between Basketball and VolleyballPlayers**

Sl. No.	Players	Sample Size	Mean	Standard deviation	*'t'* value
1.	Basketball	40	2.02	0.13	3.38*
2.	Volleyball	40	2.13	0.15	

* Significant at 0.05 level

The above table shows the mean value, standard deviation and 't' value of power of Basketball and Volleyball Players . The 't' value has shown significant difference between Basketball and VolleyballPlayers. VolleyballPlayers are having more explosive Power than the BasketballPlayers.

Discussions Of Findings

The statistical findings of the present study revealed that there is a significant difference in the selected Motor Fitnessvariables among Basketball and Volleyball Players. Speed, Endurance, Strength, Agility and Power are vital to the performance of fundamental motor Skills like Throwing, Kicking, Jumping, Stretching,Hopping and Skipping. Basketball Players have found significant in Speed, Endurance, Strength and Agility than Volleyball Players,but inPower VolleyballFemalePlayers are better than Basketball player.This is because of the type of training they get in that particular game and skills involved in the game.

Conclusions

Within the limitations of the present study it may be concluded that in SpeedBasketballPlayers are having more Speed than the VolleyballFemalePlayers, in EnduranceBasketballPlayers are having more Endurance than the VolleyballFemalePlayers, in Strength BasketballPlayers are having more shoulder strength than the VolleyballfemalePlayers,in AgilityBasketballPlayers are more Agile than the VolleyballPlayers and in PowerVolleyballPlayers are having more explosive Power than the BasketballPlayers. This results clearly shows that BasketballPlayers are getting good training when compare to VolleyballFemalePlayers in their respective universities area , this is also shows the popularity of that game.

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Students' satisfactions on Physical Education Subject at University of Sciences – Hochiminh City National University

Nguyen TraGiang[(1)], Ngo Tuan Anh[(2)], Lam QuangThanh[(3)], Nguyen Van Chanh[(4)]

(1) Faculty of Liberal Arts, Institute of Physical Education – Chonburi campus, Thailand.
Email:nguyentragiang_hus@yahoo.com,

(2) Department of Physical Education, University of Science – Hochiminh city National University, Hochiminh city, Vietnam.
(3) Vietnam Sports General Department, Vietnam.
(4) Faculty of Socialist Studies, University of Social Science and Humanities – Hochiminh city National University, Vietnam.

Abstract

The purposes of this study were to examine the satisfaction levels of students and to evaluate the different in satisfaction between male and female students with learning program, lecturers and teaching methods toward studying in Physical education classes at University of Science, HCMC National University. The sample size in this study was included 150 male and 150 female students. Furthermore, Cronbach alpha and Independent t-testto analysis the data was used in this study.

The results and discussions revealed that there were not significant differences between male and female students with learning program, lecturers and teaching methods factors (Sig >0.05) toward studying in Physical education subjects. Following the results, we found that most of students were satisfied with learning program, lecturers and teaching methods although the levels were not so very high. Thus, learning program, lecturers and teaching methods need to be improved to make the students noted highest satisfaction in learning Physical education subjects.

Keywords:satisfaction, physical education subject, learning program, lecturers and teaching methods.

Introduction

In recent years, more and more people in the world have participated in sports and physical activities. It has become an essential part of the daily life of many Americans (Streff, 1991) and this trend also has a great influence on Vietnamese people's lifestyle. Besides, on April 12th 1997, the Minister of Vietnam Ministry of Education and Training signed a decision 12/02 GD-ĐT named "Enforce the Physical education program inUniversities and Colleges**"** because Physical education is one of the goals of comprehensive education of the Vietnamese Party and State, and within the Vietnamese national education system. Furthermore,learning program, lecturers and teaching methods are important factors to attract studentsparticipate in Physical education class at the universities (Lin, 1994) because if they are poor lecturers and not enthusiasm, poor teaching methods, and simple learning program as well, they will not be able to attract enough students to join it frequently (Huang, 1992).Thus, the development of learning program, lecturers and teaching methods are issues that sports experts should have the great consideration.

According to the instruction No. 904/ĐH dated on 2/17/1994 about new physical education process of Vietnam Ministry of Education and Training, the Physical Education Department of University of Sciences, HCMC National University has been continuously trained the lecturers and staff in quantity and professional skills, deployed in depth physical activities in so many practical and effective ways. However, no researches have mentioned students' satisfaction with learning program, lecturers and teaching methods at University of Science, HCMC National University. So this study was carried out to understand what University of Science, HCMC National University student's needs are regarding lecturers and teaching methods. Then, our research will help teachers realize the strengths and shortcomings that have plans to improve the quality of teaching and service to achieve the goals that department and the University were set.

The objectives of this study were to examine the satisfaction levels of students and to evaluate different in satisfaction between male and female students with learning program, lecturers and teaching methods toward studying in Physical education classes at in University of Science, HCMC National University. Therefore, this study came along with the hypothesis: There is a significant difference in satisfaction between male and female students with learning program, lecturers and teaching methods toward studying in Physical education subjects at University of Science, HCMC National University.

Methods

Sample: In this study, researchers are teaching the physical education classes on Monday, Tuesday and Friday,thenit was reasonable to use cluster sampling as the method to select samples. Hence, the sample size was 300 students who included 150 male students and 150 female students.

Measure

A self-constructed survey questionnaire was used and it was included 22 items with 2 sections: 8 items of learning program factor, and 14 items of lecturers and teaching methods factor. Then, students answered on 5-Likert scale which includes 5 items: "strongly dissatisfied", "dissatisfied", "neutral", "satisfied" to "strongly satisfied".

Validity and Reliability

The questionnaire was developed in Vietnamese language that including 22 items. Then, the Content Validity Index (CVI) was used to establish validity, three experts were asked to evaluate the questionnaire for clarity, readability, item relevance, discrimination, and inclusiveness of items. CVI of all instruments were 0.98. Then, 50 students were tested those instruments for internal consistency with the same criteria as the subjects at Physical Education classes – University of Science. Moreover, the coefficient alpha values in the interval of .8215 to .8379 for 2 subscales (learning program, lecturers and teaching methods) which are above the minimum level of 0.7 recommended by Nunnallyand Bernstein (1994).

Data collection

Firstly, the researcher developed the Vietnamese questionnaire version from the secondary information such as the other researches, the books and internet, etc. After that, this questionnaire was checked and edited by the experts and advisors. Finally, the researcher began to collect data.

Data Analysis

Mean and standard deviation were used to examine level of students' satisfaction. Independent t-test was used to evaluate different satisfaction between male and female students with learning program, lecturers and teaching methods.

Results and Discussions

Table 1 Results of Mean, Standard deviation and Independent *t*-test of male and female students' satisfaction in Learning program factor (n = 300).

Items	Code	Gender	n	Mean	SD	Students' satisfaction level	*t*	Sig
-The contents of the learning program are reasonable.	LP1	Male	150	3.55	0.67	Satisfied	-0.602	0.552
		Female	150	3.60	0.69	Satisfied		
-The credit total of all the physical education subjects in a term is reasonable.	LP2	Male	150	3.63	0.81	Satisfied	0.291	0.772
		Female	150	3.60	0.79	Satisfied		
-The obligatory subjects are reasonable.	LP3	Male	150	3.39	0.68	Neutral	-0.242	0.807
		Female	150	3.41	0.73	Neutral		
-The optional subjects are reasonable.	LP4	Male	150	3.56	0.69	Satisfied	-0.303	0.765
		Female	150	3.59	0.85	Satisfied		
-The schedule for every subject is arranged reasonable.	LP5	Male	150	3.29	0.77	Neutral	1.974	0.05
		Female	150	3.09	0.92	Neutral		
-The schedule for extracurricular activities is reasonable.	LP6	Male	150	3.27	0.78	Neutral	0.734	0.465
		Female	150	3.20	0.79	Neutral		
-The examinations for each subject are close to the learning program.	LP7	Male	150	3.63	0.82	Satisfied	1.942	0.054
		Female	150	3.45	0.85	Satisfied		

-The examination organization is well done and the examiners are completely serious.	LP8	Male	150	3.71	0.74	Satisfied	0.692	0.491
		Female	150	3.65	0.77	Satisfied		

$p < 0.05$

Criteria: Satisfaction level (1.00 – 1.80: absolutely dissatisfied; 1.81 – 2.61: dissatisfied; 2.62 – 3.42: Neutral; 3.43 – 4.23: Satisfied; 4.24 – 5.00: absolutely satisfied)

Table 1 revealed that there was no significant difference between male and female students in learning program factor in totally. These differ from the hypothesis above but it was true with the real situation because this learning program based on the regulations of the instruction of Physical Education subject in the University from Vietnam Ministry of Education and Training (1995). In this instruction, they said that to ensure the content, the credit of Physical education subject in 1 term, to arrange the schedule for the obligatory subjects, optional subjects are reasonable, etc.

Table 2 Results of Mean, Standard deviation and Independent *t*-test of male and female students' satisfaction in Lecturers and teaching methods factor (n = 300).

Items	**Code**	**Gender**	**n**	**Mean**	**SD**	**Students' satisfaction level**	***t***	**Sig**
- The lecturer has good and understandable teaching methods.	LTM1	Male	150	3.66	0.78	Satisfied	1.196	0.233
		Female	150	3.55	0.86	Satisfied		
-The lecturer has thorough professional knowledge and updates the in-charge subject.	LTM2	Male	150	3.60	0.72	Satisfied	-0.852	0.394
		Female	150	3.67	0.76	Satisfied		
-The lecturer supplies the syllabus of each subject.	LTM3	Male	150	3.53	0.69	Satisfied	0.166	0.869
		Female	150	3.51	0.70	Satisfied		
-The lecture combines the teaching with the education of the students' characteristics and morality.	LTM4	Male	150	3.40	0.77	Neutral	-1.973	0.050
		Female	150	3.57	0.75	Satisfied		

Table 2 Continued

-The lecturer is dressed politely and behaves correctly towards the students.	LTM5	Male	150	3.44	0.81	Satisfied	-0.143	0.892
		Female	150	3.45	0.88	Satisfied		
-The lecturer always does the teaching in accordance with the teaching plan.	LTM6	Male	150	3.39	0.78	Neutral	-0.154	0.879
		Female	150	3.40	0.73	Neutral		
The lecturer is always concerned to supports weak students in the class.	LTM7	Male	150	3.63	0.81	Satisfied	-1.581	0.116
		Female	150	3.77	0.80	Satisfied		
-All questions about the Physical education subject can be posed to the lecturer in charge (through direct discussion, email, telephone etc.).	LTM8	Male	150	3.47	0.84	Satisfied	-1.934	0.055
		Female	150	3.65	0.84	Satisfied		

-There are various forms to evaluate the students' performance in each sport in Physical Education subject so the evaluation has better accuracy.	LMT9	Male	150	3.29	0.76	Neutral	1.034	0.302
		Female	150	3.19	0.80	Neutral		
-The lecturer applies the team-work method in the class the students can achieve the knowledge objectives of subject.	LTM10	Male	150	3.28	0.77	Neutral	0.363	0.717
		Female	150	3.25	0.82	Neutral		
-The students can achieve the skill objectives.	LTM11	Male	150	3.33	0.72	Neutral	2.119	0.035
		Female	150	3.16	0.70	Neutral		
-The lecturer renovates the teaching methods.	LTM12	Male	150	3.30	0.70	Neutral	0.648	0.517
		Female	150	3.25	0.72	Neutral		
-The university is concerned to the teaching quality.	LTM13	Male	150	3.31	0.72	Neutral	1.594	0.112
		Female	150	3.18	0.73	Neutral		
-The students' general remark on the University's training quality of the Physical Education subject.	LTM14	Male	150	3.38	0.64	Neutral	1.494	0.136
		Female	150	3.26	0.75	Neutral		

$p < 0.05$

Criteria: Satisfaction level (1.00 – 1.80: absolutely dissatisfied; 1.81 – 2.61: dissatisfied; 2.62 – 3.42: Neutral; 3.43 – 4.23: Satisfied; 4.24 – 5.00: absolutely satisfied)

Table 2 showed that there was no significant difference between male and female students in lecturers and teaching methods factor. These differ from the hypothesis above but it was true with the real fact that most of students enjoyed with the lecturers and teaching methods because they always make their lectures interesting so there had no sex different with what they gain from the lecturers (Adediwura&Bada, 2007).

Conclusions

In summary, we found that most of students were satisfiedwith learning program, lecturers and teaching methods although the levels were not so very high. Thus, learning program, lecturers and teaching methods need to be improved to make the students noted highest satisfaction in learning Physical education subjects.

Recommendation for applications

It is neccessary that grounds, sport halls and equipment should be upgraded and the quality of sub-services such as parking lots and canteens should be increased. Besides, teaching programs and methods be renewed to meet students' demands, especially ones of female students. Furtheremore, it is neccessary that the abilities of lecturers should be increased.

Recommendation for further researches

The results of this study are the first dicoveries to supply more evidents for the tasks of researching, managing and teaching physical education at University of Science, HCMC National University.Especially, through this study we realize that further researches must be carried out to perfect the evaluation of students' motivation and practice.

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A Comparision Of Psychological Characteristics Of Male And Female Judo Players Of Chhattisgarh

Dr. Rajkumar Sharma*
Grade-I Gymnastic –Coach (Sport Authority of India), Department of Sports and Youth Welfare, Bilaspur (CG)

Abstract
The purpose of this study was to compare the psychological characteristics of male and female players of Chhattisgarh. A sample consisted of thirty male and female Judo players of Chhattiisgarh, who participated in State Judo championships held at Bhillai in the year 2012-13. The Athletic Coping Skills Inventory-28 prepared and developed by Smith et al. 1995 was used to measure the seven dimensions of psychological characteristics i.e. Coping with adversity , Peaking under pressure, Goal setting and mental Preparation, Concentration, Freedom from worry, Confidence and achievement motivation, and Coach-ability. To find out the significance of differences between male and female Judo Players of Chhattisgarh, the Means, Standard deviations and t –ratio were computed. Results of the study indicated that the male Judo players had better coping ability than female Judo Players. Female judo players had better concentration ability than their counter parts. Male and female Judo Players also expressed similar psychological ability for the set of seven factors of psychological characteristics.
Keywords: Males, Females, Judo, Psychological Characteristics.

First of all, the inclusion of sports psychology was much more important to the Eastern European countries. Secondly, the approach to sports psychology is different. Sport psychologists in the USA work directly with the athletes, whereas, the Eastern Europeans believed that the coach should be the sport psychologist. In other words, the job of the sport psychologist is to help educate the coach. Furthermore, coaches in the former GDR completed a thorough training program that included extensive education in Sports Psychology. In western countries, coaches are seldom required to have formal training or to work closely with sport science practitioners or researchers (Roberts and Kimiecik (1989).

Few athletes have received psychological training that in any way approaches the complexity of their physiological training, even though many athletes believe that the mental aspects of their sport prevail over the physical aspects. One of the benefits of more research on psychological variables in gymnastics. Anxiety has been the psychological factor most commonly linked to these sporting injuries, and there are reports of a high frequency of injuries in gymnastics . Elite gymnasts were found to have the highest anxiety level when compared to elite athletes from eight different sports. Little attention has been paid to the relationship of anxiety and injury in gymnastics (Kolt & Kirkby, 1994).

Players of different levels of play might display differences among the various psychological factors. Also, it was believed that identifying the psychological factors that influence soccer performance could provide important information to improve the athlete's preparation for the game, influence the occurrence of injuries and lead to intervention methods to improve fair play (Junge and his associates, 2000).

The mental skills are most important for the athlete to develop in order to enhance and optimize their coping skills. One concern that Baltzell had, however, was the lack of correlation between Coping and the Coping with Adversity subscale in the ACSI-28. Baltzell asserts that these two scales should be more closely related since theoretically, those athletes who cope effectively would also cope with adversity (Baltzell , 1999).

One important question is which psychological inventory will best assess these characteristics. If only one characteristic is being studied, then the best test would be one specific for that characteristic. However, when trying to predict success in a sport like individual or team game, or trying to identify one of several psychological constructs to determine strengths and weaknesses, the Athletic Coping Skills Inventory-28 has emerged as one of the best (ACSI-28; Smith, Schutz, Smoll, & Ptacek ,1995).

The purpose of this study was to compare the psychological characteristics of male and female players of Chhattisgarh. It was also hypothesized that there will no significant difference between male and female players of Chhattisgarh.

Methodology

Sample:

A sample consisted of thirty male and female Judo players of Chhattiisgarh, who participated in State Judo championships held at Bhillai in the year 2012-13. The mean and SD of age in case of male and female for total sample was 21.66±3.61 and 20.09±2.15 years.

Instrumentation:

The Athletic Coping Skills Inventory-28 prepared and developed by Smith et al. 1995 was used to measure the seven dimensions of psychological characteristics in the form of personal coping resources of university athletes i.e. Coping with adversity , Peaking under pressure, Goal setting and mental Preparation, Concentration, Freedom from worry, Confidence and achievement motivation, and Coach-ability.

Procedure:

The test was administered on the subjects during when they were not quite busy and has sufficient time to give correct response of the questions cited in the questionnaire.

Results And Discussion

To find out the significance of differences between male and female Judo Players of Chhattisgarh, the Means, Standard deviations and t –ratio were computed and data pertaining to this have been presented in Table 1 . Significant level was set at .05 level.

TABLE 1

SIGNIFICANCE OF DIFFERENCES BETWEEN MEAN SCORES OF MALE AND FEMALE JUDO PLAYERS ON SEVEN DIMESIONS OF PSYCHOLOGICAL CHARACTERISTICS

S. N0.	Psychological Characteristics	Sex	Mean	MD	σ DM	t-value
1.	Coping with Adversity	Male Female	2.1944 2.0417	0.1527	0.2159	0.707
2.	Coach Ability	Male Female	1.6667 1.5417	0.1250	0.1843	0.678
3.	Concentration	Male Female	2.1250 2.1667	0.0417	0.2276	0.183
4.	Confidence and Achievement Motivation	Male Female	2.2778 2.1458	0.312	0.1784	0.739
5.	Goal setting and Mental preparation	Male Female	2.3750 2.2290	0.1458	0.1924	0.758
6.	Peaking under Pressure	Male Female	2.2500 2.2500	0.0000	0.2098	0.000
7.	Freedom from Worry	Male Female	1.0278 0.8333	0.1944	0.2590	0.751

Insignificant at .05 Level

t.05 (28) = 2.05

It is evident from Table 1 that the statistically significant difference was not found between male and female judo players in coping with adversity, coach ability, concentration, confidence and achievement motivation, goal setting and mental preparation, peaking under pressure, freedom from worry factors of psychological characteristics, as the obtained t –values of 0.701, 0.290, 0.676, 0.746, 0.675, 0.00, and 0.449 respectively were lesser than the required value of t.05 (28) = 2.05

Discussion

Male judo players obtained significantly higher mean scores than their counter parts in 6 of the 7 sport psychological variables, namely adversity, confidence, goal setting, and. worry except concentration . Results of t-ratio indicated the statistically insignificant differences between male and female judo players of on psychological variables. Which may be due to similarity in bounce back quickly from mistakes and setbacks, accept constructive criticism, ability to maintain unexpected situation, confidence, goal setting of specific performance, focus without worry on performance in competitive situations and perform well under pressure. In all these variables of coping skills, it was seen that the male judo players had better skills in comparison to female Judo players. This was partially supported by Kruger, Piennar, Plessis &Rensburg (2012).

It was also hypothesized that "There will no significant difference between male and female players of Chhattisgarh" is totally accepted

Conclusions

Male Judo players had better coping ability than female Judo Players.

Male and female Judo Players expressed similar psychological ability for the set of seven factors of psychological characteristics.

Female judo players had better concentration ability than their counter parts

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Extraversion And Agreeableness: Comparison Between Sedentary And Labourer Women In Respect Of Physical Capabilities

Dr. Swapna Ray Barma
Assistant Professor
Govt. College of Physical Education for Women
Dinhata, West Bengal, India
e-mail: barmaswapna45@gmail.com

Abstract
The present study was to determine the two personality traits and physical capabilities of 35-44 years women of the three different communities in three different districts in West Bengal and their comparison with each other. According to the design of the study 225 sedentary and 225 labourer women were randomly selected as the subjects. For personality traits the data were collected by administering Big Five Inventory which measures only two dimensions of personality, extraversion and agreeableness. In respect of physical capabilities the muscular strength endurance by sit-up and cardio-respiratory endurance by 1-mile run-walk have been measured. Mean and Standard deviation were calculated as descriptive statistics and to find out the inter group difference t-test was conducted. In both traits the three Sed-groups were not significantly different from each other. However, three Lab-groups were significantly different only for agreeableness. Under the sit-up score of three Lab-groups were significantly higher than their matched Sed-group. In the cardio respiratory endurance score the Sed-groups were not significant, but the difference between SC and ST Sed-groups was significant. From the results it was concluded that in the North Bengal region of India the sedentary women had superior in few personality traits than the labourer women.
Key words: Extraversion, Agreeableness, Muscular Strength Endurance, Cardio-respiratory Endurance and North Bengal Region.

Introduction:
The human personality is a marvelously intricate structure, delicately woven of motives, emotions habits, and thoughts into a pattern that balances, however precariously, the pulls and pushes of the world outside. Personality is the total sum of his “being” and includes physical, mental, social, emotional and intellectual aspects. Once personality reflects his perception, imagination, attitude, instincts, habits values, interests and sentiments about himself and his self-worth. Intelligence, achievement, motivation, modes of adjustment – all these and much more constitute human personality (Singh, A. et al. 2009). Extraversion refers the extent to which a person is sociable, talkative lively, active and excitable. Agreeableness refers to the extent to which a person is good – natured, helpful, trusting and cooperative. A person who is high in agreeableness would be caring help others, trust others and strive to be cooperative in groups. Andre, M. et al. (2010) investigated to secular trends in personality traits in adult female populations. In both age groups (38 years; n=318 and 50 years; n=593), secular comparisons in psychological profile subscales showed an increase in dominance, exhibition aggression and achievement. Li et al (2001) concluded that the high prevalence of symptoms in middle- aged women could be attributing to age, hormonal influence as well as personality. Regular physical activities contribute positively to physical and psychological health (Paudevigne and 0’ Connor, 2006).Physical capabilities are an important part of life. It is a set of attributes that relate to the ability of people to perform physical activity (Mc Ardle et al. 1996). This level changes with respect to an individual’s age, sex, activity level and socio-economic. Generally, it is achieved through exercise, correct nutrition and enough rest (Wikipedia, 2014).

Methods

In the present study, 225 sedentary women and 225 labourer women within the range between 35-44 years were selected from three districts namely Cooch Behar, Jalpaiguri and Darjeeling of North Bengal, India. According to the design of the study there were three sub-groups namely General (GN), Scheduled Caste (SC) and Scheduled Tribe (ST). The all groups (GN, SC and ST) there were two sub– groups i.e. Sedentary and Labourer. The personality traits was assessed by administering Big Five Inventory which measures only two dimensions of personality, extraversion and agreeableness. In respect of physical capabilities for estimation of muscular strength endurance by sit-up and cardio-respiratory endurance by 1-mile run-walk have been considered. Central tendency and standard deviation were used as descriptive statistics for this study. Significance of the difference between two means was computed by using t-test and the level of significance was considered only 0.05 levels. All statistical calculations were done using standard statistical software.

Results And Discussion:

The Mean and S.D. of extraversion and agreeableness were presented in Table-1 and result of t-test have presented in Table-2.The ST-Sed group has the highest mean score in comparison to all Sed and Lab groups in case of extraversion. The mean scores of all Lab-groups on the agreeableness (Ag) trait were lower than others.

Table No.1: Mean and SD of selected parameters of the psychological health

Parameters		**GN-Sed**	**SC-Sed**	**ST-Sed**	**GN-Lab**	**SC-Lab**	**ST-Lab**
Extraversion	**Mean**	**27.66**	**28.16**	**28.25**	**26.92**	**26.93**	**25.82**
	S.D.	**±4.02**	**±3.83**	**±4.12**	**±4.29**	**±3.74**	**±4.59**
Agreeableness	**Mean**	**32.63**	**32.73**	**33.31**	**31.10**	**30.04**	**28.76**
	S.D.	**±3.91**	**±4.08**	**±4.13**	**±4.24**	**±3.75**	**±4.12**

Pair-wise t-test was conducted as a routed matter. Out of 3-pairs of Sed-group and 3-pairs of Lab-groups only one pair GN-Lab Vs ST-Lab was found significant. However, when Sed-groups i.e. GN, SC and ST groups compared with corresponding Lab-groups, out of 3-pairs two pairs SC-Sed and ST-Sed had higher score than Lab-SC and Lab-ST groups respectively. It means sedentary females were more extrovert than labour groups.

For agreeableness the three Sed-groups were matched against to each other and no pair was found significantly different. On the contrary, when three Lab- groups where compared among themselves, it was observed out of three pairs two were significant. The Lab-GN and Lab-SC groups were significantly higher than Lab-ST respectively. When three Sed-groups were matched against their respective caste but Lab-groups, all the three pairs were found significantly different. It means sedentary group's agreeableness was of a higher level than Lab-groups.

Table No.2: t-test: All the groups together for Extraversion and Agreeableness

Parameters	*Statistics*	*GN-Sed Vs. SC-Sed*	*GN-Sed Vs. ST-Sed*	*SC-Sed Vs. ST-Sed*	*GN-Sed Vs. GN-Lab*	*SC-Sed Vs. Sc-Lab*	*ST-Sed Vs. ST-Lab*	*GN-Lab Vs. SC-Lab*	*GN-Lab Vs. ST-Lab*	*SC-Lab Vs. ST-Lab*
Extraversion	**t- stat**	**-0.87**	**-0.84**	**0.13**	**1.11**	**2.13**	**3.58**	**-0.02**	**1.87**	**-1.89**
	P(T>=t) one tail	**0.19**	**0.2**	**0.45**	**140E-01**	**0.02***	**0.0003***	**0.49**	**0.03**	**0.03**
Agreeableness	**t- stat**	**-0.07**	**-1.12**	**0.83**	**2.53**	**4.04**	**7.11**	**1.54**	**3.17**	**2.27**
	P(T>=t) one tail	**0.43**	**0.13**	**0.21**	**0.007***	**6.53***	**3.04***	**0.06**	**0.001***	**0.01***

Statistics: t-stat=1.98 is significant at 0.05 level ***Significant at 0.05 level**

Table No.3 represents the physical capabilities of the labourer group was better than the sedentary group. In the mean sit-up score the GN-Sed and GN-Lab groups were lower among the all sedentary and labourer groups respectively. Beside these, the SC–Sed and SC-Lab groups were taken the less time among the other Sed and Lab groups in 1-mile walk/run.

Table No.3: Mean and SD of selected activities on physical capabilities

Parameters		**GN-Sed**	**SC-Sed**	**ST-Sed**	**GN-Lab**	**SC-Lab**	**ST-Lab**
Sit-up (No.)	**Mean**	**3.43**	**4.29**	**4.27**	**8.64**	**10.35**	**10.07**
	S.D.	**±5.27**	**±5.47**	**±5.15**	**±5.05**	**±5.56**	**±5.14**
1-mile run/walk Run(Sec.)	**Mean**	**1157.27**	**1116.49**	**1166.96**	**903.43**	**880.66**	**887.36**
	S.D.	±163.27	±153.13	±192.43	±115.37	±103.97	±111.3 9

The result for sit-up of paired t-test revealed that in the sedentary and labourer groups separately none of the matched pair was significant. Whereas intra-group difference the Sed-group was compared with matched Lab-group i.e. Sed-GN Vs Lab-GN and similar, three pairs were found significantly different. For 1-mile walk /run in the Sed-groups out of three pairs (t-test) only SC-Sed and ST-Sed was significantly different. In Lab groups' intra-group variation was negligible. However, when three Sed-groups were matched with corresponding Lab-group all the three matched pairs appeared significantly different. Further it appears that Lab-group took less time in covering 1-mile distance than Sed sub-group subjects.

Table No.4: t-test: All the groups together for selected activities on physical capabilities. .

Parameters	*Statistics*	*GN-Sed Vs. SC-Sed*	*GN-Sed Vs. ST-Sed*	*SC-Sed Vs. ST-Sed*	*GN-Sed Vs. GN-Lab*	*SC-Sed Vs. Sc-Lab*	*ST-Sed Vs. ST-Lab*	*GN-Lab Vs. SC-Lab*	*GN-Lab Vs. ST-Lab*	*SC-Lab Vs. ST-Lab*
Sit-up (No.)	**t- stat**	**–1.92**	**–0.94**	**–1.16**	**–5.86**	**–5.68**	**–7.16**	**–1.82**	**–1.63**	**–0.37**
	P(T>=t) one tail	**0.03**	**0.18**	**0.13**	**6.10***	**1.27***	**2.49***	**0.04**	**0.05**	**0.36**
1-mile run/walk Run (Sec.)	**t- stat**	**1.54**	**–0.40**	**1.75**	**1.19E+01**	**11.32**	**11.22**	**1.21**	**0.87**	**0.35**
	P(T>=t) one tail	**0.06**	**0.35**	**0.04**	**3.72***	**4.17***	**6.36***	**0.12**	**0.20**	**0.36**

Statistics: t-stat=1.98 is significant at 0.05 level ***Significant at 0.05 level**

In the present study psychological health was assessed with the two dimensions of personality, extraversion and agreeableness. Extraversion predicts effective functioning and well – being across a wide variety of domains from cognitive performance and social endeavors to social economic status **(**Ozer and Benit – Martinez, 2006). John and Srivastava (1999) found the mean correlation was 0.28 for Agreeableness and Conscientiousness, –0.28 for Agreeableness and Neuroticism. They also showed the reliability and validity of BFI for agreeableness was 0.79 and 0.92 respectively. In this study, the physical capabilities of the sedentary group were lower than the labourer group. Osawa et al., (2011) reported the student and staff (21-29yrs.) of Keio University, Helsinki performed the number of sit-ups to the thereof 18.1±4.5. Kamyabnia et al., (2011) found the dynamic sit-up was higher in control subjects than the obese women. A statistically significant interaction was found between the treatment and group factors ([F. sub. 1.38] =7.08; P<0.05) for cardiovascular endurance. Moreover, mean comparison indicated that the mean time needed to run the 1- mile was significantly reduced only in the experimental group (Derri et al., 2004). AL-Shamli (2010) found the rural students secured better in cardiovascular endurance than urban students (7.63 ±1.30, 8.03±1.77 respectively). The findings of the present study are closely similar to the findings of the leading researchers.

Conclusion

On Personality Traits: In extraversion scores of three Sed-groups and three Lab-groups were not significantly different from each other. However, SC-Sed and ST-Sed groups had significantly higher score than their matched labourer groups.There were no significant differences among three Sed-groups in agreeable score. But in three Lab-groups were significantly different from each other. However, Sed-groups were higher score than their matched Lab- groups.

On Physical Capabilities: Under the muscular strength endurance the sit–up score of three Sed-groups were statistically not significant. Similarly, three Lab-groups difference are not significant. Three Lab-groups were significantly higher than their matched Sed- group.In Sed–groups the cardio respiratory endurance score was not significant, but the difference between SC and ST Sed-groups was significant. In Lab-group intra-group's variation was negligible. However, three Lab- groups were significantly higher than their matched Sed-groups respectively.

Recommendations

Considering the various aspects the author recommended that the present study has been confined within the 35-44 years age group. Further study may be conducted taking subjects below 35 years and above 44 years and also the athlete of various team and individual games.

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Impact Of Aquatic Training Programme On Selected Strength Parameters Among University Athletes

Dr. S. Manikandan
Assistant Professor
Department of Physical Education and Sports Sciences,
Annamalai University, Tamilnadu, India.

Abstract
The purpose of the study was to find out the impact of aquatic training programme on selected strength parameters among university athletes. To achieve this purpose, twenty athletes were selected as subjects, their aged between 18 to 25 years, they are studying in the Department of Physical Education and Sports Sciences, Annamalai University, Tamilnadu. The selected subjects were divided into two equal groups of ten subjects each, namely aquatic training group and control group. The aquatic training group trained for three alternative days in a week for eight weeks with normal aquatics practices with a progressive increase in load with the number of weeks. Strength Parameters such as back strength and leg strength were selected as criterion variables and they were tested by using back lift and leg lift with dynamometer respectively. ANCOVA was used to find out the significant difference if any between the groups. The results of the study showed that there was a significant differences on strength parameters such as back strength and leg strength between aquatic training group and control group.
KEY WORDS: AQUATIC TRAINING, LEG STRENGTH, BACK STRENGTH.

Introduction

Sports training is a scientifically based and pedagogically organized process which through planned and systematic effect on performance ability and performance readiness aims at sports perfection and performance improvement as well as at the contest in sports competition.

Aquatic is the performance of aerobic exercise in fairly shallow water such as in a swimming pool. Done mostly vertically and without swimming typically in waist deep or deeper water, it is a type of resistance training. Water aerobics is a form of aerobic exercise that requires water-immersed participants. Most water aerobics is in a group fitness class setting with a trained professional teaching for about an hour. The classes focus on aerobic endurance, resistance training, and creating an enjoyable atmosphere with music. Different forms of water aerobics include: aqua Zumba, water yoga, aqua aerobics, and aqua jog.

Strength is a vital factor on which the sports performance depends. Depending upon the magnitude and type of resistance to be tackled in various sports, the sportsman of different sports and different level and type of strength to achieve good performance.

Methodology

The purpose of the study was to find out the impact of aquatic training programme on selected strength parameters such as leg strength and back strength among university athletes. To achieve this purpose, twenty athletes were selected as subjects, their aged between 18 to 25 years, they are studying in the Department of Physical Education and Sports Sciences, Annamalai University, Tamilnadu. The selected subjects were divided into two equal groups of ten subjects each, namely aquatic training group and control group. The aquatic training group trained for three alternative days in a week for eight weeks with normal aquatics practices with a progressive increase in load with the number of weeks. Strength Parameters such as back strength and leg strength were selected as criterion variables and they were tested before and after the training by using back lift and leg lift with dynamometer respectively.

The selected subjects were divided into two groups of ten subjects each. Group I considered as experimental group who underwent aquatic training for eight weeks and Group II considered as control that did not undergo any special training programme. Analysis of covariance (ANACOVA) was applied to find out significant difference if any between the experimental and control group.

Table – I

ANALYSIS OF COVARIANCE FOR BACK STRENGTH AND LEG STRENGTH FOR AQUATIC TRAINING GROUP AND CONTROL GROUP

Variable Name	Group Name	Aquatic Group	Control Group	'F' Ratio
Back Strength	**Pre-test Mean ± S.D**	65.67 ± 1.35	65.93 ± 1.45	1.65
	Post-test Mean ± S.D.	68.13 ± 1.41	65.87 ± 1.51	23.14*
	Adj. Post-test Mean ± S.D.	68.23	65.77	48.19*
Leg Strength	**Pre-test Mean ± S.D**	88.8 ± 3.39	86.26 ± 4.06	3.265
	Post-test Mean ± S.D.	93.13 ± 2..97	86.73 ± 4.33	19.83*
	Adj. Post-test Mean ± S.D.	93.13	86.73	48.06*

* Significant at 0.05 level of confidence. (The table values required for significance at 0.05 level of confidence for 1 and 18 & 1 and 17 are 4.41 and 4.45 respectively).

Results Of The Study

Table-I showed that the results of the study there was a significant difference between experimental and control group on back strength and leg strength. Further the results of the study showed that there was a significant improvement on back and leg strength due to eight weeks of aquatic training programme. However the improvement was in favour of experimental group.

Conclusions

1. There was a significant difference between experimental and control groups on selected criterion variables.
2. There was a significant improvement on back strength and leg strength. However the improvement was in favour of experimental group due to eight weeks of aquatic training programme.

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A Study On Coping Strategies Among University Level Male Students

Mr. Tarun Mondal, Research scholar, University of Kalyani, West Bengal, India.
Dr. Sanjib Mridha , Associate Professor, University of Kalyani, West Bengal, India.
email: mondaltarun28@gmail.com

ABSTRACT: The purpose of the present research was to compare the level of coping strategies among university level male students. The research is causal-comparative and the sample consists of 90 students (19-25 years of age) who were selected using convenience sampling. For assessing Coping Strategies a standardized questionnaire were used for data collection.The findings revealed that the behavioural approach of physical education students were better than engineering and general students. Moreover, a significant difference was observed among the groups in the components of cognitive behavioural approach and in case of this component general and physical education students had better cognitive behavioural approach efforts to manage specific demands. Regarding avoidance strategies and its subscales(Behavioural Avoidance, Cognitive Avoidance), although the mean scores of the general and physical education students were higher than the scores of the engineering students, the difference was not statistically significant .

Keywords: coping strategies, approach, avoidance

Introduction

In education system, students are those receiving education in junior high schools, senior high schools, vocational high schools, colleges or universities. Due to fast physical changes and mental development at this stage, students may sometimes experience incompatibility of their mental development with their physical changes or with the social environment and thus suffer from problems arising from inadequate adaptations. These problems may further cause psychological troubles and even induce deviant behaviors.

In modern society, stress has become a part and parcel of life. Pinel (2003) defines stress as a physiological response to perceived threat. It therefore has negative effects on life's pressures and events and can generally be viewed as a set of neurological and physiological hardiness and coping strategies that serve an adaptive function (Franken, 1994). Holmes and Rahe (1967) indicated that any life change that requires numerous readjustments can be perceived as stressful. Teens of today face many challenges that parents and traditional educators may not have had to experience when they were growing up. Due to numerous pressures of the 21st century, university students are having difficulty in coping strategies, and are requesting for educational programs in universities to help teach them how to cope with such stressors .

Many students face stress as they try to mix up busy lives, educational place, and work; while they are trying also to have time with family and friend. For some student, stress becomes almost a way of living. However, it is really dangerous to let stress become student's way of living in college and university, because some stress levels can lead to a terrible effect that changes completely student's life and it may result to failure. The brain is familiar with stress, a physical reaction is triggered and it easily damages the memory, which may lead to further mental reactions or misconduct.

A student's life is subjected to different kinds of stressors, such as the pressure of academics with an obligation of success, uncertain future and difficulties envisaged for integration into the college system. These students face social, emotional and physical and family problems which may affect their learning ability and academic performance. Stress levels among university students are higher than those of people at any other stage of life, a poll has found. In addition, the poll found that university students have a higher predisposition toward experiencing depression sometime during their four years at college. A healthy lifestyle during university education is an essential companion to any stress-reduction program.

Stress occurs when pressure exceeds beyond its perceived ability to cope.Coping strategies are known to influence an individuals' experience of stress. For most students, managing stress during university education can be extremely challenging. However, learning how to manage stress may help students cope with every day social and academic pressures, and thus have a better college experience. Effective time management strategies increase academic performance and are frequently suggested by academic assistance personnel as aids to enhance achievement for university students. University students are at a critical period where they will enter adulthood because after completing study they need a good job for supporting their family and they are expected to be the in the society. Thus, they should enhance their stress management abilities so as to live a healthy life after entering the vocation.

Therefore, the purpose of this study was to assess the and coping strategies again tress by Physical Education, General and Engineering students belonging to universities.Therefore, early detection and intervention may prevent and minimize the exert effects of stress on the students in the future. Stress on university students needs to be recognized, and strategies developed to improve it should be focused on both individual and situational factors. Park & Adler reported that effective and appropriate coping strategies may buffer the impact of newly encountered stressful situations on mental and physical health. Therefore, using coping strategies effectively and appropriately will help the university students in improving their stress level.

Methodology

Sample

Purposive subjects were obtained from three difference streams (General, Physical Education and Engineering students) of University of Kalyani. The samples of this study consisted of ninety (90) students. They belong to the age group of 18 to 25 years. Purposive sampling involves the selection of cases or subjects that are likely to be information-rich with respect to the purposes of the research (Burns & Grove, 1993). They were randomly selected from their respective department or hostel.

A table of necessary sample sizes for correlation research was used to determine a minimum number of participants for this study. It has computed the necessary sample sizes involving statistical power analysis and effect size.In the present study the investigator followed the random sampling procedure for selecting the sample.

Criterion Measures

coping strategies were measured with the help of questionnaires. The coping strategies questionnaire was consist of two main components namely approach which include three separate sub components behavioral, cognitive and cognitive behavioral approach whereas avoidance include behavioral avoidance and cognitive avoidance.

Tool Used

For understanding of coping strategies among general, physical education and engineering students' questionnaire method was followed. For this purpose the - copying strategies questionnaires was adopted and which was formed by Prof. A.K Srivastava. The questionnaire contained variety of questions related to coping strategies. So tool used for collection of data for the study was as follows-

i. Coping strategy.
ii. Scoring key

Here were 50 questions and all questions were to be answered. Five possible answered were given against each questions.

It was a self-administering scale. The instructions were read by the subjects silently. There was no time limit for recording responses in the scale.

Results

The results and discussion on the findings of the coping strategies measured on the subjects of the study are presented below.

Mean and standard deviation of the scores of the students in coping strategies and its subscales are presented in table 1.

Table - 1:**Descriptive statistics of different components of Coping Strategies:**

Groups	**General**		**Physical Education**		**Engineering**	
Approach	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Behavioural Approach	33.06	±6.76	34.00	±6.76	26.93	±4.38
Cognitive Approach	14.23	±3.60	14.10	±2.90	13.70	±3.40
Cognitive Behavioural Approach	21.50	±4.56	20.36	±3.90	18.00	±3.61
Avoidance	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Behavioural Avoidance	20.30	±8.79	17.50	±7.00	18.80	±6.61
Cognitive Avoidance	14.43	±3.82	13.53	±4.41	13.40	±4.91

ANOVA was applied to compare general, physical education and engineering students in terms of coping measures and its subscales. The results are presented below.

Table - 2

ANOVA TABLE					
Component	**Df Between groups**	**Df Within groups**	**'F' value**	**Sig.**	**CD at 5% level**
Behavioural Approach	2	87	11.97**	0.000	3.12
Cognitive Approach			0.21	0.811	-
Cognitive Behavioural Approach	2	87	5.835**	0.004	2.08
Behavioural Avoidance	2	87	1.038	0.358	-
Cognitive Avoidance	2	87	0.488	0.616	-

**ANOVA is significant at 0.01 level.

As can be seen in table 2, F value were found significant in case of Behavioural Approach and Cognitive Behavioural approach at 0.05 and 0.01 level.

Discussion and Conclusion

On the basis of the results indicated factor wise (coping strategies- behavioral approach, cognitive approach & cognitive behavioral avoidance, cognitive avoidance), it has observed that the physical education students were better than general and engineering students in behavioral approach. It may be concluded from the discussion that general, physical education and engineering students had equal cognitive approach such as process, perception and language as a way of explaining and understanding student individual behaviour.The present study also revealed that general students and physical education students had better cognitive behavioral approach efforts to manage specific demands that appraised the resources than engineering students.So general and physical education students had better cognitive behavioral approach than the engineering students to manage specifics demands that appraised the resources. On psychological variables, it has also observed that there was found no significant difference among the three groups in respect to behavioral avoidance and cognitive avoidance.

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Comparison Of Selected Physical Fitness Components Between Government And Private School Cricket Players

***Mr. P. Ramakrishna** ****Dr.P.Gowri Sankar**

***Research scholar Andhra University Visakhapatnam, A.P, India.**
**** Physical Director, Govt.Degree College Salur, Vizianagaram (Dist) A.P**

Abstract
The purpose of this study was to compare the Physical Fitness components i.e. speed, agility, flexibility, strength endurance and cardio-respiratory endurance between Government and Private School Cricket Players in Vizianagaram District. 15 Government and Private School Students were selected as a Subjects from ZPH School and Private School in Viianagaram District. Their age ranged between 12 years to 14 years. The investigator used 50 mts. dash to measure speed, shuttle run to measure agility, hip flexibility to measure flexibility, bent knee sit-ups to measure strength endurance and Cooper's 12 minutes run / walk test to measure cardio-respiratory endurance. The subjects were oriented and instructed before they were asked to perform. To verify the hypothesis the investigator used mean, standard deviation to find out the significant level 't' ratio was used with the help of the data. The value of speed, agility, flexibility, strength endurance and cardio-respiratory endurance was calculated which was found to be significant between was fixed at 0.05 level. Since the calculated value was greater than the required value of 2.05 in thus the null hypothesis was rejected at 0.05 level of confidence.
Key words: Speed, agility, flexibility, strength endurance and cardio respiratory endurance.

Introduction
Health is wealth, a health mind resides in a healthy body, these proverbs are pointers to the prominent position health have in human life. Health is a condition of the body as well as of the mind – condition of being physically fit, mentally strong and emotionally well-balanced. It is a comprehensive state of being well and free from illness. Sport for all has become a very popular slogan all over the world today. In the present day successful sportsman are among the most popular figures in the public like. The newspapers are lavish in their praise of outstanding performances. Fitness is not static. It improves during systematic training and reaches it is peak at the time of competition and comes down during transitional period. Fitness may be defined as the capacity of an individual to perform task. Fitness may be defined as a readiness or preparedness for performance with special record for muscular activity without undue figure. It concerns the capacity to move the body efficiently with force over a responsible length of time. In the modern mechanical worlds chance for the physical activities is less because of the invention of so many devices. The participation in physical activity is the compensation to maintain a good health. Physical education and sports, being an integral part of education, have experienced the impact of scientific advancement. Now the sportsmen have been able to give outstanding performance because of involvement of new scientifically sustained training methods and means of execution of sports exercises such as sports technique and tactics, improvement of sports wears and equipments, as well as other components and conditions of the system of sports training. Physical education is an education through physical activities for the development of the total personality of the child for its fitness perfection in body mind and spirit. Man lives for happiness depends on his physical and mental ability. Physical activity is the compensation to maintain a good health. The word health defined as a state of complete physically fit, mentally alert socially sound, emotionally balanced and spiritually enriched and not merely free from disease.

Methodology
The purpose of the study was to compare selected physical fitness components between Government school and Private School, Cricket players. To achieve this purpose 15 Government school and Private students were selected as subjects from Vizianagaram district. Their aged from 12-14 years.

Before conducting the tests, all the subjects were oriented and purpose of the test procedures clearly explained to the subjects. The present study was undertaken to analyse physical fitness components such as speed, agility, flexibility, strength endurance and cardio-respiratory endurance of Government and Private school cricket players. The collected data on selected criterion variables were statistically analyzed by using independent "t" ratio to find out the significant difference between Government and Private school cricket players. In all the cases, 0.05 level of confidence was fixed to the significance, which was considered as an appropriate.

Result Of The Study

The data collected on selected variables of Government and Private school cricket players were analysed are presented in a table.TABLEMean standard deviation and "T" ratio on selected physical fitness components of Government and Private school cricket players

S.No.	Students	Mean	Standard deviation	"T" ratio
Speed				
1	Govt. School Students	7.47	0.255	1.39
	Private School Students	7.38	0.255	
Agility				
2	Govt. School Students	10.25	0.49	1.22
	Private School Students	9.68	0.36	
Flexibility				
3	Govt. School Students	16.07	1.49	1.01
	Private School Students	16.80	1.82	
Strength Endurance				
4	Govt. School Students	31	2.41	4.11
	Private School Students	37	2.56	
Cardio-respiratory endurance				
5	Govt. School Students	1673.33	140.41	7.03
	Private School Students	1346.67	112.35	

The table value required significant at 0.05 level confidence for df 28 is 2.05.

Table indicates the mean values of hill area and coastal area students on speed (7.47, 7.38), agility (10.25, 9.68), flexibility (16.07, 16.80), strength endurance (31, 37) and cardio-respiratory endurance (1673.33, 1346.67). The obtained "t" ratio for speed, agility and flexibility were 1.39, 1.22 and 1.01 respectively which was lesser than the table value 2.05 and found to be insignificant at 0.05 level of confidence. The obtained "t" ratio for strength endurance and cardio respiratory endurance were 4.11 and 7.03 respectively which was greater than the table value 2.05 and found to significant at 0.05 level of confidence.

Conclusion

An significant difference was found between Government and Private School players in speed. There was no significant difference was found between Government and Private School players in agility. There was no significant difference was found between Government and Private School players in flexibility. A significant difference was found between Government and Private School players in strength endurance and it was in favour of Private School students. There was a significant difference was found between hill area and coastal area students in cardio-respiratory endurance and it was in favour of Government school.

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Relationship Of Selected Physical, Physiological Variables And Haemoglobin Content To Theperformance Of Inter-Universitywomen Cross Country Runners

Mr. Abdul Rafeeque T.C
Research Scholar at Deartment of Physical Education and Sports in Pondicherry University
Pondicherry,605014, India. Email: tcrafeequedv@gmail.com

Abstract
The purpose of the study was to assess the relationship of selected physical, physiological variables and hemoglobin content to the performance of female cross country runners in different university. To achieve these purpose the investigator was selected a total of thirty (N=30) female cross country runners from the different universities of Kerala, namely Kannur University, Calicut University, Mahatma Gandhi University, Kerala University and Kerala Agriculture University. The age group of selected subject was ranged from 18 to 22 years. They were tested on physical variables namely height, weight and fat percentage and physiological variable namely resting pulse rate, blood pressure, aerobic capacity and hemoglobin content. Three measures were obtained for each variable and the mean value was used for subsequent analysis. The standardized tests/measurements like Stadiometer, weighing machine and Skin fold caliper were used to find out the physical variables and for physiological variables Stethoscope, Sphygmomanometer, ACSM 3 minutes step test and Haemometer were used. The finishing time of each athlete was used to judge the performance of the cross country runners. The result of the study revealed that only the aerobic capacity (.399), (.378), (.362) was brought significant relationship to cross country performance.
Keywords: Height, Weight, Fat Percentage, Resting Pulse Rate, Blood Pressure, Aerobic Capacity etc

Introduction

Physical performance in various competitive sports events depends largely on the integrated status of the different physiological mechanisms of the individual i.e. the state of health and capacity for physiological responses to meet the challenges of the competitive situation, apart from the technique, tactics and skill. Optimum level of performance depends on the development of these responses through training.

Cross country is a hard sport to tackle but it's extremely rewarding because you feel like you've really achieved something incredible after completing a run. Cross country running can take place over grass, mud, dirt trails, rocky areas, water, hills, etc. almost anywhere off-track or off-road. Although it can feel punishing at times, in the end, the physical results and the friendships built by common suffering are definitely worth the training and far outweigh the pain involved.The most important physiological determinant of distance running performance is aerobic fitness, or the body's capacity to deliver oxygen to the working muscles and process it rapidly to form ATP. The higher your aerobic fitness, the less you'll rely on the anaerobic energy system, delaying fatigue by glycogen depletion and lactic acid accumulation. To improve aerobic fitness you must raise the lactate threshold and increase VO2max. The most important physiological factor for high performance in marathon is to possess a high aerobic capacity or VO2 max. An elite marathoner exhibits a high VO2 max (more than 80 ml/kg/min), similarly the VO2 max is an important parameter of middle and long.Fat percentage: Differences in performance between the male and female can be partially explained by the greater percentage of fat contained in the female body. Body fat of the adult male averages 15 to 17 percent of body weight whiles the average female body contains about 25 percent fat. Fat have several major functions in the body. Briefly they are energy storage, carrier for fat soluble vitamins, protect vital organs from shocks.

Resting pulse rate: A sound physical education program has a clear effect on heart rate even at rest, for example the highly trained athletes of either sex, resting heart rate may be lower than 40 beats per minutes. In contrast resting heart rates for untrained but healthy individuals may be as high as 90 beats per minutes. A slow resting heart rate is a characteristic of the trained individual.

Blood pressure: Blood pressure is the force that moves the blood through the circulatory system. Blood flows from the left ventricle of heart in to the aorta. The pressure fluctuates in the arteries; the highest pressure obtained is called the systolic pressure and the lowest diastolic pressure. As the blood ejected into the arteries during ventricular systole, the pressure increases to a maximum (systolic pressure) as blood drains from the arteries during ventricular diastole, the pressure decreases to a minimum(diastolic pressure). On average adult have a blood pressure of 120/80 mm of hg.

Aerobic capacity: Aerobic capacity is the maximal rate of which an individual can consume oxygen during the performance of all out exhaustive work or exercise. A person's aerobic capacity is the first choice in measuring one's cardio respiratory fitness.

Haemoglobin: The haemoglobin found in red blood cells in a complex molecule containing Iron (heme) and protein (globins). Haemoglobin's affinity for or ability to combine with oxygen is relaxed to the heme component. Each heme group of which there are four in each haemoglobin molecules is capable of combining chemically with one oxygen molecule. This means that one haemoglobin molecules is capable of maximally combining with four oxygen molecules.Haemoglobin concentration is determined by rupturing the red blood cells so that haemoglobin dissolves uniformly in fluid protein of the blood sample the amount light passed through this fluid is inversely related to the amount of haemoglobin present. At rest and at sea level there is amount 15grams of haemoglobin present in every 100 of ml of blood (for male16grams/100ml of blood and for female14grams/100ml).

Methodology

Subjects

For the present study the investigator was selected a total of thirty (N=30) female cross country runners from the different universities of Kerala, namely Kannur University, Calicut University, Mahatma Gandhi University, Kerala University and Kerala Agriculture University. The age group of selected subject was ranged from 18 to 22 years.

Variables and Tests

A feasible analysis to which of the important variables would be taken for the investigation was made in consultation with supervisor and experts keeping in mind the availability of equipments, subject available and the suitable time that would be devoted for the test as well as to keep the entire study integrated and the following Physical and physiological variables and their respective tests were selected.

Table 1

Sl. No.	Physical Variables	Tests	Physiological Variables	Tests
1	Height	Stadiometer	Resting Pulse Rate	Hand Grip Dynamo Meter
2	Weight	Digital Weighing Machine	Blood Pressure	Pull Up Test
3	Fat percentage	Skin fold caliper	Aerobic Capacity	Standing Broad Jump Test
4			Haemoglobin Content	Haemometer

Collection of Data

The participants in the study were thirty college female athletes from five different Universities in Kerala state and the data were collected during the Inter University cross country championship held at M.G University Kottayam. The physical variable were obtained by a trained researcher and consisted of body weight, standing height and fat percentage. Three measures were obtained for each variable and the mean value was used for subsequent analysis. The standardized tests like radial pulse rate/minute, blood pressure test, ACSM 3 minutes step and Haemometer test also were used to find out the physiological variables resting pulse rate, blood pressure, aerobic capacity and hemoglobin content respectively. The finishing time of each athlete was used to judge the performance of the cross country runners.

Analysis Of Results And Discussion

The data collected was analyzed by applying Pearson's product moment correlation (r). This was used to find out the relationship of selected physical, physiological variables and hemoglobin content to the performance of female cross country runners in different university. The r-value obtained by product movement correlation needed for significance at 0.05 levels.

Results

It is clearly evident from table-II that the obtained correlation value of Aerobic Capacity (.399), (.378), (.362) was higher than the required correlation value of 0.361. However there was a positive relationship when the variable was related with the performance of cross country runners. The variables such as height, weight, fat percentage, resting pulse rate, blood pressure and hemoglobin content were got insignificant correlation value which was less than the required correlation value of .361 and don't have any relationship to cross country performance.

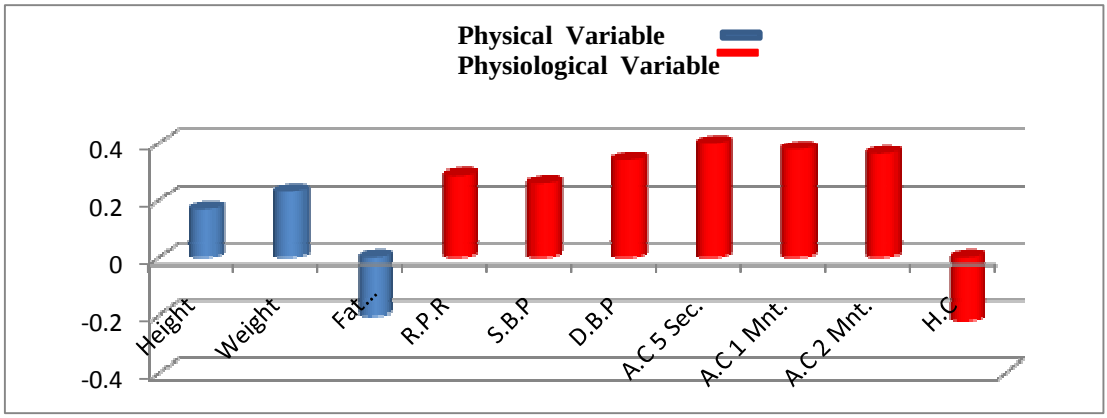
Table-II: Relationship of selected Physical & Physiological variables to the performance of cross country runners

Physical Variables	Coefficient of Correlation	Physiological Variables		Coefficient of Correlation
Height	.168	Resting Pulse Rate		.287
Weight	.232	Blood Pressure	S.B.P	.262
			D.B.P	.340
Fat Percentage	-.202	Aerobic Capacity	In 5 Sec.	.399*
			After 1 Mnt	.378*
			After 2 Mnt	.362*
		Hemoglobin content		-.217

*Correlation is significant at the 0.05 level (table value, df of 28 =0.361)

Figure I

Graphical representation of relationship of selected Physical & Physiological variables and hemoglobin content to the performance of cross country runners



Discussion

The statistical analysis of data revealed that the physiological variable aerobic capacity was significantly correlated with the cross country performance of university female athletes. The significant positive relationship of aerobic capacity with cross country performance may be due to the fact that they have more concentrated on aerobic training in their training sessions. The findings regarding the variable of aerobic capacity are in agreement with the findings of Heikki Rusko, Matti Havu and Esko Karvinen (1978) and Yvind S Andbakk , B Oye W Elde and H Ans -C Hrister H Olmberg (2010).

Among the variables selected for this study significant relationship were found in physiological variables of aerobic capacity to cross country performance. Though the physical variable of height, weight and fat percentage and physiological variables namely resting pulse rate, blood pressure and hemoglobin content were did not significantly correlated to cross country performance. As significant relationship was noticed in only the aerobic capacity thus the research hypothesis is rejected.

Conclusion

On the basis of the results of the study, the following conclusions were drawn;

Among the variables, Aerobic Capacity was positively related to cross country performance of university female athletes.

No correlation exists between physical variables of height, weight and fat percentage and cross country performance of university female athletes.

There is no correlation between physiological variables of resting pulse rate, blood pressure and hemoglobin content and cross country performance of university female athletes.

The variables fat percentage and hemoglobin content were negatively correlated with cross country performance of university female athletes.

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Comparative Study of Speed among Boxers and Wrestlers of Osmania University, Hyderabad in India

Prof. J.Prabhakar Rao
Principal, University College of Physical Education
Osmania University, Hyderabad
Prof.Rajesh Kumar
Chairman, Bos in Physical Education, Osmania University, Hyderabad
Prof.L.B.Laxmikanth Rathod
Head, Dept. of Physical Education, Osmania University, Hyderabad

Abstract:
The purpose of the present study to find out the Speed among Boxers and Wrestlers of Osmania University. The sample for the present study consists of 20 Male Boxers and 20 Male Wrestlers of Osmania University. group. To assess the Speed the 50 M Run Test Were conducted among Boxers and Wrestlers. It was found that Boxers are having good speed compare to Wrestlers.
Key Words:Speed,Boxers,Wrestlers etc.

Introduction:

Boxing in the combat sport were the two boxers – box each other with their both hand knuckles that is firsts, the boxers were 10 ounce gloves in a ring square that is 24 feet, height 3-4 feet, inside rope to rope is 20 feet inside with 4 ropes. The both boxers-box when a referee is fully control, without any infringements. One bout 3 consist of rounds, 3 minutes one round and 1 minute interval between the three rounds. The boxers throws powerful, legitimate punches on target that is from face to wrest belt above the shash. A good bout between two well matched boxers is a violent is a vast, skillful, speed with good foot work, The three or five Judges score in electronic gadgets that is computers scoring. The best boxer should be very strong quick, highly skillful with a good foot work and with excellent physical condition with coverage in spite of pain and exhaustion.

Attacking boxing skills – each boxer develops an attacking style, for example some boxers rely on speed and others on strength. One the basic stance second the straight right punch third the uppercut. Four leftjab, and five is left hook.

Defence boxing skills – In defence boxing a boxer use number of techniques to avoid his opponents punches or make them ineffective,

One clinching, two ducking, third slipping, four parrying and the five blocking

Wrestling

Wrestling is a sport in which two opponents try to pin (hold) each other`s shoulders to a mat on the floor. Wrestlers use manoeuvres called holds to grasp their opponents and control their movements.Successful wrestling demands strength, speed, coordination, balance, physical conditioning, and knowledge of body leverage. A clever wrestler can often defeat a stronger and heavier opponent.There are more than 50 kinds of wrestling. The two most popular forms of wrestling in the world are Greco-Roman and freestyle. Freestyle is the older of the two forms. It resembles the style practiced by the ancient Greeks. The Greco-Roman style developed after the Romans conquered Greece and modified the Greeks style. Greco-roman is the more popular form throughout Europe

Boxers in action


Wrestlers in action

Methodology:

The sample for the present study consists of 20 Male Boxers and 20 Male Wrestlers between the age group of 18-22 Years those who have participated in the O.U.Inter College Wrestling and Boxing Championships for the year 2013-2014.To assess the speed the 50 M Run were conducted on Boxers and Wrestlers.

Results and Discussion:

This study shows that Boxers are having better Speed compare to the Wrestlers

Table-I

Mean values and Independent Samples Test of 50 M Run between Boxers and Wrestlers

Variables	Group	Mean	SD	t	P - Value
50 M Run	Boxers	7.23	0.262	4.58	0.000
	Wrestlers	7.73	0.408		

*Significant at 0.05 level

In Table –I the Mean Values of 50 M Run of Boxers is 7.23 and Wrestlers is 7.73 The Standard Deviation of Boxers is 0.262 and Wrestlers is 0.408 and t is4.58 and P-Value is 0.000.

Hand Speed often distinguishes the two competitors in the ring. The Boxers can throw three punches to his opponents one should have an easy time winning the bout, barring a knockout.

Punching speed comes with rigorous training and continued practice. Those with slow hands will fail to make contact and will tire out after a few rounds, making their punches even slower and less powerful. All boxers should regularly perform certain drills to increase punching speed and build punching endurance, both of which are critical in order to compete in multiple-round fights.

Conclusion:

1.It is concluded that Boxers are having better speed than wrestlers

2.It is concluded that boxers requires more speed to hit the opponents.

3.Strength exercises plays a major role for improvement of speed among boxers and Wrestlers.

4. It is concluded that Speed is very important for both boxers and Wrestlers to excel in the performance.

Recommendations:

1. Similar studies can be conducted on other Events and among females.

2.This study also helps the physical educators and coaches to improve their training regime to excel in Boxing and Wrestling

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A Comparative Study of Strength among Shot Put Throwers and Discus Throwers of Hyderabad

Dr.K.Deepla
Secretary,Inter College Tournaments, (Women)Osmania University, Hyderabad
Prof.V.Satyanaryana, Director of Physical Education, Osmania University, Hyd
Maj. Kasinadhuni Allama Shiva Prasad
Lecturer in Physical Education, Spoorthy Deg and PG College, Hyderabad,India

Abstract:
The Discus Throw and Shot Put are thrown within a circle. Throwing Events Primarily depend upon strength, power and speed.The purpose of the present study to find out the Strength among shot put throwers and discus Throwers of Hyderabad. The sample for the present study consists of 20 Male shot put throwers and 20 Male Discus Throwers of Hyderabad District Between the age group of 16-20 Years. group. To assess the Strength Test Shotput back throw were given to Discus Throwers and Shot put Throwers. This study shows that shot-putter are having more strength than discus throwers.Most shot putters are relatively strong and sturdily built. Their workouts include various weight training exercises to develop the strength compare to the Discus Throwers.

Introduction:
In Athletics the throwing events comprise of javelin throw, discus throw, hammer throw and shotput. The differences between the four disciplines includes the type of implement that is thrown and the run-up or pattern of movement prior to the throw.
Javelin Throw:
A Javelin is a long spear like implement. The thrower runs down a runway prior to releasing the implement. To record a legal throw in javelin the thrower must ensure the tip of the javelin contacts the ground first.
Discus Throw:
A discus is a circular implement, which when thrown should spin while in the air and is released from the throwers hand with a straight arm.
Shot Put:
A shot put is a spherical lead implement which must be thrown from a position close and tight into the neck of the thrower to record a legal throw.
Hammer
A Hammer is similar to a shotput but has a wire extending from it to a handle, by which it is rotated in a circular motion before being released.
Discus, Shot Put and Hammer Throw are all thrown from within a circle rather than from a runway.
All the throwing events rely on strength, power and speed for performance.The shot put is a track and field event involving "throwing"/"putting" (throwing in a pushing motion) a heavy spherical object — the *shot*—as far as possible. The shot put competition for men has been a part of the modern Olympics since their revival in 1896, women's competition began in 1948.The discus throw is an event in track-and-field athletics, in which an athlete throws a heavy disc—called a discus—in an attempt to mark a farther distance than his or her competitors. It is an ancient sport, as evidenced by the fifth-century-B.C. Myron statue, Discobolus. Although not part of the modern pentathlon, it was one of the events of the ancient pentathlon, which can be dated at least to 708 BC.
The discus throw is the subject of a number of well-known ancient Greek statues and Roman copies such as the Discobolus and Discophoros.

Methodology:

The sample for the present study consists of 20 Male shot put throwers and 20 Male Discus Throwers between the age group of 16-20 Years and participated in the Hyderabad District Athletics Championships and O.U.Inter College Athletics Meets.To assess the Strength the Shot-put back throw were conducted on Shot put Throwers and Discus Throwers.

Shot Put Back Throw:

This test involves throwing an 8 pound shot put for maximum distance. The Back Throw Test is one of the tests used in the International Physical Fitness Test.

aim: This test measures core body strength and total body power and strength.

equipment required: 8 lb shot put, tape measure, clear open area for testing.

procedure: The athlete starts with his back to the throwing area, with their heels at the start line, and the shot cradled in both hands between the knees. The subject bends forward and downward before throwing the shot backwards over their head in a two-handed throwing action (optimally at about 45 degrees). Several practices may be required to get the best trajectory for maximum distance.

Scoring: Measurement is made from the starting line to the point of impact of the shot put with the ground. The measurement is recorded in meters and centimetres. The best result of two trials is recorded

Results and Discussion:

This study shows that Shot putters are having better strength compare to the Discus Throwers.

Table-I:Mean values and Independent Samples Test of shot put back throw between Shot Putters and Discus Throwers

Variables	Group	Mean	SD	t	P - Value
Shot Put Back Throw	Shot Put Throwers	13.14	1.26	1.22	0.231
	Discus Throwers	13.06	1.22		

*Significant at 0.05 level

In Table –I the Mean Values of Pre Test of shot Put Throwers in Shotput Back Throw is 13.14 and Discus Throwers is 13.. The Standard Deviation of Shotputters is 1.26 and Discus throwers are is 1.22 and t is 1.22 and P-Value is 0.231

Conclusion:

1.It is concluded that shot-putters are having better strength than Discus throwers.

2.It is concluded that there will be shot putters requires more strength to throw the shot spherical lead implement compare to the discus throw which is circular implement,

2.Weight training exercises plays a major role for improvement of physical fitness and performance in the shot put throwers and discus Throwers.

Recommendations:

1. Similar studies can be conducted on other throwing events in Athletics among girls also

2.This study also helps the physical educators and coaches to improve their training regime to excel in shotput.

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Effect Of Aqua Exercise On Health Related Physical Fitness Of Junior Boys

Sajeed K.P*
Dr. Ram Mohan Singh.R**
***Assistant Professor, Department of Physical Education, Calicut University Centre, Kadmat, Lakshadweep, India,sajeedkhankvt@gmail.com, Mob-09447509909**
****Assistant Professor, Department of Physical Education & Sports, Pondichery University, dr.rammohansingh@gmail.com**

Abstract
Sports are timeless activities; ones that human have enjoyed since at least ancient times, as exemplified by the Greek Olympic Games. Indeed, ethnographic and archaeological evidence such as cave paintings and the accounts of early European explorers indicate sports may well go back to the very beginning of humankind. The physical education profession is entering one of the most exciting and dynamic eras of history.The purpose of this study was to find out the effect of waterexercises on Selected Performance Fitness Variables between Football Players. To achieve this purpose, thirty young male football players from Government Senior Secondary School, Kavaratti Island, Lakshadweep who had represented Kavaratti Island in School Games Federation of India, National level football competition volunteered in this study and were equally divided in to two groups; control group and Experimental group. The selected variables Leg power and Cardiovascular Endurance were measured before and after the training by using the tests standing broad jump and 1 Mile run/ walk test. The data were analysed by the statistical technique paired t-test to determine the difference between initial and final means for experimental and control groups. The level of significance was chosen at 0.05 levels, for all the variables. In the experimental group, significant differences were seen in all the performance fitness variables while in the case of control group there were no significant changes in any of the performance fitness variables for the same period. Finally it was concluded that waterexercise will be improve fitness and performance of football players.
Keywords: Water, Exercise ,Football

Introduction

Sports refers to all forms of physical activity which, through casual or organized participation, aim to use, maintain or improve physical fitness and provide entertainment to participants. Sports may be competitive, where a winner or winners can be identified by objective means, and may require a degree of skill, especially at higher levels. Hundreds of sports exist, including those for a single participant, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. Some non-physical activities, such as board games and card games are sometimes referred to as sports, but a sport is generally recognized as being based in physical athleticism.

Football is a sport played between two teams of eleven players with a spherical ball. At the turn of the 21st century, the game was played by over 250 million players in over 200 countries, making it the world's most popular sport. The game is played on a rectangular field of grass or green artificial turf, with a goal in the middle of each of the short ends. The object of the game is to score by driving the ball into the opposing goal.

water exercises have rapidly increased in popularity. People from all walks of life-fitness enthusiasts; athletes of all stripes, professional, elite and recreational; people with health issues or injuries; older adults; and people who just want to have fun, have discovered that something special happens when you workout in water: it works, all over the world, individuals and groups have found that water workouts suit their fitness needs and fit their lifestyle. Water or aqua workouts have earned recognition for the unique combination of advantages they offer: a total body workout that moves your body through functional ranges of motion that build core strength against multidirectional resistance, while minimizing joint stress and reducing risk of injury, in a comfortable environment that keeps you cool.

Purpose Of The Study

The purpose of this study was to find out the "Effect of Aquaexercise on selected performance fitness variables between Football players" It was hypothesized that there will be significant effect of "aquatic exercise " on the 'leg power', and 'cardiovascular endurance' of the Football players.

Methodology

To achieve this purpose the investigator has selected thirty (N=30) football players from Government Senior Secondary School, Kavaratti Island, Lakshadweep. They had represented Kavaratti Island in SGFI competition. The age of the subjects ranged from fourteen to seventeen years. The students were equally divided into two groups of fifteen (n=15) players each randomly and named as experimental group and control group. The experimental group went through the aquaexercise program for six weeks. The training was given for three days in a week from 8.am to 9.am.The exeperimental group went through following exercise Lap walking, Side ways walk, Hip in and out, Lunges, Squat scissor lift, Side knee hop, Jump twist,Bunny hop, Cheer leading squat,Freelap swimming.

Results

Statistical analysis was carried out with discriptive statistics anddependent 't' test which were used to determine the significance in the measured variables between pre-training and post-training. The result are presented as means (SD) $p<0.05$ was accepted as significant.

TABLE I: T-RATIO OF EXPERIMENTAL AND CONTROL GROUP ON STANDING BROAD JUMP

Control Factors	Pre test			Post test			Df	t-ratio
	N	Mean	SD	N	Mean	SD		
Exp	15	35.87	6.52	15	39.40	7.24	14	11.526*
Control	15	6.93	4.08	15	16.60	.63	14	.960

* Significant at the 0.05 level of confidence, the tabulated value is 2.145.

Table I shows the number of subjects, mean, standard deviation and 't' value of standing broad jump of control and experimental group. The mean values of experimental group pre and post test were 35.87 and 39.40 and that of control group pre and post were 16.93 and 16.60. The standard deviation of experimental and control group pre and post were 6.52, 7.24 and 4.08, 4.63 respectively.The above table indicates that, there was a significant difference between the pre and post test performance on Sit ups of experimental group, since the calculated 't' value of 11.526 is higher than tabulated 't' value of 2.145 at 0.05 level of significance with 14 degrees of freedom. In the case of control group there was no significant difference. The difference in means of standing broad jump is presented in fig I.

FIGURE 1: ILLUSTRATION OF PRE AND POST MEAN SCORE OF STANDING BROAD JUMP

TABLE IIT-RATIO OF EXPERIMENTAL AND CONTROL GROUP ON 1 MILE RUN/WALK

Control Factors	Pre test			Post test			Df	t-ratio
	N	Mean	SD	N	Mean	SD		
Exp	15	8.30	.98	15	7.09	.83	14	7.305*
Control	15	7.74	.89	15	8.28	1.41	14	3.129

* Significant at the 0.05 level of confidence, the tabulated value is 2.145.

Table II shows the number of subjects, mean, standard deviation and 't' value of 1 mile run/walk test of control and experimental group. The mean values of experimental group pre and post test were 8.30 and 7.09 and that of control group pre and post were 7.74 and 8.28. The standard deviation of experimental and control group pre and post were .98,.83 and .89,1.41 respectively.

The table VI indicates that, there was a significant difference between the pre and post test scores of 1 mile run/walk test of experimental group, since the calculated 't' value of 7.305 is higher than tabulated 't' value of 2.145 at 0.05 level of significance with 14 degrees of freedom. In the case of control group there was also significant difference. The difference in means of 1 mile run/walk test is presented in fig II.

FIGURE 2: ILLUSTRATION OF PRE AND POST TEST MEAN SCORE OF 1 MILE RUN/WALK TEST

Discussion

Six weeks of aqua exercise program had improved all the health related physical fitness variables of junior boys , namely strength and cardiovascular endurance. They had also been through their regular coaching schedule and this probably could have been one of the reason for the improvement. The subject's had enthusiastically participated in the training program since they found the training to be interesting due to the freshness of the exercise, they did something that was different from the usual routine which ensured their whole hearted participation leading to the improvement in their health related fitness. The result of the study are in consonance with findings of K. Kamalakkannan, N. Vijayaragunathan and R. Kalidasan (2010). Even in the control group there was a significant change in one mile run. This could probably be due to the inherent nature of the training programme

Conclusion

Based on the results of the study the following conclusions were drawn;

Six weeks of aqua exercise had improved the leg power of Football players due to which theFootball could run faster, accelerate well, turn quickly, effect a better tackle, kick and jump to head a ball in a improved manner.

Six weeks of aqua exercise had improved the cardiovascular endurance of Football players. Aerobic fitness is a very important component of fitness for Football. Players need to be able to maintain a high intensity throughout the game. Hence with regular water exercise, they will able to enhance their cardiovascular endurance level.

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Prevalence of personality disorders among Iranian elite athletes in contact and non-contact sports

[1]Amir Mallahi [*],[2]Dr.B.Sunil Kumar
[1]Department of physical Education, Ali Abad Katoul Branch, Islamic Azad University, Ali Abad Katoul, Iran
[2]Associate professor of Physical Education, Osmania University,Hyderabad, Telangana
***Corresponding Author email:amir224488@yahoo.com**

Abstract
The study ofprevalence of personality disorders among Iranian elite athletes in contact and non-contact sportswas aims of this article. The research methodology was descriptive and survey methods and the data was collected via field procedure.The population of the study consisted of all the elite athletes of Iran (holding National, Asian and World medals) and their age was between 18 to 40 years old. The participants of the study were 160elite athletes (male and female)who were selected from among the population based on multi-stage sampling technique (78 contact and 82 non-contact). To assess prevalence of personality disorders, Millon Clinical Multiaxial Inventory(MCMI- III; Millon, 2006) was used.The results showed that83.13% participants had at least one personality disorders. The most prevalence was related to *Histrionic* (68.75%),*Narcissistic* (34.38%) and*Obsessive-compulsive* (7.50%).Test results also showed that only the prevalence of *Obsessive-compulsive Personality Disorders* in non-contact sports, were significantly (at level $p<0.05$) more than those who are engaged in contact sports.According to this results it can beconcluded, that elite athletes incontact and non-contact sports are not differencedsignificantlyin prevalence of personality disorders.
Key Words:Prevalence of personality disorders, elite athletes, contact and non-contact sports.

Introduction

The historic notion that sport develops positive characteristics in athletes has been the impetus for many studies in sport psychology. Although moderate or vigorous-intensity aerobic activity is important in the prevention of and recovery from mental and physical health problems, when performed more intensely at 'professional/elite' levels, physical activity can compromise health(Peluso 2005).Unfortunately, sport participation is not immune to relationships with socially undesirable behaviors and characteristics. Athletes have been found to show higher egocentricity, lower levels of moral reasoning and greater acceptance of aggressive behavior than non-participants and so on (Flett and Hewitt, 2005).

A personality disorder is a mental health condition that disrupts the normal feelings, mood, or ability of one person to interact with others. Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) lists ten personality disorders, grouped into three clusters.

Whilst we are aware of the physical risks athletes face with overtraining and injury…, they may also be vulnerable to mental illness. Existing research in the area highlights a range of vulnerabilities athletes have. The prevalence of overtraining in elite athletes has been reported at between 20 and 60%, (Peluso, 2005). Burnout, the most extreme end of the overtraining continuum, has been reported in approximately 10% of elite athletes. (Cresswe, 2007) Moreover, a recent review of eating disorders among those participating in high-intensity sports, reported a prevalence of 17.2% for males and 32% for females.(Sundgot, 2010)Other studies have reported eating disorders in women athletes to be as high as 60%, with athletes found to be in more severe stages of the disorder than controls.(Reardon, 2010) Compounding this, the injury experience of an elite athlete has been likened to the grief process observed following bereavement, with an estimated 10–20% of athletes warranting clinical intervention, with suicide a cause of concern.(Walker, 2007) All these pressures can leave some athletes vulnerable to mental illness.

As a result, seems the psychological demands of a professional sports person are huge. It can't be any different (Gary Speed, 2011).Therefore, the present study investigated "Prevalence of personality disorders among Iranian elite athletes in contact and non-contact sports".

Materials And Methods

With regard to the topic and objectives of the study, the research methodology was the descriptive and survey methods and the data was collected via field procedure. The statistical population of the present study was all elite athletes of Iran (holding National, Asian and World medals) in a variety of sports(Volleyball, Basketball, Futsal, Sailing, Handball, Soccer, Swimming, Chess, Weightlifting, Running, Badminton, Physical fitness, Kickboxing, Judo, Taekwondo, Karate and Wrestling) including team sports and individual sports, contact and non-contact sport that their age were between of 18 to 40 years. The participants of the study were 160 elite athletes (male and female) who were selected from among the population based on multi-stage sampling technique (78 contact and 82 non-contact).To assess prevalence of personality disorders, Millon Clinical Multiaxial Inventory (MCMI- III; Millon, 2006) was used. Both descriptive and inferential statistics were used to analyze the data. Qualitative data was described using percentage and frequency. The relationship between the prevalence of each personality disorders and Type of sport (contact or non-contact) using the Chi-square test was studied. When prevalence was low the Fisher's Exact Test was used instead of the Chi-square. The significance levels of this study was set at $p<0.05$.

Results

The results of the research showed that 64% (103 persons) of elite athleteswere male and36% were female (57 persons).Also 51%(82 persons) were from non-contact sports and49%(78 persons) were from non-contact sports .Their average age was 26.87 years and their standard deviation was 5.72 years of which the oldest elite athlete was 40 years old and their youngest one was 18 years old.

As shown in Table1, 83.13% participants had at least one personality disorders. The most prevalence was related to Histrionic (68.75%), Narcissistic (34.38%) and Obsessive-compulsive (7.50%),Dependent (5.00%), Schizotypal (3.13%), Antisocial (2.50%) and disorderssuch as Paranoid, Schizoid, Borderline and Avoidant not seen.

Table 1: Frequency and prevalence of personality disorders (N=160)

Variable	Frequency	Prevalence
Paranoid	0	0.00%
Schizoid	0	0.00%
Schizotypal	5	3.13%
Antisocial	4	2.50%
Borderline	0	0.00%
Histrionic	110	68.75%
Narcissistic	55	34.38%
Avoidant	0	0.00%
Dependent	8	5.00%
Obsessive-compulsive	12	7.50%
At least one personality disorders in athletes	133	83.13%

The data in Table 2 show the relationship between the prevalence of each personality disorders and type of sport (contact or non-contact) using the Chi-square test was studied. When prevalence was low the Fisher's Exact Test was used instead of the Chi-square.

Table 2: Prevalence of personality disorders according to contact or non-contact

Variable	*Contact (N=78)*		*Non-contact (N=82)*		*Test statistics*	*p-value**
	N	%	N	%		
Paranoid	0	0.00%	0	0.00%	-	-
Schizoid	0	0.00%	0	0.00%	-	-
Schizotypal	1	1.28%	4	4.88%	Fisher's Exact Test	0.368
Antisocial	2	2.56%	2	2.44%	Fisher's Exact Test	1.000
Borderline	0	0.00%	0	0.00%	-	-
Histrionic	53	67.95%	57	69.51%	0.045	0.831
Narcissistic	27	34.62%	28	34.15%	0.004	0.950
Avoidant	0	0.00%	0	0.00%	-	-
Dependent	2	2.56%	6	7.32%	Fisher's Exact Test	0.278
Obsessive-compulsive	2	2.56%	10	12.20%	5.345	0.032
At least one personality disorders in athletes	66	84.62%	67	81.71%	0.241	0.623

*Correlation is significant at the 0.05 level.

Significant difference between types of sport (contact or non-contact) and prevalence of Schizotypal, Antisocial, Histrionic, Narcissistic and Dependent personality disorders were not observed. Test results also showed that the prevalence of Obsessive-compulsive personality disorders, in non-contact sports, were significantly (at level 5%) more than those who are engaged in contact sports.

Discussion:

In short, a personality disorder defined as:

“An enduring pattern of inner experience and behavior that deviates markedly from the expectations of the culture of the individual who exhibits it"(Christian Nordvist, 2010).

Generally, personality disorders are divided into three subtypes (or clusters):

Cluster A (odd or eccentric disorders): Paranoid,Schizoid,Schizotypal.

Cluster B (dramatic, emotional or erratic disorders): Antisocial, Borderline, Histrionic and Narcissistic.

Cluster C (anxious or fearful disorders):Avoidant,Dependentand Obsessive-compulsive. (DSM-IV)

The prevalence of personality disorder in the general community was largely unknown until surveys starting from the 1990s. In 2008 the median rate of diagnosable PD was estimated at 10.6%, based on six major studies across three nations(Lenzenweger,2008).Although some of study reported different percentage in different community. The prevalence of individual personality disorders ranges from about 2% to 3% for the more common varieties, such as schizotypal, antisocial, borderline, and histrionic, to 0.5–1% for the least common, such as narcissistic and avoidant (Tasman et al, 2008).Relation to prevalence of personality disorders among Iranian elite athletes, the results showed that 83.13% elite athletes had at least one personality disorders. The most prevalence was related to Histrionic (68.75%),Narcissistic (34.38%)and Obsessive-compulsive (7.50%).Infact result was much unexpected and comparing with prevalence of personality disorders in normal population has huge differences. But with concerning prevalence of type of personality disorders it seems that the most differences is related to cluster B and specially Histrionic and Narcissistic. In other types of personality disorders there is no so much differences and is similar with normal population. The differences in the participant’s age and gender, samples size, the type of sport, instruments, educational levels and culture may be the possible reasons for this discrepancy(Nettle,2006)but it seem sport psychologists should get serious histrionic and narcissistic personality disorders among elite athletes.

If personality is related to body build, physical differences may account for personality differences between athletes in various sports (Barlow, 2002).One aim of this study was comparing prevalence of personality disorders in contact and non-contact sports. Test resultsshowed that only the prevalence of Obsessive-compulsive personality disorders, in non-contact sports, were significantly (at level 5%) more than those who are engaged in contact sports. Theseresultsare inconsistent with Sohrabi et al (2011) that found athletes in contact sportswere more histrionic, narcissistic, antisocial, negativismand sadistic than non-contact athletes and in schizoidscale have a lower scores. One possible reason for this discrepancy betweenthis and the present findings may be explained bydifferences in length of exercise and different athletesskills in their sport fields which seems longer training maybe due to improve and fix some personality traits and itsdependent behaviors in athletes(Ivanoviae,2009).Therefore, according to this results it can beconcluded, that elite athletes incontact and non-contact sports are not differencedsignificantlyin prevalence of personality disorders.

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Team effectiveness of selected University level basket ball and Volleyball teams in Tamil Nadu

Mr. P. Senthilkumar
Research Scholar, Department of Physical Education, Bharathiar University, Coimbatore, T.N.
Dr. R. Annadurai
Assistant Professor, Department of Physical Education, Bharathiar University, Coimbatore, T.N.

Abstract
Sport games mostly play as teams. It shows and nurtures the team work attitude between the human beings. They should properly recognize the significance of unity and its strength and energy to meet out the common goal. The primary data is collected through schedule among 4 teams which consist of 12 players per team. Simple percentage and K-S test is used. The present study is made to analyze the effectiveness of the selected sports team 5 variables such as their team foundation, functioning, skill, leadership and atmosphere. From analysis, the researcher concludes that nearly above 65 per cent players responded as strongly agree about the variables. But, some considerable per cent of respondents, responded as agree and disagree. There is some difference of opinion about the variables used to study the team effectiveness through KS test. It shows that the study team should concentrate on improvement of such variables.

Introduction
Sport games mostly play as teams. It shows and nurtures the team work attitude between the human beings. To improve the team activity, each and every member of a team should be more spiritual on their team. They should properly recognize the significance of unity and its strength and energy to meet out the common goal. The team members should recognize their role and they should be committed to their responsibility and accountability. Four characteristics of the operational system viz., work organized around the team's output, opportunities for informal communication, work that includes novel problems to solve, and management trust in teams; have an influence on team effectiveness (Mark Pagell & Jeffrey A Le Pine 2002).

Theoretical framework - Team

A team is defined as a complex entity with excellent communication, leadership, work procedures and interpersonal relations (Du Toit & Cronje, 1999). Therefore, a team is a highly-developed group that has learned to work together to achieve its goals. Team members explore possible methods to work together, try out these methods and then revise and refine them. Teams also differentiate from committees, groups of co-workers and other groups. Teams have performance goals to achieve and members of the teams feel mutually accountable for achieving them.

Types of Teams

Robbins (1994) identified the following types of teams:

Problem-Solving teams: Groups of 5 to 12 employees from the same department who meet for a few hours a week to discuss ways of improving quality, efficiency and the work environment.

self-Managed Work Teams: Groups of 10 to 15 people who take on responsibilities of their former supervisors and

Cross-Functional Teams: Employees at the same level, but from different work areas, who come together to accomplish a task. This includes teams like a task force and committees.

Team Effectiveness - Discussions

Nieva, Fleishman and Rieck (1978) used a motivational approach by defining team effectiveness as "the goal directed behaviours /activities/functions accomplished by the team in performing the task"

Hackman and Oldham (1980) expanded on this by defining team effectiveness in terms of the team's success in meeting (or exceeding) organizational standards of quality and quantity, members' needs are satisfied, and members want to continue to work together on future tasks.

Behaviors of High-Performance Teams

Blanchard et al (2000) stated that the characteristics of high-performance teamwork embedded certain behavioural traits that influence the productivity level and morale of the team. These behaviors will either influence direction or lend support. The behavioural traits that were identified by Blanchard et al (2000) are:Structure,Control,Supervision,Praising,Listening and Facilitating

Objectives of the Study

The present study is done with the following objectives

To study the effectiveness of the selected sports team through 5 variables

To analyze the effectiveness of the selected sports team

Methodology

The study is made as empirical study with the variables of Team Foundation, Team Functioning, Team Skill, Team Leadership, and Team Atmosphere.

Sample Size

The 4 (Men – 2 & Women – 2) study teams consists of 12 players per team.

Nature of Data and Collection

Both primary and secondary data is used in this study. Primary data is collected through schedule among the selected sports team.

Tools used for Analysis

Simple Percentage

$$\text{Percentage of Respondents} = \frac{\text{No. of Respondents}}{\text{Total Respondents}} * 100$$

Hypothesis testing using Kolmogorov – Smirnov One Sample Test

To testing the Hypothesis K-S Test is used in this study. This test is used to test of goodness of fit.

D = The highest Absolute Difference between Observed proportion and Null Proportion

Analysis and Interpretation

Variables	Team	Gender	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
Team Foundation	**Basketball**	**Boys**	8 (67)	2 (17)	1 (8)	1(8)	0 (0)	**12 (100)**
		Girls	7 (58)	2 (17)	1 (8)	1 (8)	1 (8)	**12 (100)**
	Volleyball	**Boys**	8 (67)	2 (17)	2 (17)	0 (0)	0 (0)	**12 (100)**
		Girls	7 (58)	1 (8)	2 (17)	2 (17)	0 (0)	**12 (100)**
Team Functioning	**Basketball**	**Boys**	7 (58)	1 (8)	1 (8)	3 (25)	0 (0)	**12 (100)**
		Girls	8 (67)	2 (17)	0 (0)	2 (17)	0 (0)	**12 (100)**
	Volleyball	**Boys**	8 (67)	1 (8)	1 (8)	1 (8)	1 (8)	**12 (100)**
		Girls	9 (75)	1 (8)	0 (0)	1 (8)	1 (8)	**12 (100)**
Team Skill	**Basketball**	**Boys**	6 (50)	2 (17)	2 (17)	2 (17)	0 (0)	**12 (100)**
		Girls	7 (58)	1 (8)	2 (17)	2 (17)	0 (0)	**12 (100)**

	Volleyball	**Boys**	9 (75)	0 (0)	1 (8)	2 (17)	0 (0)	**12 (100)**
		Girls	7 (58)	1 (8)	2 (17)	2 (17)	0 (0)	**12 (100)**
Team Leadership	**Basketball**	**Boys**	7 (58)	2 (17)	1 (8)	2 (17)	1 (8)	**12 (100)**
		Girls	9 (75)	2 (17)	0 (0)	1 (8)	0 (0)	**12 (100)**
	Volleyball	**Boys**	9 (75)	1 (8)	2 (17)	0 (0)	0 (0)	**12 (100)**
		Girls	8 (67)	2 (17)	1 (8)	1 (8)	0 (0)	**12 (100)**
Team Atmosphere	**Basketball**	**Boys**	6 (50)	2 (17)	2 (17)	1 (8)	1 (8)	**12 (100)**
		Girls	8 (67)	1 (8)	1 (8)	0 (0)	2 (17)	**12 (100)**
	Volleyball	**Boys**	7 (58)	2 (17)	2 (17)	1 (8)	0 (0)	**12 (100)**
		Girls	8 (67)	2 (17)	1(8)	1 (8)	0 (0)	**12 (100)**

Variable 1: Team Foundation

From girls' basketball team, 7 (58 per cent) respondents strongly agree as their team has good foundation through clear objectives and guidance. In boys' team, 8 (67 per cent) players strongly agree girls' opinion.

In Volleyball teams, 8 (67 per cent) boys' and 7 (58 per cent) girls' strongly agree about their strong team foundation with adequate resources. Only negligible percentage of respondents are marked as agree and disagree.

Variable 2: Team Functioning

7 (58 per cent) respondents from girls' basketball and 8 (67 per cent) players form boys' basketball team are strongly agree that their team is functioning with regular participation of players.

Out of 12 respondents in boys' volleyball team, 8 (67 per cent) players strongly agree their teams well-functioning. One (8 per cent) respondent is under agree, undecided, disagree and strongly disagree category. Majority of 9 (75 per cent) respondents is under strongly agree and one (8 per cent) respondent come under agree, disagree and strongly disagree.

Variable 3: Team Skill

In basketball team, 6 (50 per cent) boys', 7 (58 per cent) girls', in volley ball team, 9 (75 per cent) boys' and 7 (58 per cent) girls' strongly agree as their teams have good communication and constructive feedback, problem solving and decision making skills.

Variable 4: Team Leadership

7 (58 per cent) boys' and 9 (75 per cent) girls' responded as strongly agree as effective leadership in basketball teams. 2 (17 per cent) boys' respondents under agree and disagree.

In the volleyball team, 9 (75 per cent) boys' and 8 (67 per cent) girls' feel as strongly agree.

Variable 5: Team Atmosphere

Out of 12 boys' in basketball team, 6 (50 per cent) respondents is being under strongly agree and 8 (67 per cent) girls' also feel like that.

7 (58 per cent) boys' and 8 (67 per cent) girls' responded as their team has good atmosphere with the factors like conflict resolution and trust and supporting within team.

Hypothesizes

Team Foundation

Null Hypothesis (H_0): There is no difference in ratings for Team Foundation

Alternative Hypothesis (H_1): There is difference in ratings for Team Foundation

Team Functioning

Null Hypothesis (H_0): There is no difference in ratings for Team Functioning

Alternative Hypothesis (H_1): There is difference in ratings for Team Functioning

Team Skill

Null Hypothesis (H_0): There is no difference in ratings for Team Skill in the team members.

Alternative Hypothesis (H_1): There is difference in ratings for Team Skill in the team members.

Team Leadership

Null Hypothesis (H_0): There is no difference in ratings for Team Leadership

Alternative Hypothesis (H_1): There is difference in ratings for Team Leadership

Team Atmosphere

Null Hypothesis (H_0): There is no difference in ratings for Team atmosphere

Alternate Hypothesis (H_1): There is difference in ratings for Team atmosphere

Testing of Hypothesis – K-S test

Calculation of D Value

Difference Opinion / D Value	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
Team Foundation	0.42	0.36	0.28	0.08	-0.02
Team Functioning	0.47	0.37	0.21	0.15	-0.01
Team Skill	0.36	0.24	0.18	0.14	-0.06
Team Leadership	0.48	0.42	0.3	0.18	0
Team Atmosphere	0.4	0.34	0.26	0.12	-0.04

Critical D Value: $1.36/\sqrt{48} = 1.19$

Team Foundation: Alternate Hypothesis that is there is difference in ratings for team foundation is accepted due to higher calculated D value than critical value.

Team Functioning: Alternate Hypothesis that is there is difference in ratings for team functioning is accepted due to higher calculated D value than critical value.

Team Skill: Alternate Hypothesis that is there is difference in ratings for team skill is accepted due to higher calculated D value than critical value.

Team Leadership: Alternate Hypothesis that is there is difference in ratings for team leadership is accepted due to higher calculated D value than critical value.

Team Atmosphere: Alternate Hypothesis that is there is difference in ratings for team atmosphere is accepted due to higher calculated D value than critical value.From these hypotheses testing, we come to know that there is some difference opinion about team effectiveness among the players.

Conclusion

From the forgone analysis, the researcher concludes that nearly above 65 per cent players responded as strongly agree about their team foundation, functioning, skill, leadership and atmosphere. But, some considerable per cent of respondents, responded as agree and disagree. There is some difference of opinion about the variables used to study the team effectiveness through KS test. It shows that the study team should concentrate on improvement of such variables.

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Relationship of the level of achievement and the impact of anxiety among Badminton players

Hamid Abdul Sada Kadhim. Iraq
M.PEd IInd Year, Univ. College of Physical Education, Osmania University ,Hyderabad
E-mail: nnoor1202@gmail.com

Introduction

The modern world is witnessing tremendous progress in the field of information technology, where scientists are active for the application of the latest scientific MeansTo get to solving the problems facing the scientific process in various fields has extended these studies to aspects of sport in all its forms to try to gain access to scientific solutions and recognize the obstacles they face, have adopted the sport in recent times a lot of science to solve problems, where the psychology of the most important science on which they depend Sports(To study the obstacles faced by athletes to reach their highest levels, and the anxiety is more the emotions linked to performance sports.

.The importance of the studyThe importance of this study in Attempt a researcher to identify the relationship between the level of anxiety and the level of achievement for the players, badminton, where he hopes a researcher at that contribute to increase the knowledge of coaches psychological state of their players and try to address them in order to improve performance motor for the players and what And necessary foundations and rules of scientificpsychological, legal and especially with the increasing number of practitionersGame.

Problem of the study

The game badminton fastest game of the Games Tennis Other witnessed the game evolved considerably in performance skill and tactical through the attention of specialists growing them interested and may reach the speed of badminton in the case of the beating overwhelming to more than 200 miles / hour in the World Championships (Thomas Cup badminton 2010 - the finals of the World Championship men's team) and thus need to double effort and high speed of reaction and tactical skills are great and badminton sports filled with positions rich with tensions and Emotions different, which requires players to take focus These tensions and emotions when performing games. The fact that the researcher interested in the sport and their proximity to them felt the presence of several positions from the anxiety and stress that may lead to the prevention of the players do not have to provide physical energies The lack of attention to the coaches cases of anxiety that afflict these players before the game and during hence felt the researcher conducting this study in the belief that it may help coaches in reducing the suffering of the players Avoided in cases of anxiety and negative, and through what already is the problem of the study to identify levels Anxiety and achievement and their relationship with the badminton players in Iraq

Objectives of the study

1 .To identify the levels of anxiety among badminton players in Iraq in Diwaniya
2 .To identify the relationship between anxiety and athletic achievement in the game of badminton .
3.to identify levels of anxiety born badminton players in the light of the variables (sex
Age, qualification, and the level of player (player national team, for the club player).

Methodology of the study

The researcher used the descriptive approach to relevance and the nature of this study.
Results, analysis and discussion
The study found the following results have been presented and discussed according to the questions .
The first question: What is the level of anxiety when badminton players To answer this question is the use of averages and standard deviations

Levels of anxiety when the players and the table (2)shows that .Table (2): arithmetic means and standard deviations for the items of the scale n = 50Shown in Table (2) that the arithmetic mean of the levels of anxiety when players badminton ranging from (1.76 to 3.62) with a standard deviation (0.92-0 1.9)and paragraph (11), which stipulates - (anxiety which I do before competition My disability for Mastery of the competition) came first prize and correspond to the level of anxiety Degree great and came in second place, paragraph (3), which stipulates (when committed some mistakes in the beginning of the competition Fa n it helps my confusion for a long time during the competition) average account (3.50) corresponds to a moderatelywhile came with paragraph (6), which stipulates (when I feel ahead of the competition that I worried and afraid, I can control my nerves during the competition) ranked last with a mean (1.76), corresponding to appreciation to a small degree. As can be seen from the above table that the overall average for anxiety has reached (2.73), which corresponds to a medium degree
has been attributed to the concentration of the coach in training on aspects of physical and skill, and the omission of the psychological aspect and not to create a player in the tournament at an early stage without subjected to a series of friendly matches with his peers and enter the player matches with the player surpassed lived just painParticipate in tournaments with his club reflected on the player which leads him toThe ability to focus and committed a series of errors, and thus lose the ability to keep pace with rival than jReflected upon and remains his anxiety inherent in the future .The second question: Is there a statistically significant difference in the levels of concern when players are attributable badmintonThe variables of gender, age, educational qualification, and the level of the player ?To answer this question were presented the results of each variable separately .

A. Variable sex

Been using arithmetic averages and standard deviations and the value of (t) as shownTable (3)Table (3) averages and standard deviations and the value of (v) to find differencesAnxiety levels depending on the variable sex.Is evident from the above table and the presence of statistically significant differences in the level of anxiety I have a badminton players due to the variable (sex, (males, females) and in favor of males to females in the sense that they haveThe level of anxiety myself higher than the males and the reason may be due to the fact that the level of expertise Males in tournaments multi whether internal or external, and attend training camps long abroad, unlike females that govern their participation customs and traditions and the inability to travel outside the country for a long time to attend these camps and the researcher believes also that the lack of female participation in the tournament is reflected in the high level of their anxiety andParticipation in competitions both at the internal or external achievement requires of them, leading to a feeling that it bears responsibility of the player to win and this makes them in constant fear and anxiety in these meetings, which will reflect on the overall level of achievement .And Table 4 shows the averages and standard deviations And Table 4 shows the averages and standard deviations of the level of anxiety depending on the age variables evident from the above table and the presence of morphological differences in the level of anxiety among badminton players due to the variable age group and to detect the sources of these differences was used to choose analysis And the variance (Table 5) shows that Table (5): analysis of variance to denote the differences between the averages and the level of anxiety variable depending on the age group Variable depending on the age group. Is evident from the above table the lack of statistically significant differences between the levels of anxiety among badminton players due to the variable age group may be due to the reason for the similarity of the circumstances relating to Competitions and the atmosphere of training for the players as well as coaches supervisors on these categories themselves are who they train clubs in the team as the psychological atmosphere of the player and the psychological preparation has characterized as owned by the coach of expertise which is reflected on the players equally and this result is different because the knowledge of the coach to contribute significantly to the upgrading and help them exploit their likelihood

C. Variable Qualification

Been using arithmetic averages and standard deviations and ANOVA test

Table 6 shows the averages and standard deviations:Itshows the averages and standard deviations of the level of concern depending on the variable Qualifications evident from the above table and the presence of morphological differences in the level of anxiety I have a badminton players due to the variable Qualification and detect the sources of these differences were tested using analysisThe variance (Table 7) illustrates this. A table (7): analysis of variance to denote the differences between the mean level of Least Qualification for the variables evident from the above table the lack of statistically significant differences between the levels of anxiety has not my game badminton due to the variable qualification and this shows that there is a convergence in Levels of anxiety among age groups and may be due to the reason that most of the players have not submitted Their studies to specialized courses in psychology, training, or while exercising sport and therefore they have equal concern and when the campaign high school or less and thus be a similar level of anxiety Regardless of the qualification .

D. Variable classification level player

Been using arithmetic averages and standard deviations and the value of (t) as shown in Table (8)Table (8): averages and standard deviations and the value of (v) to find differences between the levels of anxiety of the variable classification level player Is evident from the above table the lack of statistically significant differences in the level of anxiety among Badminton players due to the variable level of player (team, club) in the sense that there is a similarity in The level of anxiety among the players and the clubs have attributed the cause to that of the team are players from the clubs and the circumstances they are experiencing, whether related to training or relationship with each other or competitions in which they participate it is Zero P are similar and one, and that the environment experienced by these players are environment similar in all circumstances, whether economic or social, and thus reflected on their level of psychological

Third question: Is there a relationship between the statistically significant level of anxiety and the level of achievement in the badminton competition ?To answer this question has been used Pearson correlation coefficient to find the extent of the relationship between anxiety The psychological level of achievement among players badminton and table (9) shows that .Table (9): the correlation coefficient between anxiety and level of achievement.* Statistically significant: at 0, 05 = αCan be seen from the above table to a correlation statistically significant between the level of anxiety and achievement has been attributed to a n achievement is influenced by anxiety in the player and reflected on his performance on the playground and therefore lead to indiscriminate and lack of focus and contrast for low anxiety where the player is able to control the emotions and tension which is reflected in the level of performance. It is noted that the owners of the low level of concern in the case of athletes have achieved the highest achievement of the owners of the high level of performance at the level of skill and athletic achievement

Conclusions

There are degrees of variation in the level of anxiety among badminton players. Female athletes suffer from a high level of anxiety than males. There are similarities in the levels of anxiety depending on the variables of age, educational qualification and classification Player .No correlation between the levels of anxiety and the level of achievement

Recommendations

Attention continuous levels of anxiety during the games and work on directing playerAccess to sporting achievementPut a player through training in multi-Mo standing psychological and training on how to invest cases. Anxiety accompanying the performance.Training player to overcome psychological difficulties causing concern and try to study with the player Attempt to reach reduced to its lowest level .

Interesting trainers psychological preparation for the player as one of the main pillars in the training process.

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