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## Biomechanical comparison of Genu Valgus among Futsal players

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### Abstract

The varus thrust of the knee is a dynamic increase of an often preexisting Valgus angle ( Van De Pol J et al, 2009). The aim of this investigation was study about Comparison of Genu Valgus among Futsal players. This angle is evaluated among twenty healthy Futsal players (40 knees) who play in Futsal club Elm o Adab which is a club in a premier Futsal league of Iran. Digital X ray was done as standing position for them and the Valgus angle was measured with specific software (Marco). The International Knee Document Committee Subjective Knee Evaluation Form (IKDCSKEF) was used to score the self-assessment of each study participant. In order for data analysis, we performed descriptive statistics such as mean, standard deviation, frequency tables and in inferential statistics and t.test were used. The result showed that there was a significant difference between the Valgus angle and IKDCSKEF among the players. It seems that considering the Valgus angle as one of the normal landmarks can be an indicator of a healthy knee in athletes..

**Keywords:** Valgus angle, Futsal players, IKDCSKEF

### Introduction

Genu valgum or Valgus , commonly called "knock-knee", is a condition where the knee angle in and touch one another when the legs are straightened. Individuals with severe valgus deformities are typically unable to touch their feet together while simultaneously straightening the legs. Usually external angulation of both femur and tibia is involved. Anatomic axle of knee makes a slant line from upside to downside which goes inside, while the anatomic axle of the tibia is vertical. These two factors make an angle of longitude axles of tibia and femur inside the knee whose normal range is about 180-190 degrees. When this angle is more than 195 degrees inside, or when it is less than 165 degrees outside, the irregular form of Genu Valgum appears. Such irregularity causes an increase of forces pressing the outer structures and stretching forces in internal structures of the knee. In such a case Q angle increases and causes movement of weight on external part of femur (Yasin et al, 2013). Female athletes landed with greater total valgus knee motion and a greater maximum valgus knee angle than male athletes. Female athletes had significant differences between their dominant and nondominant side in a maximum valgus knee angle (Ford. KR et al, 2003). Valgus loading is a more likely injury mechanism, especially in females (McLeanScott G et al, 2004). Female athletes with increased dynamic valgus and high abduction loads are at increased risk of anterior cruciate ligament injury (Timothy E.H et al, 2005). Landing and defending movements can increase Valgus angle and injury among Futsal players. If Valgus angle is too much among athletes especially in Futsal players they will be injured in ACL when they are in defending the position. Because in this position they have to flex their knees and move fast. Iranian School students interest to play Futsal in the yard of the schools that are hard surfaces so it can cause starting of injury among them. Then we firstly decided to obtain the quantity of the Valgus angle among Futsal players and compare with other Valgus angle reported. Most investigations were reported the quantity of it by using goniometer and they guide us to use digital software. It seems that the Valgus angle is a good indicator of the health of the situation of the knee. The researchers want to know that whether knee angles such as Valgus angle can benefit to evaluate the Futsal players in order to apply or reject their for coaches or managers of sport clubs?

## Methodology

The method of this research is experimental research. Statistical population of present research includes all of the adult Futsal players in the a premier league of Iran. According to aim of research, players of Elm o Adab Futsal club were voluntary selected after primary visiting by a physiotherapist, orthopedic surge and radiologist. Then healthy Futsal players were chosen. Regarding to the hypothesis of the research, tools of the present study were:

1-The direct digital X-Ray machine model symphony GMI (630MA, flat panel, 17\*14 inch & telescopic tube) made from Italy were used. After taking x-rays, results are analyzed by a group of specialists and were sent to the researchers.

2-International Knee Documentation Committee Orthopedics Scores (IKDCSKEF) questionnaire was used. A common terminology and an evaluation form were created. This form is the standard form for use in all publications of results of treatment of knee ligament injuries. The most recent revision is freely available at the AOSSM web site as part of the IKDC Knee Forms (Collins et al, 2011).

3-Marco PACS software; Marco (Medicine And Revolutions) founded at early 21th century, with the vision of market leadership in PACS and medical computer aided network design field. Marco's objective is to provide digital imaging solutions for medicine in PACS and radiography criteria to facilitate communication way of specialist with their respective medical centers. Their objective ultimately provides benefit to the patients through high speed and exact of communicating information, while considerably saves costs of diagnostic services.

### Procedure of the study:

Elm o Adab Futsal players were visited by proficient physiotherapist. After approving health of them, he introduced to orthopedic surge in order to send them to the digital X ray clinic. Futsal players who accepted to contribute to present research filled of three forms or questionnaires and signed them. They were sent to the digital radiology center. Standing X-rays were taken them and analyzed by proficient radiologist. Then the results were sent to the researchers. To have a more precise evaluation, qualitative questionnaire already prepared by IKDCSKEF was filled with Futsal players in a class with 22 Celsius degree and silence condition.

After collecting information and data by the above method, they were analyzed by SPSS version 19. In order to analysis the data, the different statistical method was used to make appropriate conclusions from the data. In the descriptive way used statistics such as average, Standard Deviation, variance and frequency table and in the deductive way used for Klmograph Smirnoph and t. test.

### Result

According to the aims and hypotheses, in Valgus angle and IKDCSKEF among players, was observed a significant difference between Futsal players. Summary of the statistic results has shown in tables 1and 2.

Statistics		Varus angle	IKDCSKEF
N	Valid	40	20
	Missing	0	20
	Mean	175.4150	97.0680
	Median	175.4100	97.7000
	Mode	175.4150	96.55 <sup>a</sup>
	Std. Deviation	1.80096	4.48260
	Variance	3.243	20.094
	Minimum	171.51	79.31
	Maximum	178.97	100.00

Table 1. Summary of the statistic results.

On the table showed, there are a significant difference in Valgus angle and IKDCSKEF.

One-Sample Test	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Varus angle	616.016	39	.000	175.41500	174.8390	175.9910
IKDCSKEF	96.841	19	.000	97.06800	94.9701	99.1659

Table 2. The result of t. test of Valgus angle and IKDCSKEF among Futsal players.

## Discussion

The aim of this investigation was studying about biomechanical evaluation of Valgus angle that is one of the angles of the knee. Twenty healthy Futsal player (40 knees) that their knee, s health was approved by Orthopedic surge, contributed voluntary in this investigation and standing X ray were taken of them. The mean of the age, Valgus angle and IKDCSKEF of them were  $26M \pm 3.01$  SD,  $175.415M \pm 1.8$  SD and  $97.06M \pm 4.48$  SD respectively. Using of Marco software was easily and precisely in order to provide Valgus angle than other tools such as goniometer. Pantano K.J et al (2005) reported that healthy college-aged subjects with a large Q-angle display greater peak knee valgus during a single limb squat compared to those with a small Q-angle. Timothy E.H et al (2005) and Nagano et al (2010) reported that large knee valgus angle is thought to be an indicator of the risk of ACL injury. Van de Pol et al (2009) believed that there is a direct relationship between Valgus alignment and anterior cruciate ligament tension and the Valgus thrust of the knee is a dynamic increase of an often preexisting Valgus angle and it is suspected to be a major reason for failure of anterior cruciate ligament reconstructions. Nevertheless our result showed that our subject with average Valgus knee angle are health condition as the knee surge had said. Although Jones R.K et al (2012) suggested that the valgus knee brace significantly reduced the knee Valgus angle compared to the baseline and lateral wedged insole, healthy players did not need to use any brace. Hambly K and et al (2008) reported that the International Knee Documentation Committee Subjective Knee Form was the highest scoring instrument in all categories while it is similar to the results of our research. Hambly K and et al (2010) also reported that Seventy-eight percent of the items from the IKDC were experienced by more than half of the patients. For patients 12 months or more after anterior cruciate ligament reconstruction, 94% of the IKDC items had a frequency-importance. Oliaei and et al (2008) were obtained scores IKDCSKEF, 94.3 for healthy people and 78.5 for patients. IKDCSKEF results were significantly lower in patients than control subjects. Their result was closer to our achievements among healthy people.

## Conclusion

Standing, running, jumping and explosive movement in playing Futsal with Valgus deformity more than 10 degrees ratio to natural position enters large articulatory force to lateral compartment. So Futsal player plays with painful knee and low quality. Considering the Valgus angle as one of the biomechanically landmarks or index, club's medical team, can provide and predict better advice to attract or reject the new players to the club administrators. Then after filling IKDCSKEF and checking the Valgus angle can realize of the health of knee's athletes.

## Acknowledgements

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## Effect of Lezium Training Programme on Physical Fitness of Boys

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### Abstract

Lezium, which has a physical and cultural background since our ancient times, was also restructured to suit the modern need and in turn it became a part of physical activities in physical education. Lezium, being a traditional Indian activity, has not so far been considered on scientific lines. Due to lack of scientific investigation less attention has been given to this activity. To revive this activity in the light high values, several scientific research activities are the need of the day. In a first attempt, the researchers undertaken the present study entitled, "EFFECT OF SIX WEEKS LEZIUM TRAINING PROGRAMME ON PHYSICAL FITNESS OF BOYS". The objectives of this study was, To establish the utility of Lezium training as one of the physical educational activities in school curriculum. Related measure design with one control group and one experimental group was used in the present study. 60 students of age 11 to 13 years of Sahakar Nagar Municipal School Wadala, Mumbai 31; were volunteered as subjects and they were randomly divided equally in to two groups. AAHPER Youth Fitness Test was administered in the beginning on both the groups to collect the pre-post test data. The test is intended to measure the ability of the individuals to perform fundamental physical skills such as pull ups, bent knee sit ups, shuttle run, standing long jump, 50 yard dash and 1.5 mile run, which involve the basic elements of strength, endurance, agility, power, speed and cardiovascular endurance respectively. The findings of the study were, Experimental group showed significant superiority over the control group in Pull up test (CD=0.45, p<0.05), Experimental group showed significant superiority over the control group in Sit up test (CD=5.90, p<0.05), Although the experimental group did not show significant improvement within group comparison, however, it maintained its superiority over the control group in Standing Broad Jump test (CD=0.40, p<0.05), Experimental group could not show significant superiority over the control group in 50 M Run test, Experimental group could show significant superiority over the control group in 600 M Run test (CD=2.10, p<0.01), Experimental group could show significant superiority over the control group in Shuttle Run test (CD=3.86, p<0.01) & Experimental group could show significant superiority over the control group in 1.5 Mile Run test (CD=2.08, p<0.01). Finally concluded that, A proper schedule of Lezium Exercises can effectively improve physical fitness level within a very short period of 6 weeks.

Key words: Physical exercise, Traditional activity, Fitness ability & School students

### Introduction

Out of many rhythmic activities, Lezium is one of the most popular traditional activity in Maharashtra. Though at present different systems are followed in different parts of the province, it is one of old and most traditional indigenous activities. Even till-to-day, it is generally played during social and religious festivals by the village folk in Maharashtra. Historical evidences revealed that Lezium got a place as a recreative activity among the solders in ancient days. Generally people accept that Lezium has physiological, rhythmical, recreative and demonstrative values of a very high order. If properly performed, one gets a lot of exercise in a very short-time. Experiencing such psycho-physiological benefits of Lezium, it has been introduced in the school curriculum in India and is gratifying to note that boys and girls have accepted it with a great zeal. The above statements help to assume that as an indigenous activity in school curriculum, Lezium exercises have psycho-physiological values and may lead to maintain better health and fitness for school boys. The present investigation is an endeavour to prove the efficacy of Lezium exercises for health and fitness. To revive this activity in the light high values, several scientific research activities are the need of the day. In a first attempt, the researcher undertaken the present study entitled, "EFFECT OF SIX WEEKS LEZIUM TRAINING PROGRAMME ON PHYSICAL FITNESS OF BOYS".

The **objectives** of the present study included were:

- To measure over all physical fitness level of the school boys of age 11 to 13 years; To render regular training program in Lezium exercises to the selected experimental subjects; To compare the scores of physical fitness between experimental and controlled subjects; To evaluate the efficacy of Lezium practice on physical fitness ability as assessed by selected physical fitness test. To establish the utility of Lezium training as one of the physical educational activities in school curriculum.

The **hypotheses** sought to be tested were:

H: The practice of Lezium exercises would help to improve the strength, agility, and endurance of the children of age 11 to 13 years.

OH: The practice of selected Lezium exercises would not improve all the variables of physical fitness as tested by the items of AAHPER Youth Fitness Test.

### Review

Sincere efforts were made by the research scholar to locate literature related to this study. The relevant studies from various sources, which the research scholar has come across, are cited below: Barton, conducted a study on the effect of aerobic dance programme on the self concept and the development of physical fitness in Education Mentally Retarded (EMR) children. The results revealed a significant increase in physical fitness as indicated by the subject's scores on the modified AAHPER Special Fitness Test and most positive self-concept as indicated by scores on Fisher's Self Concept Picture Test. It was concluded that participation in a planned, systematic and progressive aerobic dance programme enhances the self concept and physical fitness of EMR Children. Jeannette and Marian, studied the effectiveness of archery, badminton, basketball, dance fundamentals, fencing, field hockey, folk dancing, tennis, volley ball and swimming on some variables of physical fitness. They concluded the dance fundamentals produce significant improvement in the scores of muscular endurance as measured by the number of squat thrusts performed while maintaining a set cadence and shoulder girdle strength whereas participation in folk dance produced significant improvement only in muscular endurance.

### Method

A sample of 60 male students of age 11 to 13 years was selected from the students population of the Sahakar Nagar Municipal school Wadala, Mumbai- 31. From various standardized tests, AAHPER Youth Fitness test has been selected to measure the different components of physical fitness. The items in the AAHPER Youth Fitness Test, considered as dependent variables and included in this experiment, were as follows:

### Data Analysis

After completion of data collection, the data were analysed by using 2 x 7 Factorial ANOVA. The results have been narrated and logically as well as scientifically interpreted with the help of presented Tables. The pre-test performance (Mean and SD) of control and experimental groups in Pull Up test were 1.81 (SD = 0.32) and 1.85 (SD = 0.36) respectively. This result indicates that the pre-test means of both the control and the experimental groups were more or less similar.

**Table 3**

**Measures of Central Tendency and Dispersion of Experimental Group and Control Group in Fitness Variables**

Physical Fitness variables	Groups			
	Control group		Experimental group	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Pull Ups (pts.)	1.81 (0.32)	1.83 (0.39)	1.85 (0.36)	2.28 (0.42)
Sit Ups (Pts.)	7.30 (0.94)	7.62 (0.56)	8.56 (0.98)	13.52 (1.23)
Standing Broad Jump (M)	1.28 (0.36)	1.38 (0.34)	1.40 (0.40)	1.78 (0.51)
50 M Dash (Secs.)	9.52 (0.63)	10.23 (0.72)	8.45 (0.85)	8.40 (0.72)
600 M Run (Min./Sec.)	5.23 (0.60)	5.42 (0.32)	4.21 (0.25)	3.32 (0.34)
Shuttle Run (Secs.)	28.52 (4.05)	29.20 (5.29)	27.15 (3.62)	25.34 (3.59)
1.5 Mile Run (Min./Sec.)	26.45 (3.51)	25.59 (3.29)	26.39 (3.54)	23.51 (3.45)

## Results

- The statistical significance of Scheffe's Post Hoc test revealed that-
- Control group did not show significant improvement in **Pull Up test** (CD=0.02,  $p>0.05$ ). The result of experimental group showed significant improvement (CD=0.43,  $p<0.05$ ) in Pull Up test. Experimental group showed significant superiority over the control group in Pull up test (CD=0.45,  $p<0.05$ ).
- Control group did not show significant improvement in **Sit Up test** (CD=0.32,  $p>0.05$ ). The result of experimental group showed significant improvement (CD=4.96,  $p<0.01$ ) in Sit Up test. Experimental group showed significant superiority over the control group in Sit up test (CD=5.90,  $p<0.05$ ).
- Control group did not show significant improvement in **Standing Broad Jump test** (CD=0.02,  $p>0.05$ ). The result of experimental group did not show significant improvement (CD=0.38,  $p>0.05$ ) in Standing Broad Jump Up test. Although the experimental group did not show significant improvement within group comparison, however, it maintained its superiority over the control group in Standing Broad Jump test (CD=0.40,  $p<0.05$ ).
- Control group did not show significant improvement in **50 M Run test** (CD=0.71,  $p>0.05$ ). The result of experimental group also did not show significant improvement (CD=0.05,  $p>0.05$ ) in 50 M Run test. Experimental group could not show significant superiority over the control group in 50 M Run test (CD=1.12,  $p>0.05$ ).
- Control group did not show significant improvement in **600 M Run test** (CD=0.19,  $p>0.05$ ). The result of experimental group showed significant improvement (CD=1.89,  $p<0.05$ ) in 600 M Run test. Experimental group could show significant superiority over the control group in 600 M Run test (CD=2.10,  $p<0.01$ ).
- Control group did not show significant improvement in **Shuttle Run test** (CD=0.68,  $p>0.05$ ). The result of experimental group showed significant improvement (CD=1.81,  $p<0.05$ ) in Shuttle Run test. Experimental group could show significant superiority over the control group in Shuttle Run test (CD=3.86,  $p<0.01$ ).
- Control group did not show significant improvement in **1.5 Mile Run test** (CD=0.86,  $p>0.05$ ). The result of experimental group showed significant improvement (CD=2.88,  $p<0.01$ ) in 1.5 Mile Run test. Experimental group could show significant superiority over the control group in 1.5 Mile Run test (CD=2.08,  $p<0.01$ ).

## Discussion

- This result helps to interpret that the selected Lezium exercises could be used effectively to improve strength and endurance of arm muscles as assessed by the **Pull ups** test.
- This result helps to interpret that the selected Lezium exercises could be used effectively to improve abdominal strength and endurance as assessed by the **Sit up** test.
- This result helps to interpret that although the experimental group showed significant superiority over the control group, the selected Lezium exercises could not improve leg muscle power or explosive strength of leg muscles as assessed by the **Standing Broad Jump** test.
- This result helps to interpret that the selected Lezium exercises could not improve speed ability of lower limbs as assessed by the **50 M Run** test.
- This result helps to interpret that the selected Lezium exercises could improve the general endurance ability as assessed by the **600 M Run** test.
- This result helps to interpret that the selected Lezium exercises could improve ability in agility as assessed by the **Shuttle Run** test.
- This result helps to interpret that the selected Lezium exercises could improve ability in Cardiovascular endurance as assessed by the **1.5 Mile Run** test.

The above results help to test the formulated hypotheses. The results cited above indicate that the Lezium exercises selected in this study could help to improve the strength, agility and endurance of the subjects of age 11 to 13 years. Thus, the hypothesis-H formulated in this study was retained.

The results also revealed that the subjects participated in Lezium exercise programme could not even improve the variables viz., explosive power of leg muscles as assessed by standing broad jump and speed as assessed by 50 M dash. This in turn suggests that Lezium exercises included in this study were not effective to improve all the variables of physical fitness. Thus, the null hypothesis-OH formulated in this investigation was proved true and has been sustained.

## **Recommendations & Conclusions**

This study recommends that -

- Lezium exercises can be recommended for improving level of physical fitness of school children.
- Present study, in general, may assist the physical education teachers to evaluate the status of physical fitness of their school childrens.

Within the limitations the present study warrants the following conclusions:

- Lezium Exercises are useful for improving physical fitness levels of school boys.
- A proper schedule of Lezium Exercises can effectively improve physical fitness level within a very short period of 6 weeks.

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## Health-Cultural-Sports Activities Of Physical Education Students Of Private Higher Education Institution In San Fernando City in Philippines

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### Abstract

The purpose of this study is to determine if the tertiary schools in San Fernando City are doing their part in the conduct of the Physical Education Activities. The output of the study will serve as their guide and basis in determining the deficiency of P.E. program thereby they could help update the program. Furthermore, it will serve as a guide on proper instruction and implementation of physical education to meet the objectives and goal of the program. The success of the program could motivate and reinforce learning among students.

**Keywords:** Physical Education, Health, Culture and Sports

**Introduction:** The right to participate in fitness and in sports activities is embodied not only in the Philippine Constitution but also in the International Law developed by the United Nations. In relation to this, the International Charter of Physical Education and Sports under Article 1 clearly states that the responsibility of every state is to provide its constituent's equal opportunity and access to Physical Education and Sports Program. It further states that the practice of Physical Education and Sports is a fundamental right of all and this right should not be treated as different from the right of adequate food, shelter and medical care.

Therefore, Physical Education as a program in an institution of learning must provide interests among college students and encourage them to participate in P.E. activities in order to develop in them varied and desirable human qualities such as respect for the rights of others, sportsmanship, self-confidence, self-control, camaraderie, self-discipline, and belongingness. The cultivation of liking peer, enjoyment and appreciation, individuality and initiative among students would be likewise developed as this is possible through sports play for their fun or for competition. Exposure to sports serves as a stepping-stone among students to acquire leadership, follower ship, experiences and skills that will bring them away from entertaining the situation of cruelty, absenteeism, drug addiction, alcoholism, smoking and other untoward activities.

**Methodology:** The subjects of this study were the students of the Private Higher Educational Institutions in San Fernando City. This was sampled thru total enumeration with few or less than 100 respondents.. The descriptive method was adopted since the present study is concerned with the present Health-Cultural-Sports Activities of P.E. Students of Private Higher Educational Institutions in San Fernando City. The researcher used the questionnaire as the main tool of the study. The statistical tools such as the mean average, percentages were used in making the interpretation of the data clear and understandable so that the problem will be answered.

Frequency or percentage was also used to determine the activities conducted in the Private Higher Educational Institutions in San Fernando City.

The average weighted mean was used to determine the extent of Health-Cultural-Sports activities to develop students, the adequacy of the facilities and equipments, the availability of facilities and equipments, and also the degree of seriousness on the problems they encounter.

**Results and Discussion:** The analysis of the data shows that even there is a moderate scarcity of equipment and facilities students have a significant performance in their health-cultural-sports activities towards their physical, mental, emotional and social development.

**Recommendation:** Periodic monitoring and evaluation of the program should be conducted to gather immediate feedback, which could be bases for improvement and development.

**Conclusion:** Health and Cultural activities slightly help student's development as gauged from the average result under cooperation, participation, sportsmanship, competition, socialization and coordination. However, sports activities have a full pledge effect on the development of students. Thus, physical education and sports are interrelated which is important medium for optimum child development of social, emotional, mental as well as physical.

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## Comparison Of Motor Fitness Anthropometric Characteristics And Personality Profile Between National Level Volleyball And Football Players

Dr. Sanjay Kumar Mandal

### Introduction

Volleyball and football are two popular ball games which have more differences than similarities. Whereas football is played by feet, the volleyball is by hands. Difference exist in other aspects line size of play areas, Nature of activities, basic Technique, body types of players and perhaps in performance structure. Each of these factors may have minute differential components. A knowledge of these perhaps in helpful for teaching and learning. Coaching and training, planning and supervising with this basic idea. Present study was planned to analyze the motor fitness, anthropometric characteristics and personality profile of National level volleyball and football players and compare them.

### Purpose Of The Study

The purpose of the study was to compare between National Level Volleyballers and footballers in respect of motor fitness anthropometric characteristics and personality profile.

### Methodology

Subjects : Twenty five (25) National level volleyball players and Twenty five (25) National level football players age limit 20 to 30 from West Bengal were selected as subjects.

### Selected Parameters :

Anthropometric characteristics : Age, Height, Weight, Sitting Height, Leg Length, Arm Length.  
 Motor fitness parameters: Reaction time, speed, leg explosive strength, Agility. Abdominal Mosul strength endurance, arm and shoulder strength endurance.  
 Psychological parameters : 16 personality factors.



### Results And Discussion

Table – 1  
 Statistical significance of the differences between two means in Anthropometric Parameters

Factor	Volley ball	Foot ball	Mean Difference	T - Value	Remarks
Age(years)	24.72 ± 3.20	25.40 ± 2.72	0.68	0.81	Not Significant
Height (Cm)	178.64 ± 8.82	172.76 ± 6.04	5.88	2.75	Sig. at 0.01 level
Weight (Kg)	66.52 ± 8.94	65.32 ± 7.78	1.2	0.51	Not Significant
Sitting Height (cm)	82.52 ± 8.10	84.20 ± 3.35	1.68	0.96	Not Significant
Arm length (cm)	79.32 ± 4.81	75.32 ± 3.04	4.0	3.52**	Sig. at 0.01 level
Leg length (cm)	96.12 ± 6.70	88.68 ± 4.16	7.44	6.80**	Sig. at 0.01 level

**Table – 2**  
**Mean and SD of Motor Components of National Level Volleyball & Handball Players**

Factor	Volley ball	Foot ball	Mean Difference	T - Value	Remarks
Reaction Time (s)	0.20 ± 0.02	0.19 ± 0.01	0.01	0.96	Not Significant
Locomotion speed(s)	7.02 ± 0.34	6.61 ± 0.28	0.41	4.70	Significant at 0.01 level
Leg explosive strength(m)	2.50 ± 0.22	2.31 ± 0.26	0.19	3.51	Significant at 0.01 level
Ability(s)	9.68 ± 0.44	9.00 ± 0.37	0.68	5.92	Significant at 0.01 level
Static Balance(s)	56.91 ± 33.47	68.27 ± 16.36	11.36	1.36	Not Significant
Abdominal strength endurance(sit-ups)	41.16 ± 10.75	48.08 ± 7.91	6.92	2.59	Significant at 0.05 level

**Table – 3**  
**Mean and SD of Personality Factors of National Level Volleyball & Football Players**

Psychological Factors	Volleyballers	Footballers	Remarks
A	5.20 + 1.85	6.32 ± 1.25	Both are in within average limit
B	4.80 ± 2014	4.94 ± 1.08	Both are in within average limit
C	7.28 ± 1.74	5.52 ± 1.19	Volleyballers are above average (V.B. are more emotionally stable)
E	6.32 ± 1.89	6.76 ± 1.09	Both are in above average (Rule bound)
F	6.68 ± 1.95	5.76 ± 1.33	Volleyballers are above average(Suspicious)
G	7.04 ± 1.74	5.72 ± 1.49	Volleyballers are above average
H	6.68 ± 2.72	5.64 ± 1.44	Volleyballers are slightly above average(Assertive)
I	4.76 ± 1.83	6.80 ± 1.95	Footballers are slightly above average(Enthusiastic)
L	7.08 ± 3.00	6.68 ± 1.52	Both are in above average (Role bound)
M	5.76 ± 1.98	6.56 ± 1.45	Footballers are slightly above average(Aggressive)
N	7.68 ± 1.41	6.32 ± 1.41	Volleyballers are above average (Resourceful)
O	4.84 ± 2.21	6.64 ± 1.41	Footballers are slightly above average (Worrying)
Q1	6.28 ± 1.62	5.96 ± 1.59	Both are in within average limit
Q2	7.16 ± 2.03	5.56 ± 1.47	Volleyballers are above average (imaginative)
Q3	7.48 ± 2.18	5.32 ± 1.22	Volleyballers are above average (self discipline)
Q4	5.72 ± 2.72	5.16 ± 1.03	Both are in within average limit

### Conclusion

Volleyballers are taller in height with greater arm and leg lengths than footballers. Footballers are older in age, taller in sitting height than Volleyballers. In Motor ability Volleyballers have more leg explosive strength but footballers have better reaction ability and locomotion speed. In agility static balance, abdominal strength endurance footballers have better ability than Volleyballers. Volleyballers have better shoulder strength endurance than footballers. In personality profile, volleyballers are more emotionally stable (C), Suspicious (F), Spontaneous (G) Resourceful (N), Imaginative (Q2), Self discipline (Q3) than normal population. Footballers on the other hand, are more Enthusiastic (I), Assertive (M) and Worrying (O) than the normal population.

## Evaluation Art Intelligent Algorithms According to Fuzzy System and Image Processing

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### Abstract:

Principles of visual art and visual languages that create understanding of the rules can be interpreted in the visual arts. By getting to know and experience the basics of language arts visual art which embodiment and Visual. Communication is better understood and better utilized. Our goal in this project is to appeal a way to help the faculty of arts in grading to an artwork drawn by the students. By this project we will try to facilitate the work of judges, besides we will try to ask them to respect the rights of students in saving their efforts. Expert describes the survey take no many rules for evaluating a work of art painting sand we classify the mint stool bar fuzzy have been helping facilitate. Expert survey taken after the painting expressed many rules to evaluate work of art the ease with which we have categorized the mint the fuzzy toolbar. So in this project we used fuzzy logic as 90% of analysis work of art and also share of image processing was 10% of this analysis. Finally in this investigation, we could be obtain from combining fuzzy system and image processing as Real Percentage of Difference. after analysis of the image our finding represented the share of fuzzy system was 73.88 In which show as Defuzzification Digit and also result of image processing was 9.35 as average of difference between analysis of images. At last in this study the Real Percentage of Difference was 21.73A painting is full of uncertainty and ambiguous, Fuzzy logic was invented precisely for this reason that we think we are able to employ this logic in the proper position.

**Key words:** Fuzzy System -Intelligent Algorithm-Image processing

### Introduction:

Principles of visual art and visual languages that create understanding of the rules can be interpreted in the visual arts. By getting to know and experience the basics of language arts visual art which embodiment and Visual. communication is better understood and better utilized. Moreover, knowing the rules and the language associated with creativity and understanding of the visual art helps, as you know the language and rules of grammar and sentence structure, proper understanding of the language and better understanding will help. Arts an art generally refer to those who have the ability to directly visualize and ductility are perceived by the visual sense. No doubt the views, perceptions and interpretations, there are some flaws that the characteristics of modern art and variety of its myriad manifestations, is obvious. In this project we use an expert, a painting from the book "Painting Analysis" [1] have chosen. Then, with expert knowledge of the rules required for the effect of each of these laws are named and expanded. Then we create a set of rules for the state variable, we asked our expert to give a color of state variables. After our work rules and expert project that marks the state of each variable data into MATLAB software we provide the three-dimensional diagram of the 18 was opened by the law of a painting and then combining the results, Obtain a three-dimensional graph of the number of defuzzification has been considered as the final score. The other part of this project is, in section, from the Toolbar [2], we have used MATLAB image processing toolbox.

**Material and Method:** In this study, we have three primary tools such as:

- 1-Expert Person
- 2-Fuzzy System
- 3-Image Processing

First, expert survey taken after the painting expressed many rules to evaluate a work of art the ease with which we have categorized them into the fuzzy toolbar [2].

Then we import the analysis rules into fuzzy toolbar[2] and defined the some variables and then assign a language variable to each items, we took an output diagram for each items. also we obtain a 3D-graph, thus for finally goal we needed to combining 18 items together for achieve the final result. As was discussed in the introduction to the project, this is another part. We work to be able to get better results from another intelligent image processing algorithm, we have used, Of course, this algorithm has already been used and is as follows:

- 1-matrice
- 2-matrice B
- 3-matrice C

A

In the following we will describe each of these matrices.

First we matrix A matrice containing the original painting, The purpose of the project was based on examination, After the scan of the original painting in the first matrix is placed, After the painting as a painting student is placed in the second matrix. The important point there is that the paintings that are imported should be sized to match the exact size of the original painting. In the painting, the matrice A is located. But the third matrice, whose calculation is difference. The exact number between painting the first and second shows.

This algorithm is used to calculate pixel by pixel paintings; here show an original painting and compare it with other paintings original painting is drawn. As one can see, the algorithm is shown as the percentage difference. However, the major part of work was contribute emotions. so we consider 90% portion for fuzzy system and 10% by image processing.

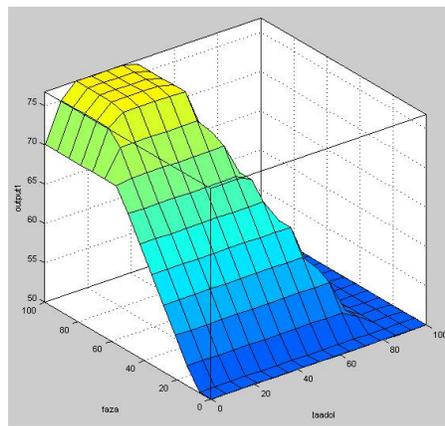
Fuzzy logic was used for two main reasons:

- 1-A painting is full of uncertainty and ambiguous, Fuzzy logic was invented precisely for this reason that we think we are able to employ this logic in the proper position.
- 2-We are expert in fuzzy logic could feel his emotions and painting, and it helps your score in the same way that a painting is full of emotions obviously a man.

**Results**

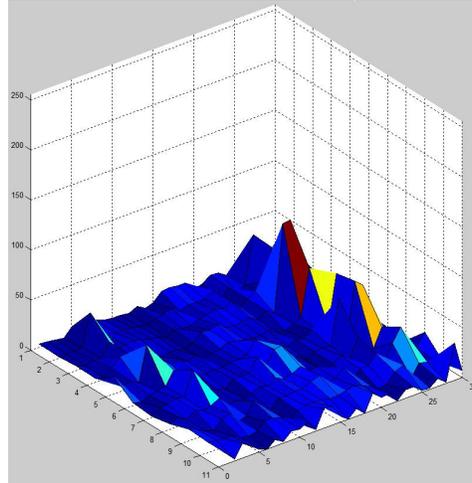
**Fuzzy system:**

By combining the output of each sub-Rule 18, which was shown in 3D in the previous section, the final output will come together eventually a 3D display you can see the following. A combination of 3D graphics by fuzzy system



Defuzzification\_Digit = 76.8850

**Image processing:**  
3D views obtained from the matrix C (matrice difference)



**Average of difference is: 9.35**

**Final combination of fuzzy system and image processing :**

Andthetotalnumberofthefollowingwould bethe finalclassic

Real\_Percentage\_of\_Difference = 21.7389 %

**Conclusion**

In this research it was attempted using fuzzy logic system is design as it is main objective, the reduction of human errors, in scoring and assist teachers and students in the art to minimize the error in measurement in the art of painting.

The study combined of fuzzy system and image processing is suggested that future researchers combine this logic with other intelligent algorithm to achieve more accurate results.

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## Psychology and Physical Education

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### Present Position of Physical Education:

The field of education is so vast. It has occupied all the borders of knowledge and experience. The scope of education includes various disciplines. Therefore, it is said that the child starts educating while in the womb of its mother and continues its education: formal and informal. It is at the post-tertiary level of education that one is educated and trained on multifarious a discipline which forms an inextricable factor of the common education.

Physical Education has been continuously attempting to gain its own importance. Bygone are the days when in the name of physical education only drills, dumbbells, physical tests were conducted or when the various types of sports were chosen for study. Today, owing to realization of importance of physical education, the sports competition on various levels from school base to that of the college are being organized. As there is the development of innovation sports education and education technology, physical education has become the inevitability. Thus in the existing competitive world, contribution of physical education takes a characteristic form.

### General Aims of Physical Education:

It is important to realize the general aims of physical education apart from getting known importance of psychology in physical education. There are basically two types of aims of physical education – i) individual aims and ii) social aims

#### i) Individual Aims:

Under the individual aims there happens a complete and balance development of life personality of small children. This means that through this physical, psychological and cultural education mechanism, there has to be a circumstance which would affect the overall development of small children. This also means the physical, psychological, intellectual and moral development of them.

#### ii) Social Aims:

Under this aims, there appears the ideal of socialization of an individual. There should be a system that would help the individual to be socially useful ever. The social and individual aims of education have been reciprocal. It can also be said that these are two sides of the same coin. An individual's personality development is possible through society.

Physical Education has both the above aims as its target. It plays a significant role in the personality development and socialization of a child. Basically psychological development is impossible without physical development. This means that the areas of psychological and physical development are interdependent.

### Relation between Physical Education and Psychology:

#### 1) Natural Relation

The general and particular aims share a relation with behavior of an individual. It is important for the individual to bring about the expected change in his behavior so as to form socialization. Actually, the overall education process centers on certification of behavior of the individual. Even physical education directs the change in behavior of the individual like the common education. Psychology studies the behavior of individuals. This way the natural relation between physical education and psychology gets established. Counseling,, psychological pressure, psychological preparation and training turn out the essential factors in physical education, especially when it means training the sportsmen. There is hardly any programme of physical education that can go without psychological study of the students.

Singer says: 'Sports Psychology explores one's behavior in athletics'.

#### 2) Relation of Psychology of Different Disciplines:

Physical education controls the behavior of the individual whereas psychology studies his/her behavior. This establishes a natural link between physical education and psychology.

### Relation with individual Psychology:

Every athlete and player has been a person that has a personality of its own. Moreover he/she may have some psychological problems. Without analyzing them it is difficult to offer him/her the physical training. This way Psychology helps.

**a) Relation with Educational Psychology**

To prepare the national as well as international level players, certain educational schemes are implemented. In short, the physical and sport training is a requisite on all levels. Therefore, physical education is closely related to educational psychology.

**b) Relation between Development Psychology:**

As human being is a developmental creature, they have to cut across various developmental stages. Per physical and psychological change in him/her, he/she finds the change in the behavior of him/her.

**Relation with social or group psychology:**

An athlete or a player has been recognized as a social phenomenon. Social power and tendency influence his behavior. For the reason of group members, he has to get adjusted with other players. This forms collective psychology among the players.

**c) Relation with Physiological Psychology:**

Physical education teaches an individual through bodily action. Therefore, it becomes a matter of relation with physiological psychology.

**d) Areas of Psychological Studies in Physical Education:**

Physical education requires studying the following areas under psychology.

**1. Behavior:**

Physical training, bodily action and sports study examine physical exercise and behavior. Behavior is a feature of psychological base. Value tendency, active mind, counseling, sympathy, imitation, etc. form the base of physical behavior. Without support from psychology, behavior cannot be studied.

**2. Individual Differences:**

No two people can be the same. Every person has a different kind of eligibility, capacity, taste, mood, habits, intellect, expression, etc. Even sexual aspects have been different. These differences are studied by psychology.

**3. Heredity and Environment:**

Heredity is related to human life. Therefore, for the individual development heredity and atmosphere play a very important role. The behavior of the player, his efficiency and his merits become part of his progress. These factors are studied on the grounds of heredity by psychology.

**4. Developmental Stages:**

In psychology, intellect and different developmental stages, for example, infancy, childhood, teenage, adulthood, etc. are studied through the psychological and sensitive angles. Without knowing these various stages, physical education cannot work.

**5. Personality Intelligence:**

Developing personality is part and the main target of physical education. Without assistance from psychology this target cannot be achieved because psychology studies personality, nature of intellect and development of an individual.

**6. Learning:**

While training the teachers of physical education, useful and apt atmosphere is to be created. This also requires appropriate training methodology. Without psychology, this is not possible.

**7. Measurement and evaluation:**

Measurement and evaluation work well with the help of psychology, in physical education. Intellect, taste and psychological methods of the training are utilized under this process.

**Need of Psychology in Physical Education:**

Physical education needs the following phenomena:

1. Disciple/Student/ Learner/Teacher/Coach
2. Educational Material
3. Educational Process
4. Learning/Study situation

For psychological study every of the above factors gets adjusted. An analysis of these factors of physical education proves how essential psychology has been for the successful working of physical education.

## Effect Of Static Stretch Exercise Program On Knee Range Of Motion (Rom) Of Male Badminton Players

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### Abstract

The purpose of the study was to determine the effect of static stretch exercise program on hamstring knee range of motion (ROM) of male badminton players. The age of the subject ranged from 13 to 19 years. An experimental control group design was implemented for this study in which thirty subjects whose their left leg hamstring range of motion of knee which were less than 70 degree were selected by AKET (Active Knee Extension Test) for the sample of this study. They were randomly divided into two groups including static stretch and control group. Each group consisted of 15 subjects. Pre-tests were conducted on both the groups to know the level of hamstring range of motion of knee (flexibility). Post-tests were done on both groups after 12 weeks of treatment. To obtain the impact of Static stretch on Hamstring flexibility, the results of pre and post-test were compared. To find out the differences of pre-test and post-test, 't'-ratio was applied. The level of significance was set at 0.05. The results of the study indicates that mean scores of post-test of active knee range of motion (hamstring flexibility) of left leg in static stretch group is significantly ( $p < 0.05$ ) higher than mean scores of post-test of control group. ( $P < 0.05$ ); so static stretching treatment has a positive impact on knee range of motion (hamstring flexibility).

**Key words:** Static Stretch, Warm-Up, AKET and Range of Motion (ROM)

### Introduction

Badminton is one of the most widely-played sports in the world. In India, badminton is one of the most popular sports, apart from cricket. 30.9% of patients in Badminton suffer from Strain which is the result of muscular-fiber tears due to overstretching that can be decreased by increasing the flexibility of muscles. Decreased knee range of motion (hamstring flexibility) is suggested to be one of the predisposing factors for hamstring strains. The studies show that the athletes with reduced range of motion are more susceptible to muscle injury than their more flexible counterparts. Besides professional exercises, flexibility plays an important role in general health. For example, stretch exercises are prescribed for pains in the lower part of spinal cord. *Chan et al. (2001)* did a research on flexibility and passive resistance of the hamstring of young adults using two different static stretching protocols. A significant increase in flexibility of hamstrings was found in both of the two training groups ( $p < 0.05$ ). Those subjects receiving the foam and stretch treatment had the greatest increase in hip ROM ( $P < .05$ ). Those subjects receiving the stretch only, foam and stretch, and foam only had greater hip ROM values than controls ( $P < .05$ ). *Davis et al. (2005)* studied on the effectiveness of 3 stretching techniques on hamstring flexibility using consistent stretching parameters; and they compared the effects of 3 common stretching techniques on the length of the hamstring muscle group during a 4-week training program. Statistical analysis ( $p \leq 0.05$ ) revealed a significant interaction of stretching technique and duration of stretch. *Kelleher and Amanda (2003)* did a research on the delayed effect of proprioceptive neuromuscular facilitation and static stretching on hamstring flexibility to determine the delayed effects of stretching, both static and PNF, on hamstring flexibility following exercise.

### Method And Procedure

The objective of the study was to find out the effect of static stretch on hamstring range of motion of knee (flexibility). Pre-test, post-test experimental design was used to find out the effect of static stretch on the subjects. An experimental control group design was selected for this study in which thirty subjects whose their left leg hamstring flexibility were less than 70 degree were selected by AKET (active knee extension test) for the sample of this study. Subjects were divided into two groups of 15 each, one group served as experimental and one as control group. The subjects were randomly selected and exercise program was conducted at Panjab University, Chandigarh and Sports Complex, Sector 42, Chandigarh. Pre-test was conducted on both the groups to know the level of

hamstring range of motion of knee (flexibility). Post-tests were done on both groups after 12 weeks of treatment. The static group (experimental group) got stretching treatments on their hamstring muscle for 9 times that was sustained for 30 seconds and the recovery time between stretches was 60 seconds. The researcher controlled the time by Chronometer and informed the subject while stretching. In addition to that the researcher observed the subject to keep his knee straight while stretching. Stretch was not done on control group. Subjects of control group did only 5 minutes warm up which was jogging. To find out the differences of pre-test and post-test, 't'-ratio was applied. The level of significance was set at 0.05.



Figure-1: Active Hamstring Knee Extension Test (AKET)

## Results

The data was analyzed by employing descriptive statistics and 't'-test. The level of significance was set at 0.05. Descriptive analysis of hamstring flexibility (active knee range of motion) of left leg in control group of male badminton players is presented in table-1.

Table-1  
Descriptive Analysis Of Pre Test And Post Test Mean Value (Control Group)

Variable		N	Mean	SD	Min	Max
ROM Control	Pre-Test	15	50	14.65	27	68
	Post-Test	15	53	13.84	33	72

Table 1 clearly shows that the mean value of pre-test (initial) was 50 & SD was 14.65 and the post-test (final) mean was 53 and SD was 13.84. Descriptive analysis of hamstring flexibility (active knee range of motion) of left leg in experimental group of male badminton players is presented in table-2.

Table-2  
Descriptive Analysis Of Pre Test And Post Test Mean Value (Experimental Group)

Variable		N	Mean	SD	Min	Max
ROM Static Stretch	Pre-Test	15	52	13.07	25	73
	Post-Test	15	67	11.39	48	85

Table 2 clearly shows that the mean value of pre-test (initial) was 52 & SD was 13.07 and the post-test (final) mean was 67 and SD was 11.39 which clearly shows that the Range of Motion mean has increased.

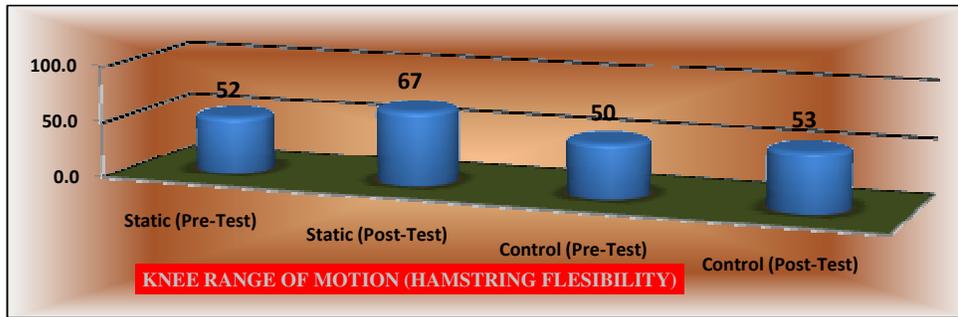


Figure: 2 Mean Values of Pre and Post-Test of Experimental and Control Group of Knee Range of Motion

The comparison of Knee Range of Motion (hamstring flexibility) between pre-test and post-test scores for experimental and control group among male badminton players is presented in table-3.

Table-3  
Comparison Of Pre Test (Initial) And Post Test(Final) Scores Of Range Of Motion (Hamstring Flexibility) For Experimental Group (Eg) And Control Group (Cg)

VARIABLE	GROUP	PRE TEST	SD	POST TEST	SD	MD	S.E.	't'-value
Range of Motion of Knee (ROM)	EG	52	13.07	67	11.39	15.66	4.47	3.49*
	CG	50	14.65	53	13.84	3.40	5.20	0.653

\*Significant at .05 level  $t'_{.05}(28) = 2.04$

Table 3 shows that there is no significant difference between mean scores of pre-test and post-test of Active Knee Range of Motion (hamstring flexibility) of left leg male badminton players in control group. The 't' value of Range of Motion (3.49) in experimental group was found to be statistically significant as the tabulated value was 2.04 with 28 degree of freedom at .05 level of significance.

### Discussion

An analysis of the results shows that there was significant difference between mean scores of pre-test and post-test of active knee range of motion (hamstring flexibility) of left leg male badminton players in static stretching group. The probable reason attributed to the significant differences in the above-mentioned parameters may be that the twelve week of static stretch exercise programme was sufficient to bring about significant changes in hamstring flexibility. Similar studies have been reported by Kieran et al. (2009). He examined the effect of warm-up, static stretching and dynamic stretching on hamstring flexibility in previously injured subjects. Static stretching also increased hamstring flexibility, whereas dynamic did not, in agreement with previous findings on uninjured controls. Davis et al. (2005) observed on the effectiveness of 3 stretching techniques on hamstring flexibility using consistent stretching parameters; and they compared the effects of 3 common stretching techniques on the length of the hamstring muscle group during a 4-week training program. The findings suggest that a sequence of 5 modified hold-relax stretches produced significantly increased hamstring flexibility that lasted 6 minutes after the stretching protocol ended.

### Conclusion

On the basis of the findings of the study, the following conclusions were framed:

- The experimental group (static stretch) showed significant changes in hamstring flexibility of male badminton players and no significant change was found in the control group.
- No significant difference was found between pre-test and post-test of control group on hamstring flexibility.
- Therefore, static stretching treatment has a positive impact on hamstring flexibility (active knee range of motion).

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

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### Abstract:

Track and field is attracted by many thousands of practicing athletes. The discus throw and Shot Put are thrown within a circle. Throwing events primarily depend upon strength, power and speed. The purpose of this present study was to find out the Strength among shot put throwers and discus throwers of Hyderabad District. 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. To assess the strength the following test was considered, test Shot put 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 strongly built. Their training schedule includes various weight training exercises to develop the strength compare to the discus throwers.

Key words: shot put, strength, throwers, power

### Introduction

In Athletics the throwing events comprise of javelin throw, discus throw, hammer throw and shot-put. The differences between the four disciplines include 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 Hammer is also similar to a shot-put 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.

Discus throwers have been selected as a main motif in numerous collectors' coins. One of the recent samples is the €10 Greek Discus commemorative coin, minted in 2003 to commemorate the 2004 Summer Olympics. On the obverse of the coin a modern athlete is seen in the foreground in a half-turned position, while in the background an ancient discus thrower has been captured in a lively bending motion, with the discus high above his head, creating a vivid representation of the sport. Weight training exercises plays a major role for improving overall physical fitness and performance in the shot put players and discus Throwers.

The purpose of this investigation was to compare the strength between the shot-putters and discus throwers of Hyderabad, India.

### 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, District Schools and Junior Colleges Athletics Meet 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 compared with 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	1.3	1.22	0.24
	Discus Throwers	13.1	1.2		

\*Significant at 0.05 level

In Table –I the Mean Values of Pre Test of shot Put throwers is 13.14 and Discus Throwers is 13.1. The Standard Deviation of shot putters is 1.26 and Discus throwers are 1.22 and t is 1.22 and P-Value is 0.231.

### Conclusion:

1. It is concluded that shot putters are having greater strength than Discus throwers.
2. It is also concluded that shot putters requires greater strength to throw the shot spherical lead implement compare to the discus throw which is a circular implement,

### Acknowledgement

The Author thanks the subjects and the authorities of King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia, and the subjects of Hyderabad District for their help in the completion of this study.

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## Growth In The Intensity Of Bio-Magnetism

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### Abstract:

- Bio magnetism-production -consumption - stock
- Exercises to replenish the stock of bio magnetism
- Lamp gazing Exercise
- Mirror gazing Exercise

### Bio Magnetism Production, Consumption, Stock:

Life force particles because of its self whirling and spreading dust particles out of them keep on producing bio magnetism. Mind is magnetic in nature. When the production and consumption of bio magnetism are well balanced the life becomes peaceful.

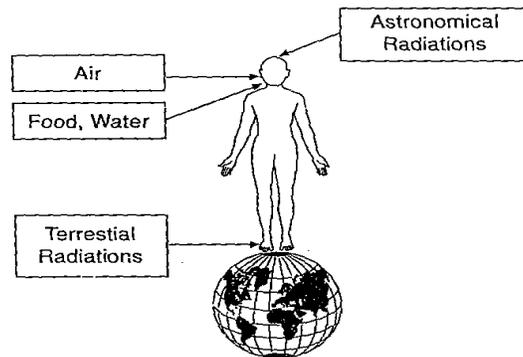
#### Production of bio-magnetism:

Universal Magnetism and bio magnetism have always maintain contacts. Through various meditations and yoga practices Universal Magnetism can be attracted more forcefully into human body and get converted into bio-magnetism. One gets bio magnetism through,  
1. Food and water 2.air, 3.stars, planets as Universal Magnetism  
4) the compressed destruction of atoms at the centre of the earth through radio active waves.

#### Consumption:

The consumption is of two types.

1. The consumption by autonomous nervous system.
2. Central nervous system.



Production of Bio-Magnetism

### Pleasure, pain, peace and ecstasy:

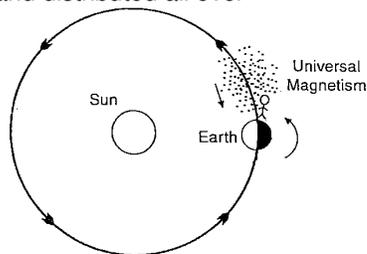
When any action creates conflict or obstacle to the functioning of the autonomous nervous system, some kind of 'short circuit' in bio magnetic circulation happens and this is felt as pain. Because at that point, the production and the stock of bio-magnetism also gets disturbed.

When the bio magnetic energy consumption is within the limit there is no obstacle and there is no pain. When all cells function in a rhythm peace prevails. Cells are not disturbed and as a result brain is not disturbed. So peace prevails all over.

Only in peace mind can become inquisitive. Learning about self becomes possible only when the mind is in peace. Analytical ability of the mind automatically increases. The wonders of the nature become secrets of Nature and the inquisite mind explores them. The exploration results in pleasure, pleasure brings peace and grows into ecstasy.

### **Exercises To Replenish The Intensity Of Bio-Magnetism:**

There are two exercises for increasing the stock of bio-magnetism. 1) Lamp gazing, 2) Mirror gazing. When one gazes at the light, concentration increases, the light energy enters through eyes, gets transformed into bio magnetic energy, and distributed all over



The abundant Universal Magnetism in the early morning

the body. When a person keeps his palms on the eyes, the eyes look inwardly and the consolidated light waves in the form of bio magnetic waves along with universal magnetism pass throughout the body. Similarly through mirror gazing, the bio magnetic stock can be represented.

From these two exercises, a person's eyes become powerful. The power gets transferred onto the objects or people who came into contact with those powerful eyes.

#### **Timing of the exercise**

These exercises can be done between 3 a.m. to 9 a.m. It is better to do it between 4.30 a.m. and 7 a.m. At this time when the earth comes to east from west the dust particles from the Universal Magnetism spreads like a hurricane and dash against the earth and human beings with enormous velocity. This is the time of 'Brahma Muhurtha'.

One has to do these exercises at least twice a week. Both the exercises should not be done together. It is always one at a time.

#### **Lamp Gazing Exercises:**

Look at a light (lamp) for a few minutes. Close the eyes with two palms. One can feel the bio magnetic waves through light waves pass through. The bio magnetic wave rises to the power of the light. At the time of closing the eyes the bio magnetism increases absorbing the surrounding Universal Magnetism. Thus intensity of the bio magnetism increases.

#### **Benefits of lamp gazing exercise**

1. Eyes become bright with love and compassion.
2. Face brightens up and glows and people get attracted.
3. The brain cells get rejuvenated.
4. Contact with Universal Magnetism becomes powerful.
1. Diseases can be cured. One becomes eligible to accomplish "Dheetchai" to others. i.e. to give initiation for mediation to others.

#### **Mirror Gazing Exercise:**

Sit before a mirror. Look at the image for a few minutes. Close the eyes with the palms. One can feel the bio magnetic waves pass through. By doing this exercise mind becomes powerful. Gazing at the mirror, one records his image, closing the eyes, allows the surrounding Universal Magnetism pass throughout the body. This method improves the bio-magnetic stock enormously. In the lamp gazing Light waves get converted into bio magnetism. When one sees his own reflection in the mirror gazing the density of the wave increases and mind doesn't need to take another shape.

#### **Astral Projection**

When we say bio magnetic waves exit actually some life force particles also exit. In a normal condition 5% of the life force particles get out. For example, on the route of floods the stones and wooden parts etc., also get carried away in the speed; but not with same speed of the water. The same way when the bio magnetic waves get out life force particles also get out with lesser speed.

In the mirror gazing exercise projection happens after 20 minutes in the beginning. In practice the projection may happen within 10 minutes, 5 minutes or even two minutes, which means life force particles get intensified. The quantum of exit is easily filled by the Universal Magnetism.

Slowly the magnetic force that passes into the body becomes more and more and life force particles become intensified.

**Facial Attraction and People attraction:**

When one person comes near you, intuitively he feels attracted towards you. He wants to be friendly with you. He wants to meet you frequently and spend more time. This is facial attraction. Some may volunteer to help you because of your facial attraction. This is the convergent effect of the two. Your facial attraction becomes people attractions. Mirror exercise improves this quality in one's face. During this time one should develop his charitable nature.

**Curing diseases**

Person who practiced these gazing methods and acquired the benefits of Thuriam can do wonders. By the tool he can cure some diseases. Take a cup (Stain less steel cup) fill it with water. Look into the water for sometime. One can see a steam like spreading on the surface of the water. It is nothing but the bio magnetic waves that passed out through the eyes. This capability can cure diseases. Drinking this water will also develop immunity against some diseases.

**Passes:**

Two people should sit facing each other. One stretches his right hand. The other uses his right palm and pass over the other's arm from shoulder to finger tips, without touching, saying 'Vazhga Valamudan'. (Live prosperously). The person who is stretching his arm can feel a vibration and this is actually passing one's power to the other. When finished doing this act for a number of time, if he moves his hand up and down, can feel some heaviness in his arms. He will feel the blood circulation also.

**Benefits of mirror gazing exercise:**

1. Immunity increases.
2. Facial attraction improves.
3. Things that sought reach one by some way or other
4. Blessing benefits others.
5. One can cure the diseases of others.
6. Hereditary diseases will become alright.
7. Can become a master to accomplish initiation to others for meditation.
8. Very useful for intensive meditation

**Consolidation:**

Lamp gazing exercise and mirror gazing exercise are the two exercises which help one to increase the quantum and quality of one's bio-magnetism. By doing these exercises one attracts more magnetism from Universal field.

Facial attractions make a friendly face and people become friendly. Diseases can be cured. Body and mind get rejuvenated.

**Reference:-**

- Vethathiri Maharishi institute for spiritual and intuitional education. Temple of consciousness, Arutperumjothi nagar, ALIYAR- 642 101, Pollchi
- The World community service centre. 156, Gandhiji road, Erode- 638 00

## Effect of Plyometric Training, Resistance Training and Their Combination on the Performance of Basketball Players

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### Abstract

A total of sixty female (N=60) school national level female basketball players ranging between 16-19 years of age were taken as subjects for the purpose of the study. The subjects were randomly selected and training was conducted at government senior secondary girls' school, Mall Road, Amritsar. The subjects were divided into two groups namely: Experimental Group (45 subjects in total) and Control Group (15 subjects). The Experimental group was further sub-divided into three groups of 15 subjects in each group. Experimental Group-I was given (Plyometric Training), Experimental Group-II (Resistance Training) and Experimental Group-III (Combined Training). The performance variables were selected for the purpose of the study: Performance (Johnson Basketball Test, C. Meyers, 1974) - Field Goal Speed Test, Basketball Throw for Accuracy, Dribble Test. In order to find out the differential effects of the two treatment groups (Plyometric and Resistance) and one control group, Analysis of Covariance (ANCOVA) test was computed with the help of SPSS computer software. The LSD post-hoc test was applied in cases where 'F'-ratio has shown significance to find out which of the differences of the paired means were significant. The level of significance chosen was .05.

**Keywords:** Plyometric Training, Resistance Training, Performance, Basketball Player

### Introduction

In sports that require jumping and quick movements, there is a need for muscular strength and power such as basketball. One of the basketball skills is rebounding, dribbling etc. The necessity to attain ultimate ability to perform skills has motivated coaches and trainers to apply different solutions and exercises for the success of players. In order to improve in any sport, in addition to necessary knowledge of principles and techniques, the player should have the necessary required fitness. Plyometric Exercises are specialized high intensity training technique used to develop strength and speed. Plyometric movements are those in which a muscle is loaded and then contracted in rapid sequence, use the strength, elasticity and innervations of muscle and surrounding tissues to jump higher, run faster or hit harder, depending on desired training goal.

Performing Plyometrics at high amounts and intensity is very dangerous. As fatigue sets in, one becomes more prone to lose form and perform the movement incorrectly. These jumps should be done sparingly and each jump should be done for quality not quantity so doing death jumps from the top of your garage roof over and over again, isn't going to help you much. This simply means performing Plyometrics is same as to lift weights. Concentrate, keep perfect form and give it all you got; jumping as high as possible. Plyometric refers to exercise that enables a muscle to reach maximum force in the shortest possible time. The muscle is loaded with an eccentric (lengthening) action, followed immediately by a concentric (shortening) action. This study outlines the physiology behind how and why plyometrics works. It also examines the research that demonstrates why, as a form of power training, plyometric training is very effective.

A combination of plyometrics and resistance training during a training cycle should be structured to allow maximal efficacy and physical improvement. To our knowledge, no randomized studies have compared the effects of combined plyometric training and prospective resistance training in children and adolescents. Physical adaptation of the player to perform the sport activities is one of the practical functions of the training which improve the training of the player to reach to higher levels in the sport activities (Abdel et.al 1993). The skillful performance is relevantly associated with the special physical motor abilities as the perfection of the skillful performance depends on the range of the development of the special physical abilities to perform such requirements, such as muscular power, endurance, agility and others. The skillful performance is often measured by the level of the player to acquire physical abilities (Abdel et.al 1992).

The importance of this study lies in demonstrating an important aspect of special preparation and training for the competition as through the matches' results, we can see the failure of a number of players in passing, dribbling and shooting during the matches: the matter that enables the author to determine the problems of that study as a scientific attempt directed to study the effect of using the plyometric training on developing the special physical abilities and the skillful performance of the basketball players.

The combination of plyometric exercise and weight training increased (Adams et al., 1992; Baur et al., 1990; Ioannis et al., 2000) or maintained as unaffected the vertical jumping performance (Stone & O'Bryant, 1986). (Adams et al. 1992) suggested that this combination may provide a more powerful training stimulus to the vertical jumping performance than either weight training or plyometric training alone. However, (Clutch et al. 1983) did not reach similar conclusions. Therefore, the purpose of the present investigation was to compare the effects of 8-week training period of plyometric, resistance and combined plyometric and resistance training with fitness and performance in youth Basketball players.

**Procedure and Method**

The present study was conducted on sixty (60) School National level female basketball players ranging between 16-18 years of age. The subjects were randomly selected and training was conducted at Government Senior Secondary Girls School, Mall Road, Amritsar (Punjab). The subjects were divided into two groups namely: Experimental Group (45 subjects in total) and Control Group (15 subjects). The Experimental group was further sub-divided into three groups of 15 subjects in each group. Experimental Group-I was given (Plyometric Training), Experimental Group-II (Resistance Training) and Experimental Group-III (Combined Training). All the subjects were local residents. During data collection period, the subjects were not allowed to participate in any competition except daily training schedule.

The performance variables were: Performance (Johnson Basketball Test, C. Meyers, 1974) -*Field Goal Speed Test, Basketball Throw for Accuracy, Dribble Test*. In order to find out the differential effects of the three treatment groups (Plyometric, Resistance and Combined Plyometric & Resistance) and one control group, Analysis of Covariance (ANCOVA) test was computed with the help of SPSS computer software. The LSD post-hoc test was applied in cases where 'F'-ratio has shown significance to find out which of the differences of the paired means were significant. The level of significance chosen was .05.

**Data Analysis and Results**

The Analysis of Covariance for different Training groups (Experimental group 1: Plyometric group, Experimental group 2: Resistance group, Experimental group 3: Combined group) and control group of school national level female basketball players for basketball performance comprising of dribble is presented in table-1.

**Table-1**  
**ANCOVA on Performance (Dribble) of School National Level Female Basketball Players**

TESTS	GROUPS (MEAN)				Source of Variance	Sum of Square	df	Mean Square	'F' Value
	EXP GP-1	EXP GP-2	EXP GP-3	CONT GP.					
Pre-Test Means	21.00	20.00	20.00	20.47	Between Groups	10.20	3	3.40	5.05*
					Within Groups	37.73	56	.674	
Post-Test Means	23.40	22.27	22.67	20.87	Between Groups	51.00	3	17.00	16.53*
					Within Groups	57.60	56	1.03	
Adj. Final Mean	22.99	22.49	22.89	20.80	Between Groups	46.900	3	15.633	20.27*
					Within Groups	42.420	55	.771	

\*Significant at 0.05 level 'F'<sub>0.05</sub> (3, 55) = 2.77

The above results indicate that there has been a significant difference among pre-test and post-test mean scores of various training groups of school national level female basketball players among performance variables comprising of dribble as the obtained 'F' value (Pre-test : 5.05 & Post-test : 16.53) was found to be greater than the table value of 2.77, which is required to be significant at 0.05 level of significance. Further, the results of adjusted final means indicated significant difference among four groups at 0.05 level as obtained 'F' value 20.27 was much more than the table value of 2.77.

**Table-2**  
**Significant Differences between the Paired Adjusted Final Means of Dribble in Basketball Performance Variable among Different Training Groups**

PERFORMANCE	GROUPS (MEAN)				MD
	EXP. GP-1	EXP. GP-2	EXP. GP-3	CONTROL GROUP	
Dribble	22.99	22.49			.499
	22.99		22.89		.099
	22.99			20.80	<b>2.195*</b>
		22.49	22.89		.400
		22.49		20.80	<b>1.696*</b>
			22.89	20.80	<b>2.096*</b>

\*Significant at .05 level  $F_{.05}(3, 55) = 0.92$

From the description presented in table-2, it has been found that there were no significant differences in the adjusted means between Plyometric and Resistance group, Plyometric and combined group, Resistance and Combined group. However, Plyometric, Resistance and Combined group recorded significant differences in comparison to control group as the adjusted mean of 2.195, 1.696 and 2.096 for these groups were found greater than the obtained critical ratio (0.92). The Analysis of Covariance for different Training groups (Experimental group 1: Plyometric group, Experimental group 2: Resistance group, Experimental group 3: Combined group) and control group of school national level female basketball players for basketball performance comprising of dribble is presented in table-3.

**Table-3**  
**ANCOVA on Performance (Field Goal Speed Shot) of School National Level Female Basketball Players**

TESTS	GROUPS (MEAN)				Source of Variance	Sum of Square	df	Mean Square	'F' Value
	EXP GP-1	EXP GP-2	EXP GP-3	CONT GP.					
Pre-Test Means	10.47	10.47	9.67	9.93	Between Groups	7.20	3	2.40	1.57
					Within Groups	85.73	56	1.53	
Post-Test Means	12.87	12.20	13.47	10.47	Between Groups	75.65	3	25.22	<b>16.53*</b>
					Within Groups	55.60	56	.993	
Adj. Final Mean	12.69	12.03	13.70	10.57	Between Groups	77.657	3	25.886	<b>42.25*</b>
					Within Groups	33.697	55	.613	

\*Significant at 0.05 level  $F_{.05}(3, 55) = 2.77$

The above results indicate that there has been a significant difference among post-test mean scores of various training groups of school national level female basketball players among performance variables comprising of speed shot as the obtained 'F' value (Post-test: 16.53) was found to be greater than the table value of 2.77, which is required to be significant at 0.05 level of significance. Further, the results of adjusted final means indicated significant difference among four groups at 0.05 level as obtained 'F' value 42.25 was much more than the table value of 2.77.

**Table-4**  
**Significant Differences Between The Paired Adjusted Final Means Of Field Goal Speed Shot In Basketball Performance Variable Among Different Training Groups**

PERFORMANCE	GROUPS (MEAN)				MD
	EXP. GP-1	EXP. GP-2	EXP. GP-3	CONT. GP.	
Speed Shot	12.69	12.03			.667
	12.69		13.70		<b>1.004*</b>
	12.69			10.57	<b>2.13*</b>
		12.03	13.70		<b>1.67*</b>
		12.03		10.57	<b>1.46*</b>
			13.70	10.57	<b>3.14*</b>

\*Significant at .05 level  $F_{.05}(3, 55) = 0.82$

It is observed from table-4 that the mean differences between adjusted-paired means were statistically significant in all cases at 0.05 level of significance as the adjusted mean difference was higher for all three groups than the critical ratio ( $t=0.82$ ) except for plyometric and resistance group. All the three experimental groups showed significant improvement in speed shot as compared to control group. The Analysis of Covariance for different Training groups (Experimental group 1: Plyometric group, Experimental group 2: Resistance group, Experimental group 3: Combined group) and control group of school national level female basketball players for basketball performance comprising of dribble is presented in table-5.

**Table-5**  
**ANCOVA on Throw for Accuracy of School National Level Female Basketball Players**

TESTS	GROUPS (MEAN)				Source of Variance	Sum of Square	df	Mean Square	'F' Value
	EXP GP-1	EXP GP-2	EXP GP-3	CONT GP.					
Pre-Test Means	15.60	11.60	16.47	12.07	Between Groups	271.87	3	90.62	5.97*
					Within Groups	849.87	56	15.18	
Post-Test Means	17.93	13.67	19.73	12.80	Between Groups	500.33	3	166.78	14.25*
					Within Groups	655.60	56	11.71	
Adj. Final Mean	16.69	15.42	17.84	14.20	Between Groups	89.132	3	29.711	9.147*
					Within Groups	178.649	55	3.248	

\*Significant at 0.05 level 'F'<sub>0.05</sub>(3, 55) = 2.77

The above results indicate that there has been a significant difference among pre-test and post-test mean scores of various training groups of school national level female basketball players among performance variables comprising of throw for accuracy as the obtained 'F' value (Pre-test : 5.97 & Post-test : 14.25) was found to be greater than the table value of 2.77, which is required to be significant at 0.05 level of significance. Further, the results of adjusted final means indicated significant difference among four groups at 0.05 level as obtained 'F' value 9.147 was much more than the table value of 2.77.

**Table-6**  
**Significant Differences between the Paired Adjusted Final Means of Throw for Accuracy in Basketball Performance Variable among Different Training Groups**

PERFORMANCE	GROUPS (MEAN)				MD
	EXP. GP-1	EXP. GP-2	EXP. GP-3	CONT. GP.	
Throw For Accuracy	16.69	15.42			1.270
	16.69		17.84		1.151
	16.69			14.20	2.486*
		15.42	17.84		2.421*
		15.42		14.20	1.216
			17.84	14.20	3.637*

\*Significant at .05 level  $t_{.05}(3, 55) = 1.90$

It has been observed from table-6 that the differences between adjusted final means were statistically significant in plyometric and combined group as compared to control group, resistance and combined group as the difference between their adjusted means 2.486, 3.637 and 2.421 were found to be greater than critical ratio.

## Conclusion

Plyometric group demonstrated maximum effect on dribbling ability as compare to other groups whereas combined group was the next effective group to improve dribble ability followed by resistance group that showed least effect on dribbling ability as compared to control group. Combined group (plyometric and resistance) demonstrated maximum effect on field goal speed shot ability and throw for accuracy as compared to other groups where as plyometric group was the next effective group followed by resistance group that showed least effect as compared to control group.

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## A Study on Effect of Anaerobic Exercises on BMI of Adult Women

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### Abstract

The effect of different type of exercises on the physical, physiological and psychological factors of human body is a well-established fact considering the intensity, duration and volume of exercises. The aim of this study were mainly to find out the effects of low intensity long term anaerobic exercises on body mass index of adults women. Besides this the change of weight throughout the long time span was taken into consideration. The impact of different other extraneous factors were not considered. About 32 collage girls (age ranges 21-25yrs) were enrolled as the subject of the study. There were one experimental group of 18 students (mean height  $153.96 \pm 5.73$  cm., mean weight  $50 \pm 9.50$  kg. and mean BMI  $21.11 \pm 4.20$  kg/m<sup>2</sup>), participated in an aerobic exercise programs and one control group of 14 students (mean height  $154.07 \pm 4.10$  cm., mean weight  $58 \pm 6.71$  kg. and mean BMI  $24.47 \pm 2.97$  kg/m<sup>2</sup>). The experimental subjects were continued for aerobic exercises for nine month (three days in a week, 45min. in each day). It has found that due to low intensity long term aerobic exercises there were no significant changes occur in case of Weight and Body mass index.

**Key words:** Exercise, Anaerobic, Height, Weight, Body Mass Index, Adult women

### Introduction

The effect of exercises to health related physical fitness variable has been well established by different scientists in variety of health related field. Benefits of exercise are mainly four folded, as it promotes health, avoid diseases, recover quickly and ultimately add enjoyment in life. According to Hetherington "The latent power in human body comes out through exercise". The physical activity totally disappeared and the push button life takes place, thus generating several hypo-kinetic diseases. Obesity the boomerang start ended in to some fatal problem after suffering different other physical and physiological malfunctioning. Our today's adult women are the future carrier of our next generation. Healthy women can only give the birth of a healthy child. We have to protect our future mother from different ailments as well as to make them physically fit to restore our future. In this regard we must think about the latest addition of W.H.O. in case of the definition of health – Attainment of level of health that will enable every individual to lead a socially and economically productive life. So to enhance their daily life skill it demand some health related physical fitness and we must have to take care about the maintenance of their health and fitness. The present research project intended to find out the effect of regular exercise on health related physical fitness in our climate and environment. Numerous studies already have carried out with a limited study in India. Till now there is no such specific information about the effect of very low intensity long term aerobic exercise on the said variables of the adult women in the age group of 20-25 bearing normal BMI level in India. The researcher was very much intended to search out this effect. It will give some specific information regarding the change of such said variables due to the direct effect of regular exercise.

**Ryan and Nicklas (1999)** determined if fat deposition within mid-thigh muscles, represented by low-density lean tissue density, is associated with age, low physical fitness, hyperleptinemia, hyperinsulinemia and dyslipidemia in women. They found that mid-thigh low-density lean tissue is directly related to age and adiposity. Furthermore, it appears that fat accretion in skeletal muscle adversely influences plasma insulin and lipoprotein metabolism in women, but not independently of total adiposity and age.

**Knudson, (2001)** was examined the validity of 2 field tests of abdominal endurance in a sample of 22 female college students. Scores on the modified trunk curl and the 90 sec. bench trunk curl were correlated with isometric trunk flexion strength and endurance measured on a cybex TEF machine. There were no significant correlation ( $-0.21 < r < 0.36$ ) between the field tests and abdominal strength. Only the bench trunk curl was significantly correlated ( $r = 0.46, P < 0.05$ ) with abdominal muscle endurance.

**Hulens, et al. (2002)** aimed to assess dimensions of health related quality of life (HRQL) in women attending an obesity clinic and to rate differences in HRQL in those with the highest and lowest levels of Physical activity (PA). The findings indicate that a higher level of PA in an obese female clinical population was positively associated with diverse dimensions of HRQL. However, it was not possible to determine if these favorable aspects of HRQL are the cause or the consequence of a higher PA level.

**Ransdell, et al., (2003)** conducted a pilot study to compare the effectiveness of home and community based physical activity interventions that target mothers and daughters to increase physical activity and improve health related fitness. They found that mothers and daughters responded positively to community based and home based physical activity programs. Home-based physical activity programming is a cost-effective means to increase physical activity and improve health-related fitness in this group.

**Sartorio, et al., (2003)** studied over severely obese patients (18 male and 53 females aged 29.3 +/- 0.8 years, with a mean weight of 113.8 +/- 2.2 kg and a mean BMI of 41.3 +/- 0.5 kg/m<sup>2</sup>) to assess the effects on performance and work capacity of a short term (3 week) integrated body weight reduction programme consisting of an energy restricted diet, nutritional education, psychological counseling and aerobic exercise training at a constant metabolic load. It was concluded that the changes in exercise capacity induced by the present programme offer significant advantages for obese patients that can be quantified in terms of an improvement in their ability to perform everyday activities and thus contributing towards improving their quality of life. Anaerobic exercise is exercise which responsible for trigger anaerobic metabolism. Athletes use this type of non-endurance sports to develop speed, strength and power. In anaerobic energy systems the muscles develop differently compared to aerobic exercise, leading to better performance in high intensity short duration activities, which last from mere seconds up to about 2 minutes. Any activity after about two minutes will have a large aerobic metabolic component. Anaerobic metabolism, or anaerobic energy expenditure, is a natural part of whole-body metabolic energy expenditure. Fast twitch skeletal muscle (as compared to slow twitch muscle) operates using anaerobic metabolic systems, such that any recruitment of fast twitch muscle fibers will lead to increased anaerobic energy expenditure. Intense exercise lasting upwards of about four minutes (e.g., a mile race) may still have a considerable anaerobic energy expenditure component. Anaerobic energy expenditure is difficult to accurately quantify, although several reasonable methods to estimate the anaerobic component to exercise are available. The purpose of the study was to find the effect of long term low intensity anaerobic exercises upon Body fat composition which is nothing but one of the most important indicator of the health related physical fitness component of the general adult women bearing normal BMI level in Indian climate.

#### **Methodology**

**Subjects:** About 32 collage girls' were considered as the subject of this study. The age of the subjects were ranging between 21-25yrs. One group of 18 students(mean height 153.96±5.73cm., mean weight 50±9.50 kg. and mean BMI 21.11±4.20 kg/mt<sup>2</sup>), the experimental group was participated in an anaerobic exercise programs and the group of 14 students(mean height 154.07±4.10 cm., mean weight 58±6.71 kg. and mean BMI 24.47±2.97 kg/mt<sup>2</sup>) considered as control group maintained only their normal life style. The measured variables were height(in cm.), weight(Kg.) and body composition; B.M.I.(Kg./mt<sup>2</sup>).

**Design:** The actual experimental period was of 09 month. Pretest of all the subjects of two groups were conducted on the onset of the experimental period. The low intensity continuous anaerobic exercise program was continued for 09 month considering 03 month in each phase. After 3 month the 1<sup>st</sup> posttest, after 6<sup>th</sup> month the 2<sup>nd</sup> posttest, after 9 month the 3<sup>rd</sup> and final posttest were conducted. The exercise program were of 45 min. consisting of general warm up, stretching exercises, Weight training with own body weight and with extra weight as it planned. Some team game, relaxation exercises were also included to avoid monotony, to create interest but that were of target oriented and relevant. The exercises have fulfilled the individual need of the subjects. The exercise-program intensity was increased gradually with very slow pace considering the status of the experimental group. The main target was to introduce the schedule considering the appeal of movement programme towards the normal fitness of which one of the most important indicator is the weight. To maintain weight for a considerable time is nothing but to maintain the normal body functioning. As the subjects were the adult women and having the normal BMI range so the target was to maintain that level with some improvement of internal Physiological functioning through anaerobic exercises. The frequencies of the exercise program were three days in a week and of 45min./day.

#### **Training Protocol**

Daily for 45 min. thrice a week. Daily distribution: 15%- Speed, 70%- Strength, 15% Flexibility for main activity(10 min warm up – stretching, joint mobility, slow jogging)

(30 min – main course: 5 min. speed, 20 min. Strength, 5 min. Flexibility)  
 (5 min cooling down – stretching, joint mobility) Total weekly hours 135 min  
 Strength training with own body weight: Push up, sit up, pull up and squat.  
 Strength training with external weight: curl up, arm press, bench press, squat thrust, leg press  
 Strength training: start with 20% of max. weight, 8-10 rep. with 2sets of each exercise then gradually increased to 30% and 40% after each phase of 3 month with same rep. but increase of sets to 3sets  
 Flexibility: self-free hand

**Results And Discussion**

The following tables shows the results after statistical calculation on the collected data of different variables through the tests and measurements after different phases of anaerobic training. Here Phase-1, 2, 3, 4 denoted the result of the collected data at onset of exercise, after 3 month(1<sup>st</sup> stage), 6 month(2<sup>nd</sup> stage) and 9 month(3<sup>rd</sup> stage) respectively.

**Table-1: The mean and S.D. of Height in different phases of measurements of experimental and control group.**

Height(cm.)		Phase-1	Phase-2	Phase-3	Phase-4
EXP.	Mean±S.D.	153.96±5.73	153.11±5.54	152.92±5.74	153.05±5.74
CONT.	Mean±S.D.	154.07±4.10	153.94±4.05	153.57±4.76	154.11±4.25

0.05 level of significance

Table-1 shows the mean and S.D. of Height indifferent phases of measurements of experimental and control group.No significant difference was found in height in both the cases in different phases.

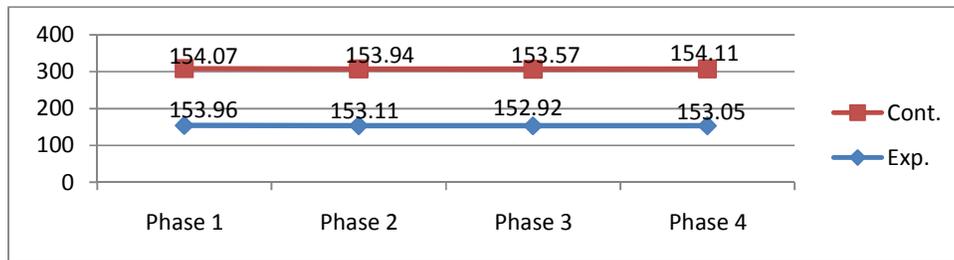


Fig. 1: The pattern of change of Height of both the group in different phases of measurements

**Table-2: The mean and S.D. of Weight in different phases of measurements of experimental and control group.**

Weight(Kg.)		Phase-1	Phase-2	Phase-3	Phase-4
EXP.	Mean±S.D.	50±9.50	49.9±8.13	50.3±8.35	49.3±8.27
CONT.	Mean±S.D.	58±6.71	56.54±5.99	58.36±5.08	57.54±5.40

0.05 level of significance

Table-2 shows the mean and S.D. of Weight indifferent phases of measurements of experimental and control group.No significant difference was found in both the cases in weight in different phases.

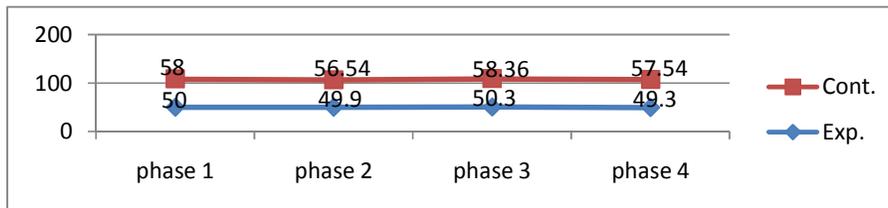


Fig.2: The pattern of change of Weight of both the group in different phases of measurements

**Table-3: The mean and S.D. of BMI in different phases of measurements of experimental and control group.**

BMI( Kg./mt. <sup>2</sup> )		Phase-1	Phase-2	Phase-3	Phase-4
Exp.	Mean±S.D.	21.11±4.20	21.33±3.81	21.11±4.20	21.13±4.08
Cont.	Mean±S.D.	24.47±2.97	23.89±2.68	24.83±2.82	24.27±2.58

0.05 level of significance

This table shows the mean and S.D. of BMI indifferent phases of anaerobic training.No significant differences was found in BMI after different stages training.

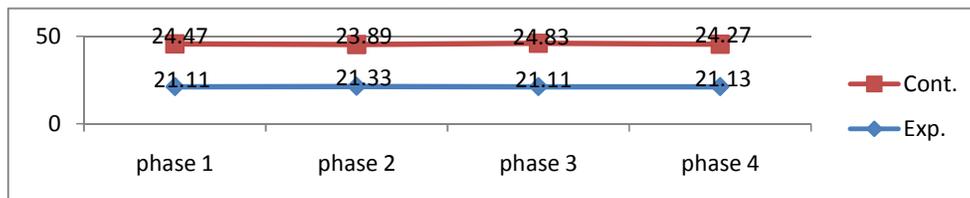


Fig. 3: The pattern of change of BMI of both the group in different phases of measurements

Substantial studies have documented that independently both aerobic exercise training and resistance exercise trainings have made significant changes on body weight and body composition variable in

obese individuals but in case of the very normal weight category there is no such change with low intensity exercises in the form of slow running or different resistant training. Exercises have been useful as a way of controlling body weight. In my study the total long term programme of anaerobic type exercises showed no significant change of body weight and body mass index. My result supports the weight maintaining role of movement activities in case of normal body weight. It has found that a change has occur in case of weight of the control group, although that was not significant, as the different factors such as the life style, caloric intake, different routine life during that total training session were not controlled in case of the control group. In case of the experimental group the weight constantly maintained its own normal status with slight increase at the end although that was also not significant. That was attributed to the development of the total muscle mass instead of adipose tissue as a result of weight training.

### Conclusions:

From the findings of the study and discussion accordingly it may be concluded that the low intensity long term anaerobic type of movement programme can be able to control the normal bodyweight and thus maintain the safe body mass index consistently.

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## Heal Arthritis Through Aqua Fitness In Form Of Hydrotherapy To Your Joint Pains

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### Introduction:

Aerobics can be defined as any physical exercise that increases the heart rate and increases the body's intake of oxygen long enough to benefit the condition of the human body. Performing simple activities such as walking, running, dancing, and swimming are defined as doing aerobic exercises. Water Aerobics comes close by conforming to individual needs, restrictions, and abilities. It allows a person to exercise every muscle and every joint in the body all at the same time it cures your arthritis. Because it is done in water, you may perspire, but you will remain cooler because the water cools you off as you exert. This is one reason that water aerobics is popular in climates where the weather is quite warm. The reason for this is because the water causes your body to be buoyant, thus causing less stress on your joints and muscles. Water aerobics is a non-weight bearing exercise where water, instead of your lower extremities, supports your weight. It provides a great deal of resistance in all directions for your muscles to work against. This multi-directional resistance provides an excellent environment for rehabilitation of injured athletes and orthopedic patients. Make sure the water temperature is ideal for caloric expenditure. What can you do that's aerobic in a pool? You can walk, jog and run, all of which will strengthen quadriceps, hamstrings and gutte's as well develop cardio respiratory fitness. A good game of water polo can be the high light of an advanced calls. As with any aerobic class you will start with stretches and a warm up and end with more stretches and cool down. This may sound easy, but believe me, that's part of using the resistance of the water to strengthen your body. When you walk or jog in the water, make sure you pump your arms the same way you would if you were on land most of the joint pains and accident healing cures totally arthritis. Once you have developed a good technique that is comfortable for you, aim to walk or jog in the water for between 20 to 40 minutes per exercise session. Water aerobics has an added benefit: it enables you to burn up calories much more efficiently. Compare the following estimates of calorie consumption for a 30-minute workout.

- ❖ Water walking burns: 135 calories
- ❖ Deep water walking and curing your arthritis joint pains and body pains and make erect a core spine: 264 calories
- ❖ Jogging on land: 240 calories
- ❖ Deep water jogging: 340 calories which cures your total body.

### Discussion.

A qualified instructor who has training not only in water aerobics but should have a knowledge of scientific coaching methodology of teaching a lessons with the knowledge of anatomy, human physiology and kinesiology. We all know that diet, medication and exercises of the backbone treatment. Warm water is one of the most relaxants alleviating convulsions and muscles spasms. It transfers heat into the body to relaxants muscles and increases the blood flow to the tissues.

Hydrotherapy is the use of water curing arthritis, either internally or externally, to maintain health and prevent disease. Although it was the Romans who introduced spas throughout the Roman empire, modern hydrotherapy is commonly attributed to Father Sebastian Kneipp (1821-97), who believed that water would 'dissolve, remove and strengthen'. Dissolve matter-containing disease, remove diseased matter from the body and strengthen the body by restoring cleansed blood to the tissues and maximizing circulations. Water has the power to improve blood and lymph circulation, relax tension in the tissues, alleviate pain and calm the nervous system. Research had been carried out into hydrotherapy conducted in Germany. However, in recent years some interesting studies have been carried out into the varied forms and applications of hydrotherapy and curing arthritis in water and medicine.

There is no drug on the market that can rival the number of beneficial physiological effects that water is capable of producing. No drug can decrease body temperature as quickly and efficiently and harmlessly as water cold water can reduce pulse from forty to twenty beats per minute and decrease

high body temperature within a matter of minutes. Water fomentations are often used to alleviate joint pain and prolonged use of cold water causes a pain relieving numbness, which is used for muscle pain and bum pains.

Basically aerobic and exercises means live in air and utilize the oxygen. Actually hydrotherapy curing arthritis is the best form of relieving your body pains. In the same manner you can also come across doing regular aqua aerobics keeps you fit and trim. Water cures most of diseases like bronchitis, arthritis and body pains. Most of the doctors and surgeon always refers for swimming basically which water cures all the accidental cases, joint pains, arthritis, swollen ankles.

After all we always talk about aerobic dance, aerobics, aqua aerobics, swimming and overall hydrotherapy which basically all these are the best forms of exercises with develops a feeling of pride in yourself which improves your posture. This helps you think clearer and faster which shape your body alignment and boost your moral and confidence and develops you stronger, more coordinated, more flexible, peaceful and energetic to cross over the battles and hurdles for developing the best form of physical fitness makes you to look trim and shape your waist, hips, thighs, buttocks, calves, ankles, upper arms and abdomen also enhance your ability and performances in every activities which improves the capacity of your heart, lungs and circulatory systems. Which eliminates back and neck pains and also slowly increase your stamina and contributes to look you healthier and prevents falling hair and gives you a glowing skin. Basically overall the fitness improves diet and cures overall the body posture through curing all health problems by aqua exercises and burns fats and calories, releases physical and emotional stress, anxiety, worries and tensions give you the look of authority, courage, confidence and power. Helps you loose weight in inches helps you to stay at your ideal weight and helps you to grow taller reduces and eliminates headaches contribute to better relationship and productivity at home and at work and improves your digestion system and helps you look and feels younger. Firms and tones sagging and flabby muscles promotes discipline so that you can set goals reach them to make yourself help you look and feel glamorous, clam, dynamitic, radiant, sleek, elegant and healthy.

## **Conclusions**

According to manprieet who is the regular swimmer he says a few days back my ankle twisted badly and I had very bad arthritis it has been swollen and fractured. After doing regular exercises in water the whole swelling gone and able to walk faster and faster and recovered arthritis through doing aqua exercise in water cured completely. I am specially very much thankful to our swimming coach Mr. Farooq Kamal.

According to Mr. Agarwal, whose age is 51 years right now he says I got a paralytic attack and bad knee problem and arthritis after my accident couldnot do anything in the age of 35 years in 1990. Since then I started swimming regularly and keep doing exercises in water swim for 365 days don't miss a single day. Earlier I ever used to drive a car but right now swimming and exercises made it everything possible and changed my life. I am specially very much thankful to our swimming coach Mr. Farooq Kamal. Phone No 924657955.

According Mr. Sachan wing commander in airforce recently he met with an accident which he has been operated twice for knee operation and also was suffering from joint pains and arthritis there was lots of swelling and fell difficult in walking but my orthopedic surgeon he asked me to start the exercise and go for swimming. Which he started doing regularly trading and doing the cycling and few water exercises. Which it makes the less pressure and strengthened the muscles. And now he is able to walk very well and join the office also I am specially very much thankful to our swimming coach Mr. Farooq Kamal. Phone No. 09346413895.

Ms. Kusum according to her she was suffering with very bad arthritis problem most of the medicines never worked for her later on she took swimming very seriously and now she is feeling much better with water aerobics. With the perfect guidance the instructor and coach leads to her life very simple. I am specially very much thankful to our swimming coach Mr. Farooq Kamal..

## Cognitive Development And Exercise Of Children

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### **Abstract:**

The purpose of the present study was set to find the effect of exercise on eight years age group of children in relation to cognitive development. For this purpose, 60 male students of 8 years age from a primary school were selected. Students were divided into experimental and control groups consisting 30 each. The treatment of exercise considering of warming up exercises, developmental exercises and recreational games was scheduled for a period of ten weeks. Central tendency was judged by calculating mean and variability was assessed by standard deviation. T-test was used to find out the statistical significances of each groups pre and post mean differences. It is concluded that exercise has a positive effect to improve cognitive ability of children.

**Key words:** Exercise, cognitive development and children.

**Introduction:** The nature of sports has been changed drastically due to the change of society. Development of science has an impact to the society and society also takes part to change the science. As a result competitive nature of sports is being adopted by the society. Sportsman has to elicit his best performance which does not come by chance or at a night. It requires long, continuous, systematic and scientific practice. So many profile studies of eminent players have proved that most of the international players had started their practice since their childhood days. India is such a country who produces so many talent in sports but due to lack of nurture from earlier are nipped in the bud. In the modern stage of sports competition physical efficiency is not only the determining factor. Cognitive ability of the sportsman is vital to give him the winning taste. Especially in case of team game where players have to perform against opponents' hindrances cognitive ability of the players plays a great role.

More recently, research on the favorable effects of exercise and brain function is emerging. The aim of this study is to highlight some of known effects of exercise on brain cognition in children. Cognition refers to thinking, remembering, imagining or learning, problem-solving, reasoning and judging. This type of ability predominantly mental in nature – depends greatly on the brain process which deals with conscious awareness of the external environment and the acquisition of all kinds of knowledge. To perform sports skills accurately in the critical game situation cognitive is highly required. So the researcher cherishes in his mind to take up the study to train the children.

### **Methodology:**

**Subjects:** For the present study the population was the school going children. 60(sixty) male students of age seven years from a general primary school of West Bengal was selected for the study. Subjects were chosen randomly on the basis of their birth certificate. All of the subjects were non-vegetarian and non-residential (day's scholar). They were all from low middle class family. The subjects were selected at random from the whole class.

**Criterion measure:** Raven's Progressive Matrices Test was used to measure cognitive ability of the subjects. Pre experimental test was administered for both the groups. Experimental group of 8 years (30) undergone for experimental treatment for a period of ten weeks but the control group of 8 years (30) did not receive any treatment. Both the groups were re-tested on criterion task at the conclusion of the experimental period. Therefore, the experimental design was a random group design.

**Experimental treatment:** The treatment of exercise considering of warming up exercises, developmental exercises and recreational games was scheduled for a period of ten weeks. The treatment was carried out at every Tuesday, Thursday and Saturday for the experimental group. But the control group did not receive any exercise program. They were allowed to attain normal class and lead their normal life as usual.

**Level of Significance:** Mean, standard deviation, and 't' test were computed to analyze the data. The level of significance was set at .05 level of confidence.

**Results and discussion:**

The result of the study is discussed group wise.

Table- 1: Comparison of cognitive ability scores between pre and post tests of experimental group

Parameter	group	N	Mean	Sd	't' significance
CA	Pre	30	36.50	4.47	2.15 0.0355 S
	Post	30	39.00	4.53	

\* Table value of t for df 58 is 2.01 at 0.05 level of significance.  $\leq 0.05$  indicates significant at 5% level. NS= Not Significant, S=significant.

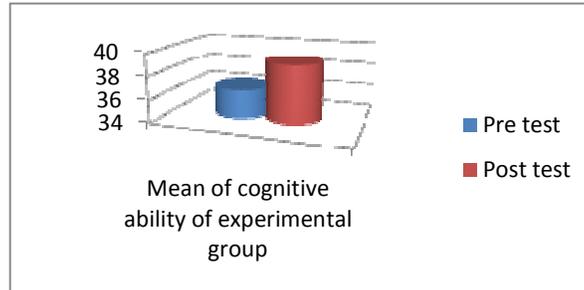


Fig.1: Comparison of cognitive ability scores between pre and post tests of experimental group.

Result shows that there was significant difference between the pre test score and post test score of experimental group. It is noted that in relation to cognitive ability higher the score was better for performance. The mean value of pre test score was 36.50 and post test mean value was 39.00 and sd was 4.47 and 4.53. For better understanding 't' ratio was calculated. The calculated 't' value was 2.15 which was greater than the table value at 0.05 level of significance. So it can be safely said that the difference between pre test and post test mean values were statistically significant.

Table-2: Comparison of cognitive ability scores between pre and post tests of control group

Parameter	group	N	Mean	Sd	't' significance
CA	Pre	30	37.93	4.75	0.51 0.6111 NS
	Post	30	38.57	4.85	

\* Table value of t for df 58 is 2.01 at 0.05 level of significance.  $\leq 0.05$  indicates significant at 5% level. NS= Not Significant, S=significant.

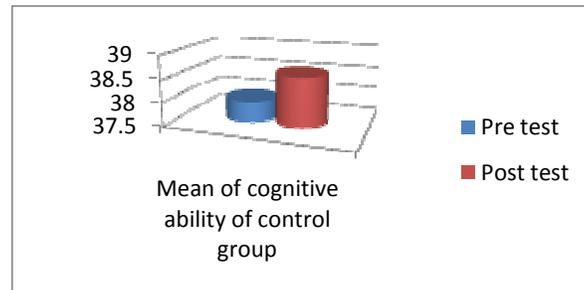


Fig.2: Comparison of cognitive ability scores between pre and post tests of control group.

The table shows that the post test mean value was 37.93 and sd was 4.75 and pre test mean value was 38.57 and sd was 4.85 of control group. The post test mean value was better than the pre test mean value. But the calculated 't' value was 0.51 which was not statistically significant at 0.05 level of confidence. So the difference between the two means was not significant.

**Discussion:**

Sibey and Etnier (2003) concluded in their study that a significant positive relationship exists between physical activity and cognitive function in children aged 4-18 years. They noted that physical activity improves a youth's perceptual skills, intelligence quotient, achievement, verbal tests, mathematics tests, developmental level and academic readiness. Hillman and colleagues (2008) propose the findings with brain function in youth clearly indicate that exercise early in a person's life can be of great magnitude for the improvement of cognitive health during childhood and this may extend throughout one's adult lifespan. It is also evident from the findings of the present study that following participation in an exercise program cognitive ability had improved significantly among the subjects of the study.

**Conclusion:**

Within the certain limitation of the present study this may be considered that regular participation in an exercise program is useful in improving the cognitive ability. So therefore, it may be concluded that exercise has a positive effect in relation to develop cognitive ability of the children.

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## Nutritional Supplementation On Physical Fitness And Performance Of Athletes

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### Introduction

Over the past 20 years, research has clearly documented the beneficial effects of nutrition on exercise performance. There is no doubt that what an athlete eats and drinks can affect health, body weight and composition, substrate availability during exercise, recovery time after exercise, and, ultimately, exercise performance. As the research and interest in sport nutrition have increase, so has the sale of ergogenic aids, all aimed at improving supports performance. The athlete who wants to optimize exercise performance needs to follow good nutrition and hydration practices, use supplements and ergogenic aids carefully, minimize severe weight-loss practices, and eat a variety of foods in adequate amounts (Manore, 2000).

### Discussion

Nutrition of sportsman like that of every other person is aimed mainly at providing him with an adequate quantity of energy, and other essential nutrients with reference of his specific requirements. The sportsman requires a well-balanced diet containing adequate calories and nutrients to maintain both normal daily activities associated with training and competitions. Calorie requirement of athletes vary, depending on body-size, age, type of competitions and level of training. Correctly organized nutrition for sportsman during the period of intense physical and neuropsychological loads increase their working capacity and create the foundation for achieving high level of physical performance (Grandjean, 1990)Food is more than just bulk that stops your hunger; it is a fuel composed of important nutrients essential for maintaining optimal health and top performance.About 45 essential nutrients need to be obtained either from the diet or from supplements. Those nutrients include glucose, 2 essential fatty acids, 9 essential amino acids, 13 vitamins, about 21 minerals, and water. The simple classification categories are carbohydrates, fats (lipids), protein, vitamins, minerals, and water. All of these are essential for every cell in the body and for human life to exist. The nutrients in foods offer four general functions that are energy for every cell in the body, growth and repair of tissue, regulation of metabolism, and provision of water for every cell (Ayottt, 2001).

### Macronutrients

**Energy (calories):** These calorie requirements are increased considerably during athletic activities. (Thornton, 1990) have reviewed the energy requirements for various types of activities. Depending on the intensity and duration of the daily exercises of the athletes, the total daily calorie requirements may range from 3000 to 5000 dcal as compared with the calorie requirements for very hard work of 3600-3000 Kcal per day. It is evident that the calorie requirements of athletes may higher than those doing very hard work. About 20-25 per cent of the calories should be derived from fats.)

**Carbohydrates:** Carbohydrates are the primary energy source when doing exercise hard. Carbohydrates are essential for athletes, especially endurance athletes. Carbohydrates are the preferred source of energy for all body functions and muscular exertions and are necessary to assist other foods in digestion, assimilation, and elimination (Costill 1988)

**Proteins:** Protein is essential for building and repairing muscles, red bold cells, hair, and other tissues, and for synthesizing hormones. Protein is digested into amino acids, which are rebuilt into the protein in muscle and other tissues. Protein is a source of calories and can be used for energy if inadequate carbohydrates are available such as during a strict diet or exhausting exercise (Borsheim et al.,2002)One of the persisting misconceptions is the increased need for proteins for persons doing hard physical work. The proteins provided by well-balanced diets meet the extra proteins required for the formation of new muscle. Protein requirements slightly increased in highly active people. Protein recommendations for endurance athletes are 1.2 to 1.4 g/kg of body weight a day, whereas those for resistance and strength-trained athletes may be as high as 1.6 to 1.7 g/kg of body (Levehagen et al., 2001).

## **Fat**

Fats are essential for good health. They constitute an important source of energy storage in the body, cushion and protect vital organs and carry fat-soluble vitamins like vitamins A,D,E and K. Fat is a concentrated source of energy and hence about 20 to 25 percent of the caloric intake should be derived from fats. The daily fat intake should be between 80-150g consisting about 20-25 percent of the daily calorie requirements. Fat intake should not be restricted, because there is no performance benefit in consuming a diet with less than 15% of energy from fat, compared with 20-25% of energy from fat. Fat is important in athletes' diets because it provides energy, fat-soluble vitamins, and essential fatty acids. However, there is no scientific basis for recommending high-fat diets to athletes.

## **Micronutrients**

Apart from macronutrients like carbohydrates, proteins and fats, the body requires macronutrients minerals and vitamin in small quantities for its proper functioning. There are 13 different vitamins some of which are water soluble and others fat-soluble. The first category includes vitamin C,B1,B2,B6 and niacin, which are involved in energy metabolism and folic acid and vitamin B12, which are involved in cell development. Deficiency and B-group vitamin can result in premature fatigue and inability to maintain heavy training program. The fat-soluble vitamins include vitamins A,D,E and K. Vitamins A,C and E have antioxidant properties. Antioxidants offer a defense against the damaging effects of free radicals (Panandiker, 2007).

National Institute of Nutrition Research council (1989) observed that many Indian athletes come from rural areas and from not so well to-do families and may not have received proper nutrition in childhood. Inadequate and unbalanced nutrition results in lower height for age, lower weight for height and lower weight for age. National Nutrition Monitoring Bureau (NNMB) surveys indicate that micronutrient deficiencies are widespread and acute. Hence, it is necessary to monitor micronutrient status of athletes and if deficiencies are located, they should be made good through supplementation or through fortified foods.

## **Water**

Water is the other category of nutrient and vital to the life of every cell in the body. Water is a solvent, lubricant, medium for transport and temperature regulator that makes up the majority (about 2/3) of our body and yields no energy.

Dehydration decreases exercise performance; thus, adequate fluid intake before, during, and after exercise is necessary for health and optimal be consumed and during exercise .

## **Suggestions**

Many athletes have turned to ergogenic aids in hopes of achieving an edge on their opponents. The term "ergogenic" means "tending to increase work" and, in the context of sport, includes techniques used to increase energy. Many athletes use sporting ergogenic aids to improve both the quality and Quantity of their training and in turn boost their performance in competitive Situation. It is possible that additional nutrients will be necessary for athletes During high-intensity exercise to allow for maximal expression of endurance and strength gains.

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## Roll of Yoga in anxiety and Stress

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### Introduction

Yoga is an ancient, Indian art and science that seeks to promote individual health and well-being through physical and mental exercise and deep relaxation. Although known to be at least 5,000 years old, Yoga is not a religion and fits well with any individual's religious or spiritual practice. Anyone of any age, religion, health or life condition can practice Yoga and derive its benefits. Unique and multifaceted, yoga has been passed on to us by the ancient sages of India; early references to yoga are found in the spiritual texts of the Vedas, Upanishads and the Bhagavad-Gita. Pantanjali's Yoga Sutras (the Eightfold Path) are still widely studied and practiced today. The Sutras form the basis of much of the modern yoga movement.

The three major cultural branches of Yoga are Hindu Yoga, Buddhist Yoga, and Jaina Yoga. Within each of these great spiritual cultures, Yoga has assumed various forms. Yoga is a combination of exercise postures, breathing exercises, and a philosophy about the way one lives life. The different yoga postures, called asanas, are specifically designed to stretch and relax certain muscles and stimulate various organs and glands to balance them for optimal health.

Muscles that are tightly held can result in shortened or chronically contracted muscles. Stress is then put on the opposition muscle groups. They may become weak and flaccid from under-use. With regular practice, the stretching, relaxing, and stimulating yoga postures bring a sense of well-being, a feeling of ease within the body and the emotions.

In conjunction with the asanas, one needs to practice breathing exercises. Yogis believe that breath is life—the life force that exists between the boundary of the body and the mind. The breathing exercises, called pranayama, induce relaxation in the parasympathetic nervous system. Prana means the breath; yama means to pause. When we bring our awareness to our breathing, we may notice that the breath is chronically held in a shallow and restricted way. Pranayama is the practice of regulating irregular and hurried respiratory processes without using excessive restraint or force. Breath that is fully open, deep, relaxed, and slow without constriction in the lungs, in the diaphragm, or in the muscles of the chest and rib cage, allows for a full emotional experience.

The third component of yoga is its philosophy. The central principle is ahimsa, meaning nonviolence in attitude as well as behavior. This principle is applied to the way one performs the asanas as well as the way that one lives one's life. There is no competition among yoga students; we only strive to be the best we can be on any given day, listening to the sensations, messages, and wisdom of the body. We are also charged with looking at how we make life difficult for ourselves, push ourselves, judge ourselves, and create an inner environment of violence against ourselves.

Stress and anxiety have been implicated as contributors to many chronic diseases and to decreased quality of life, even with pharmacologic treatment. Efforts are underway to find non-pharmacologic therapies to relieve stress and anxiety, and yoga is one option for which results are promising.

### Anxiety and Stress

Anxiety and stress have unfavorable effects on the body that may progress into chronic conditions if left untreated. For example, psychological stress has been linked to deleterious effects on the immune system, while anxiety has been connected to coronary heart disease, decreased quality of life, and suicidal behavior. Anxiety disorders are subdivided into panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, social anxiety disorder, phobias, and generalized anxiety disorder. Although the clinical presentation of anxiety disorders ranges from chest pain and tachycardia to insomnia, all of these disorders center on an intense, unwarranted fear for a defined period of time. In contrast, psychological stress is perceived and is less defined than anxiety disorders. As a result, no recognized pharmacologic treatment algorithm exists for stress. Additionally, it should be recognized that some people experience stress and anxiety without having been diagnosed with a specific disorder by health care professionals; such individuals may also benefit from yoga exercises.

## **Assessment of Anxiety and Stress Disorders**

Generalized anxiety disorder (GAD) is a common, chronic disorder characterized by long-lasting anxiety that is not focused on any one object or situation. Those suffering from generalized anxiety disorder experience non-specific persistent fear and worry, and become overly concerned with everyday matters. Generalized anxiety disorder is "characterized by chronic excessive worry accompanied by three or more of the following symptoms: restlessness, fatigue, concentration problems, irritability, muscle tension, and sleep disturbance". Generalized anxiety disorder is the most common anxiety disorder to affect older adults.

The single largest category of anxiety disorders are that of phobic disorders, which includes all cases in which fear and anxiety is triggered by a specific stimulus or situation. Between 5% and 12% of the population worldwide suffer from phobic disorders. Sufferers typically anticipate terrifying consequences from encountering the object of their fear, which can be anything from an animal to a location to a bodily fluid to a particular situation. Sufferers understand that their fear is not proportional to the actual potential danger but still are overwhelmed by the fear.

With panic disorder, a person suffers from brief attacks of intense terror and apprehension, often marked by trembling, shaking, confusion, dizziness, nausea, and/or difficulty breathing. These panic attacks, defined by the APA as fear or discomfort that abruptly arises and peaks in less than ten minutes, can last for several hours. Attacks can be triggered by stress, fear, or even exercise; the specific cause is not always apparent.

Agoraphobia is the specific anxiety about being in a place or situation where escape is difficult or embarrassing or where help may be unavailable. Agoraphobia is strongly linked with panic disorder and is often precipitated by the fear of having a panic attack. A common manifestation involves needing to be in constant view of a door or other escape route.

Social anxiety disorder (SAD; also known as social phobia) describes an intense fear and avoidance of negative public scrutiny, public embarrassment, humiliation, or social interaction. This fear can be specific to particular social situations (such as public speaking) or, more typically, is experienced in most (or all) social interactions. Social anxiety often manifests specific physical symptoms, including blushing, sweating, and difficulty speaking. As with all phobic disorders, those suffering from social anxiety often will attempt to avoid the source of their anxiety; in the case of social anxiety this is particularly problematic, and in severe cases can lead to complete social isolation.

Obsessive-compulsive disorder (OCD) is a type of anxiety disorder primarily characterized by repetitive obsessions (distressing, persistent, and intrusive thoughts or images) and compulsions (urges to perform specific acts or rituals). It affects roughly around 3% of the population worldwide. The OCD thought pattern may be likened to superstitions insofar as it involves a belief in a causative relationship where, in reality, one does not exist.

Post-traumatic stress disorder (PTSD) is an anxiety disorder which results from a traumatic experience. Post-traumatic stress can result from an extreme situation, such as combat, natural disaster, rape, hostage situations, child abuse, bullying or even a serious accident. It can also result from long term (chronic) exposure to a severe stress or, for example soldiers who endure individual battles but cannot cope with continuous combat. Common symptoms include hyper vigilance, flashbacks, avoidant behaviors, anxiety, anger and depression.

Separation anxiety disorder (SepAD) is the feeling of excessive and inappropriate levels of anxiety over being separated from a person or place. Separation anxiety is a normal part of development in babies or children, and it is only when this feeling is excessive or inappropriate that it can be considered a disorder. Separation anxiety disorder affects roughly 7% of adults and 4% of children, but the childhood cases tend to be more severe; in some instances, even a brief separation can produce panic.

### **Importance of yoga for Anxiety and Stress reduction**

Yoga is the practice of putting the body into different postures while maintaining controlled breathing. It is considered to be a discipline that challenges and calms the body, the mind, and the spirit. Preliminary studies suggest that yoga may be beneficial in the treatment of some chronic conditions such as asthma, anxiety, and stress, among others. There are many ways to manage and reduce stress and one such technique is practicing Yoga. By focusing on the breath entering and leaving your body, you are performing an exercise in concentration. If your mind wanders to other things, your focus on the breath will bring your concentration back. Research confirms that consciously directed breathing can have the following benefits: reduced stress, sound sleep, clear sinuses, smoking cessation, improved sports performances, relief from constipation and headaches, reduced allergy and asthma symptoms, relief from menstrual cramps, lower blood pressure, and emotional calmness. Yoga integrates the concepts of stretching, controlled breathing, imagery, meditation, and physical movement

Yoga is thought of by many as a way of life. It is practiced not only for stress management but also for good physical and mental health and to live in a more meaningful way. Yoga is a system of healing and self-transformation based in wholeness and unity. The word yoga itself means to "yoke" -- to bring together. It aims to integrate the diverse processes with which we understand the world and ourselves. It touches the physical, psychological, spiritual, and mental realms that we inhabit. Yoga recognizes that without integration of these, spiritual freedom and awareness, or what the yogis call "liberation," cannot occur. Yoga's numerous health benefits, its potential for personal and spiritual transformation, and its accessibility make it a practical choice for anyone seeking physical, psychological, and spiritual integration. Interest in Yoga is surging throughout the world. Among the many different Yoga styles, Hatha yoga is the most familiar to Westerners. It is the path of health using breathing techniques and exercises concerning different postures to better mental and physical harmony. During an experiment in biology lab concerning the measurement of heart rate, I experimented with yoga breathing as a technique to decrease heart rate and bring about relaxation. Our results did show a decrease in heart rate from the norm and it was concluded that if yoga was practiced in a calm setting without a time constraint (neither of which was available to us in a noisy laboratory) there would have been a significant decrease in the practicing individual's heart rate. Moreover, from personal experience I can vouch that Yoga is indeed effective in not only stress reduction but also for an individual's general well-being.

All forms of Yoga teach methods of concentration and contemplation to control the mind, subdue the primitive consciousness, and bring the physical body under control of the will. In Hatha yoga, slow stretching of the muscles in exercise is taught, along with breathing in certain rhythmical patterns. The body positions or asanas for exercises and meditation can be learned, with some practice, by most. These positions are thought to clear the mind and create energy and a state of relaxation for the individual. Hatha Yoga is basically the style of Yoga practiced by most Westerners not only for relaxation and stress reduction but also for the mitigation of pain during certain illnesses. Yoga is also widely recommended for pregnant and nursing women as well as those reaching menopause.

Yoga is so popular in today's world that it is increasingly being coined as a religion. Is Yoga a religion? Your guess is as good as mine. Since Yoga comes from Hindu, Buddhist and Jain scriptures, certain aspects of these religions are supposedly integrated in Yoga such as the ideas of karma and reincarnation and the notion of there being many deities in addition to the one ultimate Reality. However, most Yoga gurus deny the existence of Yoga as a religion and go on to say that Yoga does not teach the idea of reincarnation or even impose karmic beliefs.

Yoga is one of the orthodox philosophies of India. While it is not a religion, it is theistic, that is, it teaches the existence of a Supreme Intelligence or Being. However, to practice the techniques of yoga successfully you do not need to believe in such a being. Because yoga is a spiritual rather than a religious practice, it does not interfere with any religion. In fact, many people find that it enhances their own personal religious beliefs.

### **Effective Roll of Yoga on Anxiety and Stress**

Anxiety is a non separable characteristic of the human life in the contemporary industrial era and definitely, is one of the results of modernism and post-modernism in the third millennium. Anxiety has serious impacts in both losing material-national and spiritual (human, emotional and affective) resources. Anxiety is arguably an emotion that predates the evolution of man. Its ubiquity in humans, and its presence in a range of anxiety disorders, makes it an important clinical focus. Developments in nosology, epidemiology and psychobiology have led to significant advancement in our understanding of the anxiety disorders in recent years. Advances in pharmacotherapy and psychotherapy of these disorders have brought realistic hope for relief of symptoms and improvement in functioning to patients. Neurotic disorders are basically related to stress, reaction to stress (usually maladaptive) and individual proneness to anxiety. Interestingly, both stress and coping have a close association with socio-cultural factors. Culture can effect symptom presentation, explanation of the illness and help-seeking. Importance given to the symptoms and meaning assigned by the physician according to their cultural background also differs across culture. In this way culture can effect epidemiology, phenomenology as well as treatment outcome of psychiatric illness especially anxiety disorders. Yoga is an effective way to release stress because it stimulates both the mind and the body. Stress is our reaction to something in the environment or a social situation that poses a real or perceived threat. In order to ward off the threat, the individual has to mount a physiological, physical, or psychological response. Some stress can be positive, useful, and even necessary as motivation in everyday life and emergency situations. The danger comes when stress is chronic or unmanageable because a person's responses may be inadequate. Intense stress can lead to physical illness, emotional problems, or interpersonal difficulties. Many Head Start staff and families experience challenging and

overwhelming stress, including financial pressures, community and domestic violence, divorce and other losses, substance abuse, physical illness, and homelessness. Yoga is an effective way to resolve stress because it works on both the mind and body, reducing the feeling of being overwhelmed and burned out by life's circumstances. Yoga stimulates the natural healing resources of the mind and body so that the individual is better able to cope with stress.

## Summary

While a direct relationship between yogic practices and declines in stress and anxiety is not yet supported by statistically sound randomized controlled trials, the studies suggest that yoga as a supplement to pharmacologic therapy may improve stress and anxiety symptoms. Because the data are conflicting and many experiments thus far conducted have not been well designed, yoga should not replace conventional medical practice until further work has been conducted and strong statistical evidence of its benefit exists. Many difficulties arise in drawing definitive conclusions from experimental data. For example, different researchers used different populations for study, ranging from patients with diagnosed anxiety disorders to healthy yoga instructors to cancer patients. This mix of heterogeneous study population's makes comparisons of the results problematic; it is unreasonable to extrapolate data obtained from healthy college students and young musicians to the general population. Further confounding the question of yoga's efficacy are the questions of the validity of outcome measures, numbers of subjects and validity of statistical analyses. (e.g., biochemical measurements validated psychological instruments) in randomized controlled trials with a predetermined power and appropriate sample size is necessary to yield more definitive statistics. Further difficulties arise from lack of appropriate controls in some studies. These are imperative to validate the effectiveness of yoga in reducing stress and anxiety symptoms. Control subjects should experience the same camaraderie as the yoga intervention group to determine whether the results obtained were from the practice of yoga alone or from the personal friendships and support developed during yoga practice. Another useful control group would be a group involved in a different form of exercise, as any effects of physical activity of any kind. Standardization of interventions would also be of benefit in determining what effects, if any; the various forms of yogic practice have on stress and anxiety. Studies evaluating the different styles of yoga would be informative in determining which, if any, form of yoga (or whether full yoga practice or meditation alone) would be the most effective at reducing stress and anxiety. An additional consideration in assessing patient populations includes accounting for the stress and anxiety associated with learning anything new. Stress and anxiety in certain patients may be elevated at the start of intervention. Thus, researchers should consider recruiting experienced yoga practitioners as participants in future studies. Future research should also include economic considerations. The cost-effectiveness of managing anxiety with and without yoga practice compared to the use of medications alone should be investigated. Yoga may be considered as a possible adjunctive therapy for experiencing stress and anxiety. Due to its good compliance and lack of drug interactions, yoga appears to be safe and could be encouraged to improve quality of life and, perhaps, the symptoms of stress and anxiety. Nonetheless, only when the benefits of yoga practice have been realized through, valid research study should yoga be recommended as a method to decrease the pill burden or to replace pharmacologic treatment.

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## Effect Of Varied Integrated Modules Of Yogic Practices On Platelets Count Among Women Type II Diabetic Patients

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### Abstract

The purpose of the present investigation is to find out the effect of varied integrated modules of yogic practices on platelets count among women type II diabetic patients. To achieve these purpose 45 women subjects were selected at random from Chennai district Hospitals, Chennai, Tamilnadu as subjects. Their age ranged from 40 to 50 years. They were divided into three equal groups of 15 subjects each and assigned to experimental group-I, experimental group-II and control group. In a week the experimental group I underwent Bihar school of yogic practices, experimental group II underwent VYASA yogic practices and Control Group was not given any specific training. All the subjects underwent one area of test namely platelets count. They assessed before and after the training period of 12 weeks. The analysis of covariance was used to analyze the data. The study revealed that the above said criterion platelets count were significantly improved due to the influence of varied integrated modules of yogic practices on platelets count among women type II diabetic patients. **Key words:** Bihar School of Yogic Practices, VYASA Yogic Practices, Platelets Count and ANCOVA.

### Introduction

Yoga is a self therapy. It is a self therapy in the sense that one can perform this discipline on his own. Yoga involves different breathing techniques and postures which are known as Asanas or postures. Postures, proper breathing, relaxation and meditation are an important part of yoga. The word yoga is derived from the Sanskrit root yuj meaning to bind, join, attach and yoke, to direct and concentrate one's attention on, to use and apply. (Iyenkar, 1995).

The main function of platelets, or thrombocytes, is to stop the loss of blood from wounds (homeostasis). To this purpose, they aggregate and release factors which promote the blood coagulation. Among them, there are the serotonin which reduce the diameter of lessened vessels and slow down the hematic flux, the fibrin which trap cells and forms the clotting. Even if platelet appears roundish in shape, they are not real cells. In the smears stained by Giemsa, they have an intense purple color. Their diameter is 2-3  $\mu\text{m}$  about; hence they are much smaller than erythrocytes. Their density in the blood is 200000-300000 / $\text{mm}^3$ .

### Statement Of The Problem

The purpose of the study was to find out the effect of varied integrated modules of yogic practices on platelets count among women type II diabetic patients.

### Hypothesis

- It was hypothesized that there would be significant improvement difference in the platelets count due to the influence of varied integrated modules of yogic practices than the control group among women type II diabetic patients.
- It was hypothesized that there would be significant improvement difference between the (varied integrated modules of yogic practices) Bihar School of Yogic Practices and VYASA Yogic Practices group on platelets count among women type II diabetic patients.

### Methodology

To achieve the purpose of investigation forty five women type II diabetic patients were randomly selected from Chennai district Hospitals, Chennai, Tamilnadu. The subjects age ranged from 40 to 50 years. The selected subjects were randomly divided into three equal groups, namely experimental group I underwent Bihar School of Yogic Practices, experimental group II underwent VYASA Yogic Practices and control group was not given any specific training. Each group consisted of fifteen subjects. All the subjects underwent one area of test namely platelets count. They assessed before and after the training period of 12 weeks. The analysis of covariance was used to analyze the data.

**Dependent Variable**

- Platelets Count

**Independent Variables**

- Experimental group I - Bihar School of Yogic Practices
- Experimental group II - VYASA Yogic Practices
- Control group - No Training

**Collection Of Data**

The data on platelets count collected by administrating blood test. Pre-test were collected two days before the training programme started and post-test were collected 24 hours after the training session. In both the cases, the data were collected in one day only.

**Results And Discussion**

**Results Of Platelets Count**

The statistical analysis comparing the initial and final means of Platelets Count assessed through Blood Test (Lab) due to Bihar School of Yogics Practices group, and VYASA Yogic Practices group on women type II diabetic patients presented in Table I.

**Table I**  
Computation Of Analysis Of Covariance Of Platelets Count (Scores In Lakhs/Cu Mm)

Test	Exp.Gp 1	Exp.Gp 2	Control Gp	Sov	Ss	Df	Ms	F
Pre Test Mean	3.24	3.21	3.21	B	0.01	2	0.005	0.02
				W	8.50	42	0.20	
Post Test Mean	3.68	3.51	3.23	B	1.57	2	0.78	3.68*
				W	8.96	42	0.21	
Adjusted Post Test Mean	3.66	3.51	3.24	B	1.37	2	0.69	18.61*
				W	1.514	41	0.04	

\*Significant At 0.05 Level Of Confidence. (The Table Value Required For 0.05 Level Of Significance With F 2, 42 And 2, 41 Are 3.22 And 3.23 Respectively)

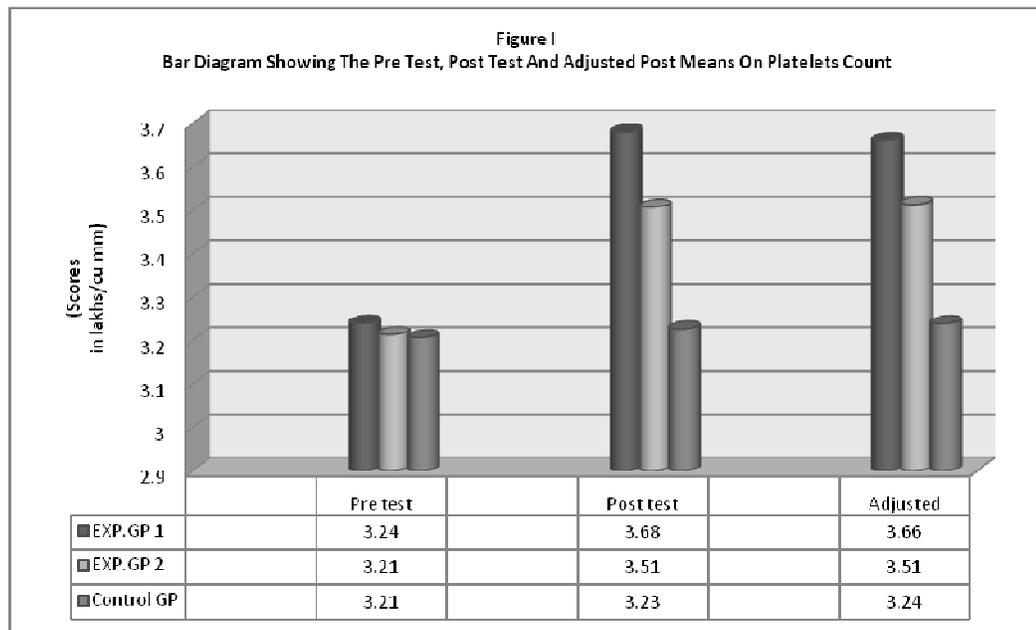
As shown in table I the obtained F value on the scores of the pretest means 0.02 was lesser than the required F value of 3.23, which proved that the random assignment of the subject were successful and their scores in Platelets Count before the training were equal and there was no significant differences. The analysis of posttest means proved that the obtained F value 3.68 was greater than the required F value of 3.23 to be significant at 0.05 levels. Taking in to consideration of the pretest and posttest means the adjusted posttest means were done and the obtained F value of 18.61 was greater than the required F value of 3.22 hence it was accepted that the Bihar School of Yogic Practice group and VYASA Yogic Practices group significantly increased the Platelets Count. Since the significant differences were recorded, the result was subjected to post hoc analysis using scheffe's confidence interval test. The results are presented in table II.

**Table II**  
Scheffe's Confidence Interval Test Scores On Platelets Count

Means			Mean Difference	Required Ci
Exp.Gp 1	Exp.Gp 2	Control Gp		
3.66	3.51	-	0.15	0.17
3.66	-	3.24	0.42*	0.17
-	3.51	3.24	0.27*	0.17

\*Significant At .05 Level Of Confidence

Table II shows that the adjusted post-test mean difference in platelets count between EXP.GP 1 and CG and between EXP.GP 2 and CG are 0.42 and 0.27, respectively which were statistically significant at 0.05 level of confidence. The adjusted post-test mean difference in platelets count between EXP GP 1 and Exp GP 2 was 0.15 which was less than the confidence interval value at 0.05 level. The ordered adjusted means are presented through bar diagram for better understanding of the result of this study in Figure I.



### Discussion On The Findings Of Platelets Count

The result of the study on platelets count indicates that all the experimental groups namely EXP GP 1 and EXP GP 2 brought about significant improvement after the training. The analysis of the data indicates that there was no significant difference on platelets count between EXP GP 1 and EXP GP 2. Based on the mean value, the Bihar School of Yogic Practice group was better in increasing the level of platelets count than the VYASA Yogic Practices group. Systematic yogic practices training improve the platelets count. The result of this study on platelets Count (Platelets Count) has in line with the study conducted by **Yoga, Abirami Kiruthiga and Elangovan, (2011)**.

### Conclusions

- Two different yogic practice methods (Bihar School of Yogic Practices and VYASA Yogic Practices group) helped to increasing the Platelets Count.
- There was a little improvement difference between the Bihar School of Yogic Practices and VYASA Yogic Practices on the Platelets Count but not at the significant level. Based on the mean value was concerned, 12 weeks of Bihar School of Yogic Practices systems improve the Platelets Count more than the VYASA Yogic Practices among women type II diabetic patients.

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## The Issues of Women in Sports

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### Introduction

The topics including race, gender, history and sexual orientation play major roles in women's participation in sport. Throughout the history of women in sport, opportunity has increased. Many athletes and coaches are presented with the issue of sexual orientation throughout their sporting career. Regardless of sexual orientation, all female athletes are affected by heterosexist. One's racial or ethnicity background greatly shapes the experience they may have in sport. This essay explores the many issues women in sport face today. Historically, it has been understood that the "natural order of the universe" consisted of man to the marketplace, woman at home with her family, woman the mistress of domesticity, man the master of all else, man the rational thinker, woman the guardian of morals, man dominant, and woman subordinate. The injection of equality between the two genders challenged the foundation of the social order. Women's sports in the late 1800's focused on correct posture, facial and bodily beauty, and health. In 1916 the Amateur Athletic Union (AAU) holds its first national championship for Women. In 1919, Suxanne Lenglen shocks Wimbledon in triumph in a dress that exposes her arms and lower legs. In 1925 Gertrude Ederle becomes the first woman to swim the English Channel, breaking the existing record by more than two hours. In 1932, Babe Didrkson sets the world record in three track and field competitions. Amelia Earhart disappears over the South Pacific in her round-the-world flight in 1937.

Marcinia (Toni) Stone is the first woman to break gender barrier when signed to the Negro American League Team in 1953. In 1960 gender verification testing for women was enforced at international sport competitions. The first five-person full court play is adopted in women's basketball in 1971. In 1972 Title IX is passed creating opportunities for girls and women to participate in sport. In 1973 Billy Jean King defeats Bobby Riggs in the "battle of the sexes" tennis match. In 1973 the Association for Intercollegiate Athletics for Women (IAAW) awards the first academic scholarships to women athletes at the collegiate level. Jackie Joiner-Kersey sets the new heptathlon world record and wins a second gold medal in the long jump in 1988. In 1991 Judith Sweet becomes the first woman president of the NCAA. Soccer and softball make it into the Olympic debut in 1996. In 1997 professional basketball debuts with the WNBA and ABL. In 1999 the U.S. Women's Soccer team defeats China for the World Cup win in a record seating of 90,185 people (Cohen, viii).

Gender role is defined as the socially constructed and culturally specific behavior and appearance expectations imposed on women (femininity) and men (masculinity). Many girls are subjected to gender role stereotyping and different treatment Through socialization, individuals learn to behave in accordance with the expectations of others in the social order (Hult,83.).Gender ideology is involved when one attaches a color such as pink and blue to sex and when one designates types of toys as male, female or neutral. Most play behavior is an outcome of gender role stereotyping that stems from cultural ideology. Early research provides that by first grade, boys recognize sports, whereas girls recognize grades as the most important attribute for popularity. Research has found that girls tend to play indoors more often and tend not to play team or competitive games, which limits their spatial experiences in outdoor settings. Developmental progression of sports socialization process provides us with the following information: activities during the early years are more gender similar than gender differentiated, by grade one, children are monitoring their parents' behaviors for cues that reveal the importance parents attach to participating and doing well in sports, gender differences in sport ability, enjoyment, and perceived usefulness are evident, parents encourage sons more than they encourage daughters to be physically active(Cohen,9.)

An early study indicates that race and social class background accounts for different experiences in socializing young girls into sport. Women of color experience both racism and sexism. Racial, and social class are essential elements that need to be incorporated into the socialization process in general and sport socialization in particular. These factors represent critical components in the formation of values and cultural practices that orient individuals to particular patterns of thinking and feeling about sport, leisure, gender, and the body. Women of color speak with the understanding that they will often not be listened to. Coaches who are women of color know that the majority of White colleges and universities are not viable places employment. People of color can not be late to

meetings or practices without it reflecting their race. When people of color are successful athletes, their success reflects their race rather than their ability (Cohen, 291.)

Girls and women who excel in sport are threats to a gender system that insists on unequal social constructions of womanhood and manhood. Women are perceived as an imitation of the real thing and are treated as second class citizens. Women and girls in sport are often called lesbians or dykes to deny them the equal opportunity in school or community sport programs. The heterosexist in women's sport affects all women, regardless of their sexual orientation. Many lesbian coaches and athletes are hesitant to out themselves publicly out of fear that they will be discriminated against, losing corporate endorsements or the support of fans, teammates, or coaches. Some athletic directors prefer to hire female coaches that are married to avoid hiring a lesbian coach. Some colleges participate in negative recruiting. They tell the recruit and her parents that there are lesbians in other school's sports program to discourage an athlete from considering another educational institution. Sometimes lesbian athletes are shunned by their teammates. Athletes taunt and tease opponents during competitive play by shouting anti-gay slurs or questioning female identity. Homophobia in sport needs to be addressed because generally 10% of athletes are gay, coaches may help unlearn certain prejudices that athletes bring with them. Another reason to address homophobia in sport: The U.S. dept. of health and services released information indicating that 30% of suicides are committed by gay or lesbians (Cohen, 279.)

### **Conclusion**

Although Title XI has brought women's history in sport a long way and has provided women with the opportunity for fair play, many objectives are still left unmet. For every one dollar spent on collegiate female athletes, two dollars are spent on males. As long as there are expectations for male and female children to participate in certain activities based upon their gender, equality between the two sexes will not be met. The touchy subject of homophobia in sport has begun to draw interest over women in sports today. This major issue needs to get world-wide attention before great efforts are made to stop homophobia in sport. White people realize the concept of their white privilege and the responsibility it entails.

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## **The new role of the mass media in the construction of sport and Olympic values**

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### **Introduction**

An interpretation of the cultural values of sport and Olympism in contemporary society cannot be made without considering the enormous influence that the media have on them. Such an interpretation is even more difficult to make if we bear in mind the wide range of new relationships that Sport, Olympics and the Media strike up between each other in what has been termed as the "marriage of interests", as the "coming together of interests" or, more recently, as "synergies", all of which serve to emphasise their new economic and technological relationships. As a result of this new coming together of interests or "synergy", the media are no longer straightforward broadcasters or reporters on sporting issues. They themselves have now become actors and producers of a new cultural phenomenon that we could "media-sport".

To make this possible, both the media - television in particular - and sport have been forced to transform their respective organisation and production logic. In other words, their coming together has been possible by their prior adaptation. To understand this phenomenon in depth, it is necessary to examine it from a double viewpoint. On the one hand, we could consider the transformation of sporting activities -and especially spectator sports- as a consequence of media influence. On the other, we could consider the influence that sport itself has on the media. This twin-edged analysis will allow us to reveal to what degree we are actually faced with a new phenomenon -that we have termed "media-sport"- which has multiple technological, economic, social and cultural implications.

### **The role of "Media-Sport" in popular modern culture**

Recent research proves that there has been a major increase -at least quantitatively- of sport in the media in countries all over the world, in the number of specialist newspapers, the number of pages given over sport in conventional newspapers, television sport channels, in the number of programming hours and the radio and television sport programmes' audiences, etc. The increase in the number of references to sport and Olympism in advertising and sponsorship strategies of small and large advertisers alike stresses the financial importance that this phenomenon has acquired and is also an unquestionable sign of its cultural importance. "Media-sport" is one of the major forms of entertainment in modern societies but, as the cultural theory has clearly shown, these forms of entertainment are also forms of production and a privileged vehicle for the broadcast of ideas about identity, social- relationships, cultural exchange, etc. What is more, "media-sport" has become one of the main settings for the exhibition (ritual) of social and intercultural relationships on a World wide scale.

Sport is also a powerful "audiovisual" resource for television channels. "Media-sport" is so well adapted - even better than cinema- to the new conditions of the communication society which, dialectically speaking, attempts to draw cultural reference from the "global" (worldwide) and the "local" (national, city). "Media sport" is so well adapted -even better than the "soap operas"- to the needs of group identification and symbolic participation in major public events.

The stars of sport, the athletes, have become never-ending sources of inspiration for the construction of stories to be told. Today, sport is a never-ending source of characters and plots for the mass media. Modern stories about good and bad, success and failure, luck and misfortune, victory and defeat, things native and foreign, group identity and emotion are all recounted in their most popular of expressions - sports narration. The media select, prioritise, augment and silence the values (and counter-values) of sport and Olympism. And they do so for billions of people, for the new "tele-athletes" or, in other words, the "viewers" who have never done -and may never do- any sport in their lives. The cultural importance of sport is unquestionable when we realise that "media-sport", besides satisfying the symbolic needs of the identification of groups and nations, also satisfies the needs of the "tele-athletes" fantasies and the identification.

## **Media-Olympism**

What we have said so far about sport is equally applicable to Olympism. In addition, the dimension of the Olympic Games, their unique "local-global" character, the wide range of sports represented and their universality are all aspects that turn them into the principal setting for these new forms of "media-sport" where the mass media and the Olympic organisers share the same cultural responsibilities. Our study of Olympic ceremonies as covered by 26 television companies from all over the world<sup>1</sup> shows that the biggest televisual event in modern society is, to be precise, the opening ceremony of the Olympic Games. What is more, the ceremony is not just experienced by the spectators present in the stadium but by approximately 800 million viewers around the globe. We also discovered that many different ceremonies exist; the interpretation of the ceremony by each individual country's media depends on the criteria of quality and respect for Olympic values placed on it. These criteria were found to vary tremendously. Why should we analyse the cultural aspects of the Olympic ceremonies if we stick to the scripted proposals produced by their creators? All contemporary sports phenomena, including the ceremonies, are the end product of a new triangle formed by sport organisers, the media and viewers.

### **Sport and its influence on the media. The importance of sport for television**

It is generally recognised that modern sport can no longer do without the media and vice-versa. As far as television is concerned, the interdependence is so great that when analysed we are able to reveal the general conditions governing the modern audiovisual industry. Analyzing the role of sport in television could be as representative as analyzing other major audiovisual phenomena such as television fiction, cinema, news programmes or advertising.

The influence that sport exerts over television affects several areas. Here we shall take a look at four in particular:

- a - Programme scheduling
  - b - Audiences and the economy
  - c - Television companies' recognition and prestige
  - d - Technological development and the new stages of television
- a - Programme scheduling

Regarding sport's influence on television programme scheduling, it should be pointed out that sport constitutes a never-ending source of programmes and broadcasts (live or recorded) that are gradually accounting for a higher percentage of time in relation to modern television's total broadcasting time. Sport has many advantages and holds a great deal of appeal for television programmers given that programmes are relatively cheap, very varied and quite restricted in production complexity, and that the audiences constitute a source of high profitability because of its easy adaptation to the advertising strategies.

#### **b - Audiences and the economy**

Sport manages to attract large audiences for television. We should also consider the fact that sport achieves large viewing ratings on international, national and local television in the annual sports programme scheduling. A very significant part of such sports programmes is broadcast in prime time whilst other programmes are spread out over a wide range of times and thus manage to attract large segments of the (international, national and local) advertising market.

#### **c - Television companies' recognition and prestige**

The consolidation of some television companies and their popularity is due in part to the leading role they have played in the coverage of major sporting events. The fight to ensure that they get the rights to broadcast the Olympic Games is a good example of the synergy that exists at this point. Sport has a great deal of added value for the advertisers' and television companies' strategies,

### **The role of media. Critical and educational responsibilities**

Under these circumstances, we must demand a high degree of cultural responsibility from the media and sporting organisations. We must demand the media to exercise their critical function with regard to sporting institutions and events. The media should report the mismanagement of sporting institutions (Federations, Clubs, Committees, governmental sport policy executives, etc.), the abuse of commercialisation, the use of drugs and inhuman training practices, antisocial (and unsporting) behaviour of the protagonists, etc. In this sense, they should not defend differences or privileges for sport over and should respect other social institutions (economic, political, educational, scientific, etc.). On the other hand, we must also demand the media to be culturally and morally responsible in their coverage of modern "media-sport" events. Sports commentators and cameramen bear a great deal of cultural responsibility in terms of their commentaries and focus on sporting events. The media

bear their share of the responsibility: modern sport will only be able to fulfill its educational responsibilities if the media make a valid contribution to the strengthening of its positive values and avoid highlighting the negative ones. For their part, sporting institutions - Federations, clubs, athletes, etc. – must be aware of the effects that their decisions and gestures can have because of their constant exposure to the media.

### **The necessary independence between the media and sporting institutions**

The synergies between media and sport being analysed here, as well the common interests stemming from them, may provoke a loss of independence between sporting institutions and the media. In fact, there are more and more cases of sports clubs going through financial crises which are purchased by large media companies, thus creating common television-sport businesses.

The combination of interests between the media and sporting institutions may cause the media's Miquel de Moragas – *The new role of the mass media in the construction of sport and Olympic values* necessary critical function of sport to weaken -or even disappear- and therefore lead to a loss of autonomy and independence.

However, an equally negative effect can be attributed to the loss of sporting institutions' independence from the media. In this instance, sporting institutions may give in to demands of the media at the expense of some of the values of sport itself. Here are some examples. Athletes are starting to be affected by some undesirable changes in the scheduling of their sport or are being subjected to an unbearable pace of competition. This has occurred as a result of the pressure of the media which require a larger number of spectacles to make their investments profitable. The mass media's need for spectacularity has already begun to

Jeopardise minority sports and thus generally jeopardise sporting activity or the unique nature of the many local-interest sports.

To be more critical still, this loss of independence may neutralise sport's educational messages, making the counter-values of competition and rivalry prevail over and above the values of participation, fair-play and tolerance. Faced with phenomena of such complexity it is hard to offer solutions, though it is possible to suggest some positive attitudes in favour of the upkeep of sport's positive function in modern society. In my opinion, this positive attitude involves suggesting negotiation whilst respecting the logic of both sport and communication. Such negotiation should take place from independent standpoints with each party having its own duties even though their cultural responsibilities are shared.

### **Conclusion**

In this context, one hundred years after the restoration of the Olympic Games by Pierre de Coubertin, we are in a position to demand the Olympic Movement to exercise a worldwide leadership to safeguard the educational values of sport<sup>2</sup> which now implies negotiation and the independence of the media. The present-day reality of world sport with the ever-increasing number of international championships and competitions is very different from what Pierre de Coubertin would have experienced in his day. His ideas of universalism have become incredibly reinforced by 20th century communication technology and telecommunications. However, the unique character of the Olympic Movement cannot restrict itself to the upkeep of the values of physical education and that universality. Instead, it must now embrace issues that defend the educational and cultural responsibility of Olympism in the new context of "media-sport".

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## Women in Sports: Natural and Unnatural Challenges to Purity

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### Introduction

At about the same time the Olympics games started in Athens, it was announced that John Paul II had set up a Vatican department to encourage sports among the youth. I was quite disappointed to see in the item an unreserved encouragement of all sports – without a word of warning about modesty and the general Catholic decorum the Church has always taught, especially for women. I am not an enthusiast of competitive sports for women. Prior to Vatican II, neither was the Catholic Church. It was always understood that the violent nature of many sports is incompatible with the feminine spirit. The demand for immodest sports dress, e.g. the swimsuit, acrobatics outfits, gym suits, etc., imposed on girls under the pretext of practicality, destroys their natural spirit of modesty.

But it is not only the dress that is objectionable, the positions and stances that girls and women assume are frequently prosaic and often clearly indecent. One need only consider the acrobatic routines of the 16-year-old American who won the all-around gymnast gold medal in Athens. The lithe young figure in leotards that reveal every line of her body has become a role model for a multitude of young girls, who will enrol in gymnastic classes and imitate her hairstyle, scanty outfits and poses without a thought about the immodest dress and indecent postures the sport dictates.

These girls are to be pitied because they lack serious moral guidance. Without such an orientation it is more or less inevitable that they should reach the a-moral (or immoral) level inherent to such sports today. The blame should not be laid principally on them, but on those who should have provided the direction. That is to say, the Consular Church. The silence of Church authority on the topic is disturbing. Before Vatican II, the Church was not mute on this important topic. It seems opportune to offer a few examples.

### The perennial moral teaching of the Church

Pius XI issued a letter to the Cardinal Vicar of Rome expressing his disapproval of the impending national gymnastic and athletic competitions for women. The means employed to give health to the body, “the noble instrument of the soul,” he stated, should take into account suitability of time and place. They should not excite vanity or promote immodesty. And they must not lessen a young woman’s “reserve and self-possession which are both the ornament and guarantee of virtue” (Letter *A Lei, Vicario Nostro*, May 2, 1928). Pope Pius XII, who watched the modern advance of immodest styles for women with concern, often reminded young girls to be vigilant against dangers threatening purity. He offered the exquisite delicacy of conscience of the martyr St. Perpetual as an example:

“When she was thrown into the air by a savage bull in the amphitheatre at Carthage, her first thought and action when she fell to the ground was to rearrange her dress to cover her thigh, because she was more concerned for modesty than pain” (*Allocution to the girls of Catholic Action*, October 6, 1940). Mode and modesty should go hand in hand like two sisters, he continued, because both words derive from the Latin *modus*, meaning a right measure. He warned:

“Many women have forgotten Christian modesty because of vanity and ambition: they rush wretchedly into dangers that can spell death to their purity. They give in to the tyranny of fashion, be it even immodest, in such a way as to appear not even to suspect that it is unbecoming. They have lost the very concept of danger; they have lost the instinct of modesty” (*ibid.*). One year later, congratulating the Catholic Action girls for beginning the “crusade for purity,” he encouraged a militant spirit against impurity. The life of man on earth remains always one of warfare, he said, and young women have a special fight against the dangers of immorality in the field of fashion and dress, and of health and sports. The weapons they must take up for the fight, Pius XII told them, are words, clothing and behaviour that display a high standard. It is truly a war, the Sovereign Pontiff warned. The purity of souls living in the state of supernatural grace is not preserved without a struggle. A special heroism is needed to counter public opinion, to stand apart from popular styles, amusements, and sports. This is even more difficult because of the “indulgent attitude, or better said, the negative attitude of an ever greater part of public opinion, which renders it blind to the gravest moral disorders” (*Allocution of May 22, 1941*).

He was quite specific on the things young women should shun at all costs:

- “Dresses which hardly suffice to cover the person;
- “Others that seem designed to emphasize what they should rather conceal;
- “Sports that are performed with such clothing;
- “The kind of exhibitionism that is irreconcilable with even the least demanding standard of modesty” (*ibid.*).

### **Some objections**

Pope Pius XII addressed the objection that was already being raised about the convenience of the new sports fashions. Some young women, he noted, offer practical objections, saying that “a certain form of dress is more convenient or even more hygienic.” This kind of protest is commonly heard today: “How can I do acrobatics in a dress? You can’t play soccer in a skirt,” and so on. How did Pope Pius XII respond? Quite simply but firmly, he stated,

“If a form of dress becomes a grave and proximate danger for the soul, it is certainly not hygienic for the spirit, and you must reject it” (*ibid.*). Again, he turned to the example of martyrs to make his point. He challenged young girls to follow the example of girls like St. Agnes and St. Cecilia, who suffered tortures of body to preserve their virginal innocence and save their souls: “Will you, then, for the love of Christ, in the esteem for virtue, not find at the bottom of your hearts the courage and strength to sacrifice a little well-being – a physical advantage, if you will – to conserve safe and pure the life of your souls?” (*ibid.*) What is more, he added, if one does not have the right to endanger the physical health of others simply for one’s own pleasure, then it is certainly even less licit to compromise the health of their souls.

With this, the Pontiff turned to another objection, also commonly heard today: that the immodest popular fashions do not cause young women any moral harm or lead them to make any personal compromises with purity. He answered: “But how can you know anything of the impression made on others? Who can assure you that others do not draw there from incentives to evil? You do not know the depths of human frailty .... Oh, how truly was it said that if some Christian women could only suspect the temptations and falls they cause in others with modes of dress and familiarity in behaviour, which they unthinkingly consider as of no importance, they would be shocked by the responsibility which is theirs” (*ibid.*).

Pius XII added a strong word of warning to Catholic mothers who imprudently allow their sons and daughters to become accustomed “to live barely attired.” The relevance of his words make them well worth repeating for the benefit of both mothers and fathers today, many who are well meaning but ignorant of the dangers of the immodest clothing that has become commonplace today. He affirmed forcefully: “O Christian mothers, if you only knew what a future of worries, dangers, and shame ... you lay up for your sons and your daughters by imprudently accustoming them to live barely attired, making them lose the natural sense of modesty. You would blush and take fright were you to know the shame you inflict upon yourselves and the harm which you occasion to your children, entrusted to you by Heaven to be brought up in a Christian manner” (*ibid.*) There is something yet more reprehensible, he continued, and that is for the mothers themselves and other women among the faithful - “and pious women at that” - to show approval of immodest fashions by wearing them themselves. The moment a “questionable fashion” appears on persons “beyond all reproach,” he warned, others will no longer hesitate to follow the current, “a current that will perhaps drag them to the worst falls” (*ibid.*)

Finally, Pius XII encouraged Catholic girls and mothers to join together to make a common effort to counter such fashions in dress, behaviour and entertainment. Unity is strength, and even a small group of “resolute and not timid Christian spirits” can exert a strong influence and make a powerful moral example” (*ibid.*). This is the moral teaching of the Holy Catholic Church that seems to have been forgotten by the very religious authorities that should emphasize them. Certainly, the dangers previous Popes so prudently warned about have not lessened, but rather augmented. The fashions have become bolder; complacency toward immodesty has grown; more girls and women are engaging in violent sports, even wrestling and football; manly and indecent language, postures and attitudes permeate much of the sports environment. Everything speaks of a need for a renewed challenge of a “crusade for purity” to young women who engage in sports.

### **Increasingly masculine girls**

Popes Pius XI and Pius XII were addressing an age-old problem, a badly governed feminine spirit that tempts men with immodest clothing and bold attitudes. Consciously or unconsciously seductive, these women at least remain feminine, and their censurable position is still a natural one. Today a new long step has been taken down the stairs of decadence: the emergence of the masculine girl. For basketball, baseball, soccer, football – for the game, the sport, not for the skills and virtues that will help them as future wives and mothers. They are rough, sassy girls with the muscles of men, good enough to play against the “guys,” girls who have traded in their femininity in their mania for sports.

Look, for example, at the picture at left. Is the figure in it a he or a she? One doesn't really know at first glance if the basketball player is a masculine girl or a feminine young man.

It is, in fact, a young woman, a popular college basketball player who represented the US at the Olympics. For some young girls aspiring to be athletes, she has become a new model ideal. She is an icon for the "ballet girls" in-the-making who surround her in the picture *at right*. They wear their baggy t-shirt and shorts not just on the court, but at home, at school, in the malls, even to church. They slick back their hair tight, no curls, bows and fancy barrettes for them. They shuffle everywhere in tennis shoes and socks. This kind of behaviour represents a trend toward the ever more masculine girl. Such women seem to have taken a step past the loss of the instinct of modesty that Pope Pius XII warned against, they are losing the very instinct of femininity. One can only wonder about the harsh and unhappy future of girls who reject their femininity openly and blatantly. They clearly have lost the notion of the dignity of the woman in view of her most noble office as wife, mother and helpmate of man. The masculine woman does not reflect a true emancipation. It is rather the debasing of the feminine character, a rejection of the wise plan of God. It is a position against nature.

### **Conclusion**

Catholic Morals are not like styles, they do not change with the times. What was immodest or indecent yesterday has not miraculously become acceptable today because of the omission or the complacency of the Conciliar Church. The words of Pope Pius XII to girls and women continue to be appropriate today: "Beyond fashion and its demands, there are higher and more pressing laws, principles superior to fashion, and unchangeable, which under no circumstances can be sacrificed to the whim of pleasure or fancy, and before which must bow the fleeting omnipotence of fashion. These principles have been proclaimed by God, by the Church, by the Saints, by reason, by Christian morality. "As St. Thomas of Aquinas teaches, the good of our soul must take precedence over that of our body, and to the good of our body we must prefer the good of the soul of our neighbour" (*Allocution to the girls of Catholic Action* of May 22, 1941). There is only one way, today, as yesterday and tomorrow, for the Catholic girl and woman to counter immodesty in immoral fashions, bad language, and masculine attitudes: an absolute rejection of them. For the good of the soul, certain gymnastic exercises and sports are simply not suitable for Catholic young ladies.

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## **Investment scenario in Industrialised countries Special Reference with Olympic Games**

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### **Introduction**

Sporting mega-events such as the summer and Winter Olympic Games or soccer's World A cup focuses the world's attention on the region hosting the event and is highly sought-after by cities and countries around the globe. It would not be an exaggeration to suggest that the competition among cities and countries to host these events can often be as fierce as the competition among the athletes on the playing field. Over the past decade or two, developing countries have increasingly thrown their hats into the ring for a chance to host these mega-events. However, the cost of operating, organizing, and building infrastructure for an Olympic Games or World Cup can be daunting, especially for developing nations without the same level of sports and tourism infrastructure that exists in many industrialized countries. On the other hand, megaevents present an opportunity to generate the political will necessary to make investments in general infrastructure that can lead to long-run economic growth. From an economic standpoint, the question is whether mega-events represent a good investment for developing countries and whether developing nations have used mega-events differently than industrialized nations to promote general infrastructure development. These are the questions that will be addressed in this article.

The modern Summer Olympic Games began in 1896 and take place every four years at new locations selected through an elaborate bidding process many years in advance of the event. The Winter Olympics, held since 1924, follow an identical procedure. In recent times, the host city for both the summer and Winter Games has been selected six or seven years before the event is to take place. Historically, hosting the Olympic Games has been almost exclusively the domain of rich, industrialized nations. Between 1896 and 1952, every summer and Winter Games was held in either Western Europe or the U.S. with cities in Japan, Canada, and Australia joining the mix over the next two decades. Mexico City in 1968 was the first location outside the industrialized world in which the Games were held. Eastern European countries were awarded the Summer Games in 1980 (Moscow) and Winter Games in 1984 (Sarajevo, Yugoslavia). Seoul, Korea was awarded the 1988 Summer Games, a time during which South Korea might be classified as "rapidly industrializing" rather than industrialized, but it is probably fair to note that shortly after the Olympics, the country was admitted to the Organization for Economic Cooperation and Development (OECD), a de facto dividing line between industrialized and developing nations.

More recently, however, the International Olympic Committee (IOC) has encouraged bids from poorer countries and has awarded the Games on several occasions to countries outside of the OECD. The 2008 Summer Games were hosted by China, and the 2016 Summer Olympics will be played in Rio de Janeiro, the first time the event has taken place in the South America. In both cases, the winning nations prevailed over numerous bidders from various industrialized countries. The next two Winter Olympics will be played outside of Western Europe, North America, and Japan, for only the second and third times with the 2014 Winter Olympics in Sochi, Russia, and the 2018 Winter Games in Pyeongchang, South Korea. The list of countries submitting formal bids has also dramatically changed in recent decades.

While the recent trend has been to "reward" developing countries with the opportunity to host mega-events such as the World Cup and the Olympics, the empirical evidence suggests that if rich countries want to promote economic development in poor countries, it would make more sense for high-income nations to explicitly keep these events out of the developing world and instead continue to award the games to rich countries that are better able to absorb more of the associated costs than low-income countries.

Alternatively, the industrialized world could subsidize these events when they are held in poor countries through sponsorship or by direct foreign assistance although seems unlikely that rich countries would be willing to subsidize poor countries' hosting efforts when the two are often in direct competition with one another for the rights to host in the first place.

Brazil's upcoming events may provide one additional avenue for potential economic gains. Mega-events can serve to "put the host on the map" leading to higher levels of future tourism, trade, and investment. As noted by Matheson (2008), The other major intangible benefit of mega-events claimed by sports boosters is that of national and international exposure. Sports fans may enjoy their visit to the city and return later raising future tourist revenues for the area. Corporate visitors, it is claimed, may relocate manufacturing facilities and company headquarters to the city. Television viewers might decide to take a trip to the host city at some time in the future based on what they see during the broadcast of the mega-event.

Finally, hosting a major event might raise perceptions of the city so that it becomes a "world class" city and travel destination. All of these claims are potential true although little empirical research has conclusively demonstrated any long-run connections between hosting mega-events and future tourism demand. There are not even any anecdotal examples of companies moving corporate operations to a city based on the hosting of a sporting event. There are individual cases where mega-events do seem to have major influence on future demand, but it appears that a "perfect storm" is needed.

## **Conclusion**

Cities that are already on everyone's map, London for example, gain little in exposure from a major event since they are already at nearly maximum exposure. Other cities such as Atlanta or many Winter Olympics hosts also gain little from exposure because the cities have little to offer potential tourists after their events. Advertising without a subject to advertise is likely to be an exercise in futility. Under very specific conditions, however, a "hidden gem" can raise its international profile by hosting a major event. This appears to have been the case with Barcelona, a city with great artistic, cultural, and architectural treasures, but also a city long overshadowed by European capitals such as Madrid, Rome, London, and Paris, as well as 40 years of fascist rule. By 2012, twenty years after their moment on the world stage, Barcelona was the fourth most visited city in Europe. Barcelona's tourism experience, however, has not been replicated in the majority of Olympic hosts. Brazil in general, and Rio in particular, offer unparalleled travel opportunities for tourists, but may have been underutilized as vacation destinations by world travelers.

It is possible that Brazil's upcoming moments in the spotlight could bring long-run increases in global tourism, but it is important to note that Brazil is incurring very certain costs today for very uncertain future benefits. It remains a widespread belief among countries that there are substantial national gains to be made from hosting these global events, but the evidence indicates that this is rarely the case. Samuel Johnson once wrote that second marriages reflect "the triumph of hope over experience." Such thinking also pervades the vigorous competition among countries to host these exciting but economically questionable events. Acknowledgements: The authors would like to thank the BRIC Policy Institute and fellow participants at the Symposium on BRICS and Sports Mega-Events at the BRICS Policy Institute in Rio de Janeiro in December 2012. Portions of this paper update and draw heavily from our previous work published as "Assessing the infrastructure impact of mega-events in emerging economies."

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## A Comparative study of agility among Sepak Takraw and Netball Players of Hyderabad District

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### Abstract

'Sepak takraw' is very famous in Malaysia and Thailand. "Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, consequently sepak takraw quite literally means to kick ball. The choosing of this sport name was essentially a compromise between Malaysia and Thailand, the two powerhouse countries of this sport. Strength and agility is important for netball players and sepak takraw players. The basic elements of speed, agility and strength are all functions of explosive power and agility. The purpose of this present study was to find out the effect of agility among sepak takraw and Netball players. The sample for the present study consists of 20 Male sepak takraw and 20 Male Netball players. The shuttle run for agility was considered for the both groups. This study had shows that sepak takraw players are having good agility in compare with Netball players.

Key Words: Agility, Speed, mobility, sepak

### Introduction

'Sepak takraw' is very famous in Malaysia and Thailand. "Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, consequently sepak takraw quite literally means to kick ball. The choosing of this name for the sport was essentially a compromise between Malaysia and Thailand, the two powerhouse countries of this sport. Strength and agility is very important aspect for football players and sepak takraw players. The basic elements of speed, mobility and strength are all functions of explosive power and agility. Sepak Takraw is Playing Volleyball with the Feet. Sepak takraw is a skill ball game originated from Asia. It combines the teamwork of volleyball, the dexterity of soccer and the finesse of badminton. In Thailand it is called takraw, but the official name of this internationally recognized game is sepak takraw. Without a doubt it is one of the world's most exciting sports, both to play and to watch, yet it is relatively unknown outside of Southeast Asia. Playing the sport requires little in the way of equipment or preparation but it does require quick reflexes, coordination, agility and, above all, technique. Thick skin is also helpful; a skilfully kicked takraw ball can travel at speeds of over 60mph! The game is played by two opposing Regus, a team of three players each, on a court separated by a net similar to badminton. It begins with the service, executed by a ball toss from one player to the Server. Then, the players try to beat their opponents using their legs and head, except their hands, inside three kicks. The highlight is the "spike" (see right picture above). This is the most dramatic and explosive move in the game for spectators to watch as players go mid-air, twisting and turning to power the ball down into the opponent's court. To play takraw, players can use either a net, a hoop, or simply stand around in a circle formation. Whatever the style, the object is to kick the ball to another player without the ball touching the ground. Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton players

Netball is a ball sport played by two teams of seven players. Its development, derived from early versions of basketball, began in England in the 1890s. By 1960, international playing rules had been standardized for the game, and the International Federation of Netball and Women's Basketball was formed. As of 2011, the INF comprises more than 60 teams organized into five global regions. Games are played on a rectangular court with raised goal rings at each end. Each team attempts to score goals by passing a ball down the court and shooting it through its goal ring. Players are assigned specific positions, which define their roles within the team and restrict their movement to certain areas of the court. During general play, a player with the ball can hold onto it for only three seconds before shooting for a goal or passing to another player. The winning team is the one that scores the most goals. Netball games are 60 minutes long. Variations have been developed to increase the game's pace and appeal to a wider audience.

Netball is most popular in Commonwealth countries, specially in schools, and is predominantly played by women. According to the INF, netball is played by more than 20 million individuals in more than 80 countries. Major transnational competitions take place, including the Netball Super league in Great

Britain and the ANZ Championship in Australia and New Zealand. Three major competitions take place internationally: the quadrennial World Netball Championships, the Commonwealth Games, and the yearly World Netball Series. Sheppard and Young (2006) defined agility as "a rapid whole body movement with change of velocity or direction in response to a stimulus."

**Purpose of this study**

The purpose of this present study was to find out the agility among sepak takraw and netball players. This study will bring the true facts of agility abilities among Sepak Takraw and Netball players. The study is limited to 20 Male Sepak Takraw Players and 20 Male Netball Players of Hyderabad District in India.

**Methodology**

The sample for the present study consists of 20 Male sepaktakraw and 20 Male netball players. The shuttle run for agility was considered for both the groups

**Shuttle Run**

This test measures agility and speed while running between two lines 10m apart.

Purpose: this is a test of speed, body control and the ability to change direction (agility).

equipment required: two wooden blocks for each runner (each block should measure 10 x 5 x 5 cm), marker cones or marking tape, measurement tape, stopwatch, flat non-slip surface, with two lines 10 meters apart.

Procedure: Mark two lines 10 meters apart using marking tape or cones. The two blocks are placed on the line opposite the line they are going to start at. On the signal "ready", the participant places their front foot behind the starting line. On the signal, "go!" the participant sprints to the opposite line, picks up a block of wood, runs back and places it on or beyond the starting line. Then turning without a rest, they run back to retrieve the second block and carry it back across the finish line. Two trials are performed.

**Scoring:** Record the time to complete the test in seconds to the nearest one decimal place. The score is the better of the two times recorded. A trial is void if a block is dropped or thrown. The above tests conducted at Nizam College grounds, Hyderabad separately for both groups with the help of qualified Testers.

**Results**

**This study shows that Sepak Takraw players are having good agility compared with the net ball players.**

**Table – I**

Test	GROUP	N	Mean	S.D	Std. Error Mean	t	df	Sig. (2-tailed)
Shuttle Run	Sepak Takraw	20	14.3	0.6	0.2	2.55	38.00	0.02
Shuttle Run	Net Ball Players	20	15.6	1.2	0.4			

The Table I showing the Sepak Takraw players are having the good agility compare to Net Ball Players. The mean of sepak takraw players in Shuttle Run is 14.30 compare to Net ball players is 15.58. The agility is very much important for sepak takraw and net ball players, but sepak takraw players must have more acrobatic technique to hit the ball with the legs than net ballers.

**Discussion:**

Sepak takraw game combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton.. Sepal takraw is played between two teams consisted of three players respectively, the left inside, right inside and back. The important skills in sepak takraw are inside kick, out side kick and roll spike. Net Ball is one of the most popular sports in the Europe like basket ball Net ball Performance which depends on the technical skills and physical fitness of the players. Agility, explosive strength and acceleration are regarded as critical technical skills and the main components of the Netball.

**Conclusion**

It is concluded that Sepak Takraw players are having more agility and explosive strength than with their counter parts foot ball players. Sepak Takraw players need quick reflexes, coordination, agility and a good technique to perform well. A net ball player requires agility and explosive strength to excel in their performance. Hence the physical conditioning training must be given to sepaktakraw and foot ball players to improve the motor qualities such as speed, agility, explosive strength, and endurance.

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## Effect of Reasoning Ability upon Shooting Skills of male Basketball Players

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### Abstract

In the present study shooting skills of male basketball players was analysed in the context of their reasoning ability. 100 male intercollegiate basketball players (Ave. age = 21.12 yrs.) were selected as sample for the present study. To assess shooting skills of selected male basketball players, Johnson Basketball Field Goal Speed Shooting Test was used. Reasoning ability of the selected subjects was assessed by MGTI prepared by Mehrotra (1984). Results reveal that field goal shooting ability of male basketball players exhibiting superior reasoning ability was found to be significantly better as compared to field goal shooting ability of male basketball players with average and inferior reasoning ability. It was concluded that reasoning ability has a significant impact as far as shooting skills in basketball is concerned.

### Introduction

Drawing conclusions or inferences from a given information is called reasoning. It is always associated with going beyond the information that is given. It is also used in terms of speed of information processing. Throwing, passing, dribbling and shooting skills in basketball requires certain amount of information processing, hence reasoning ability may play a vital role in affecting skill performance of basketball players. So far researchers like Vermon (1992), Kioumourtzoglou et al. (1998), Planinsec J. (2006), Karalejic and Jakovljevic (2008), Kamkary et al. ((2012) have analysed the effect of intelligence upon motor performance, sports performance etc. but the impact of reasoning ability have remained unexplored upon shooting skills of basketball players. Hence the present study was planned in order to ascertain the effect of reasoning ability upon field goal speed shooting ability of male basketball players.

### Hypothesis

It was hypothesized that shooting skills of male basketball players with superior reasoning ability will be significantly better as compared to male basketball players with average and inferior reasoning ability.

### Methodology :-

The following methodological steps were taken in order to conduct the present study.

### Sample :-

For present study, 100 male intercollegiate basketball players (Ave age = 21.12 yrs.) were selected as sample. The selection of subjects was done from Inter-collegiate tournaments held in the State of Chhattisgarh India. The selection of sample was based on convenience sampling technique.

### Tools:

#### Johnson Basketball Field goal speed shooting Test :

To assess shooting skills of selected male basketball players, Johnson Basketball Field Goal Speed Shooting Test was used.

#### Reasoning Ability :

To measure reasoning ability of selected subjects, Mehrotra's (1984) Mixed Type Group Test of Intelligence (MGTI) was used. This test has two parts i.e. verbal and non verbal intelligence test. Both the parts have 50 statements. The test-retest reliability of the verbal test is 0.89, for non verbal test it is 0.82 while full test reliability coefficient is 0.86. The validity verbal test is .86 and for non verbal test it is 0.72 while the overall validity of the test is 0.87 when it was correlated with teacher's ratings. Only non-verbal intelligence part was used in the present investigation.

### Procedure:

Johnson basketball Field Goal Speed Shooting Test was administered to each subject as per their availability and convenience. After sufficient rest MGTI was administered to each selected subject. The response pertaining to MGTI was scored off as per author's manual. Scores on Johnson basketball Field Goal Speed Shooting test was also recorded for each selected subject. To divide

cases into superior, average and inferior reasoning ability,  $Q_1$  and  $Q_3$  statistical technique was used. Subjects whose reasoning ability scores lies below  $Q_1$  was assigned to inferior reasoning ability, subjects whose scores lies above  $Q_3$  was assigned to superior reasoning ability category while scores on reasoning ability test lying between  $Q_1$  and  $Q_3$  was assigned to average reasoning ability category. To find out the effect of reasoning ability on shooting skills of selected male basketball players, 't' test was used. Results depicted in table no. 1.

**Analysis Of Data**

**Table 1 Comparison of shooting skills between male basketball players on the basis of their reasoning ability**

Categories of Reasoning Ability	Field Goal Speed Shooting Scores		t'
	Mean	S.D.	
Superior (N=26)	13.26	3.19	4.78**
Inferior (N=30)	10.86	4.26	
Superior (N=26)	13.26	3.19	4.60**
Average (N=44)	9.45	3.43	
Inferior (N=30)	10.86	4.26	1.57
Average (N=44)	9.45	3.43	

\*\* Significant at .01 level

Entries reported in table 1 indicate that the shooting skills of male basketball players exhibiting superior reasoning ability (M=13.26) was found to be significantly better as compared to male basketball players with inferior (M=10.86) and average level of reasoning ability (M=9.45) respectively. No statistically significant difference was observed in shooting skills of male basketball players belonging to inferior and average level of reasoning ability. The reported t=1.57 confirms it statistically.

**Results**

Male basketball players with superior reasoning ability showed significantly superior shooting Skills as compared to male basketball players with average and inferior level of reasoning ability. The shooting skills of male basketball players with average and inferior binocular reasoning ability, did not differ with each statistically.

**Discussion**

In the present study, effect of reasoning ability was observed upon shooting skills of basketball players. Cashmore (2005) also highlighted the importance of cognitive skills i.e. relating to thinking, anticipation, and decision-making for superior sports performance. Similarly Voss et al. (2009) also showed that high-performing athletes consistently outperformed non-experts in tests of a subset of cognitive abilities as measured by the component skills approach. Hence, the result of the present study once again highlights the importance of cognitive ability in sports related skills.

**Conclusion**

On the basis of results, it may be concluded that reasoning ability do play a major role as far as shooting skills of male basketball players are concerned.

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## **A Comparative Study On Body Mass Index, Blood Pressure And Cardio-Vascular Endurance Between The Female Students Coming To School By Cycling And Walking At Sundarban Delta Region In West Bengal.**

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### **Abstract**

**Objective:** The objective of the study was to compare the body mass index, blood pressure & Cardio-Vascular fitness between the female students coming to their school by cycling & by walking at the remote area of Sundarban delta region of North 24 Paraganas in west Bengal.

**Methodology:** For the purpose of the study eighty female students (cycling group N=40, walking group N=40) were selected randomly from the Barunhat high school situated at a remote village of Sundarban Delta region in West Bengal at the age of 14 to 16 years. The data were collected by using standard tools and techniques. Height and weight were measured by steel tape and digital weighing machine respectively. Then Body Mass Index was calculated. BP (systolic & Diastolic) were measured by Sphygmomanometer & Stethoscope. Cardio-vascular endurance was assessed by 600 yard run/walk test.

**Statistics:** Mean and standard deviation of different variables were calculated. The data of the selected variables were analyzed through standard Statistical procedure. The mean of different variables were compared by using t- test. Statistical significance was tested at 0.05 levels. For statistical calculations Excel Spread Sheet of windows version 7 was used.

**Results:** Result of present study revealed that there was no significance difference in body mass index & blood pressures but significantly, difference exist in cardio-vascular endurance between the cycling group and walking group female. It was also evident from the result that the females belonging to the cycling group were significantly better than walking group females.

**Conclusion:** Though walking and bicycling both offers several healths benefit but as per cardio respiratory endurance is concern; cycling is a better form of exercise than walking.

**Key Words:** Body Mass Index, Blood Pressure, Cardio-Vascular Endurance, Cycling & Walking

### **Introduction**

Body mass index is considering one of the most important indexes of growth through which obesity can be predicated. It is an artistic way for expressing body weight in relation to height. Obesity and hypertension are both major public health problems in society. Cardiac output and systematic vascular resistance determines the level of arterial blood pressure. In children, high cardiac output plays a part in the early pathogenesis of hypertension. Several factors have been suggested to be related to the BP level in children. These include genetic factors, maturation, obesity and low physical activity; body size, endocrine and renal factors, dietary factors, environmental cardiac exposure, oral contraceptives and psychological & social influences.

Cycling requires one right type of bicycle and some safety equipment. Long distance cycling is excellent for developing aerobic endurance and also for increasing the strength and endurance of muscles of the lower extremities (leg). Being a non-weight-bearing activity, cycling provides least chance of injury to the lower body. To be most effective in building physical fitness, you should pedal continuously, rather than coasting for long periods. Walking is very good fitness exercise for every person. **Walking is simple, free and one of the easiest ways to get more active, lose weight and become healthier.** It's underrated as a form of exercise but walking is ideal for people of all ages and fitness levels who want to be more active. Regular walking has been shown to reduce the risk of chronic illnesses, such as heart disease, type-II diabetes, asthma, stroke and some cancers.

The quality of life depends greatly on fitness. An unfit individual who cannot discharge the duties of life efficiently and effectively lags behind in the race for progress and prosperity. In the era of decreasing physical exertion even in the normal work, for most of the adults, the need for exercise and fitness assumes special significance. Moreover, human productivity, so important for prosperity, is essentially related to man's fitness for work and life. Schools have the potential to improve the

health of young people by providing instruction in physical education that promotes enjoyable lifelong physical activity. Disease and health problems resulting from an inactive life style have their origins early in life. This is when an active life style should be established. Fitness improves general health and it is essential for full and vigorous living. Physical fitness includes not only components of sports but those of health as well. Regular physical activity prevents or limits weight gain, and gain body mass index (Kyle et al. 2001).

Aerobic exercise is any activity for which the body is able to supply adequate oxygen to keeps its performance going for long periods. Aerobics describe all forms of low intensity exercise designed to improve cardio-respiratory fitness such as walking, cycling etc. As aerobic activities have proved very effective in promoting weight loss and reducing the risk of cardio-vascular disease, exercise physiologist consider cardio-respiratory fitness (aerobic fitness) to be the centre of gravity of health related physical fitness.

### Objective Of The Study

Objective of the study was to compare the BMI, BP & Cardio-vascular endurance of female students coming to school by cycling and by walking and to find out which of these two categories is more physically fit means which type of journey is more effective for students.

### Methodology

Subjects

For the purpose of these study eighty- (80) female students selected, forty- (40) from the bicycling group and forty- (40) from walking group who were studied in Barunhat High School, Sundarban Delta Region in West Bengal were selected randomly. Their age ranged from 14 to 16 years.

### Variables

- 1.Body Mass Index:- weight(pounds) multiply by703 & divided height(Inches)squared.
2. BP (systolic & Diastolic) :-Sphygmomanometer & Stethoscope will be used to measure the blood pressure of the subject.
3. Cardio-vascular endurance:-600 yard run/walk for cardio-vascular endurance (seconds).

### Statistical Technique

Mean and standard deviation of different variables were calculated. The data of the selected variables were analyzed through standard Statistical procedure. The mean of different variables were compared by using t- test. Statistical significance was tested at 0.05 levels. For statistical calculations Excel Spread Sheet of windows version 7 was used.

### Result

Table 1: Comparison of scores on Body Mass Index (BMI), & Blood Pressure (Systolic & diastolic) and CVE (Cardio Vascular Endurance) between cycling & walking group female students

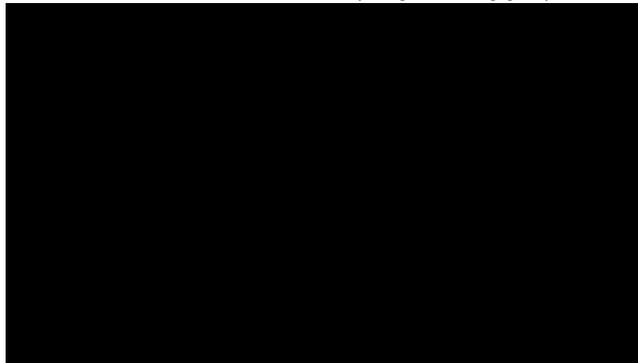
Variables	Group	Number	Mean	SD	SEM	MD	t-value
BMI (kg/m <sup>2</sup> )	Cycling	40	18.13	2.397	0.378	0.19	0.547
	Walking	40	17.94	2.502	0.395		
Systolic BP (mm.Hg)	Cycling	40	119.43	1.655	0.203	0.45	0.352
	Walking	40	119.88	1.486	0.193		
Diastolic BP (mm.Hg)	Cycling	40	75.60	1.976	0.222	1.60	0.434
	Walking	40	77.20	1.912	0.218		
CVE (Sec)	Cycling	40	191.25	30.11	4.76	84.30	4.49*
	Walking	40	275.55	50.28	7.95		

t-0.05 (78)=1.99, \* Significant at 0.05 level

It was evident from the table that there were no significant differences between the female students going to school by cycling & walking, on the variables of body mass index, & blood pressure. Table-1 showed that the calculated 't' value in case of cycling & walking group female students on body mass index, systolic blood pressure & diastolic blood pressure were not found to be statistically significant as the value obtained were 0.547,0.352,0.434 where it was needed to be greater than the tabulated value 1.99 of 78 degrees of freedom at 0.05 level of significance. Table-1 indicated that the mean and standard deviation values for body mass index & blood pressure variables for cycling & walking group female students were recorded as 18.13, 2.397 & 17.94, 2.502 (BMI), 119.43, 1.655& 119.88&1.486 (systolic blood pressure), 75.60, 1.976 & 77.20, 1.912 (diastolic blood pressure) respectively.

On the other hand the table-1 also showed that the mean & standard deviation value of the cardio-vascular endurance variable of the cycling & walking group students were recorded as 191.25, 30.11 & 275.55, 50.28 respectively. It was also evident from the table that the cardio-respiratory endurance between the two groups was statistically significant. It depicts that the cycling group female students have performed significantly better as compare to their counterparts.

Figure 1: The Cardio-Vascular Endurance of cycling & walking group female students.



## Discussion

The purpose of the present study was to compare the body mass index, blood pressure & Cardio-Vascular fitness between the female students coming to their school by cycling & by walking at the remote area of Sundarban delta region of North 24 Paraganas in west Bengal. The result of the present study showed that there were no significant difference in BMI & blood pressures between the walking group and cycling group but significant difference were observed in cardio vascular fitness between the groups. This result may be explained by the fact that cycling needs more involvement of muscles and need more oxygen uptake and caloric expenditure that effects more positively to the cardiorespiratory endurance than walking. Cycling is an activity that involves the whole body. Therefore arm to leg; feet to hands & body to eye coordination are improved. Cycling improves general muscle function gradually with little risk of over exercise or strain. Regular cycling strengthens leg muscles & is a great for the mobility of hip & knee joints, you will gradually begin to see an improvement in the muscle tone of your legs, thighs, rear end & hips. Cycling makes the heart pound in a steady manner & helps improve cardio-vascular fitness & work will increase cardio-vascular fitness by 3-7%. Cycling uses the raising heart rate to benefit stamina & fitness. According to the British Medical Association cycling just 20 miles, a week can reduce the risk of coronary heart diseases by 50%. On the other hand in BMI and Blood Pressures no significant difference were observed that may be explained by the fact that walking and cycling are equally effective for those variables that is why no significant difference were observed.

## Conclusion

On the basis of the obtained results from the present analysis, it may be concluded that cycling and walking group female students of Sundarban delta region in West Bengal did not significantly differ on the variables of body mass index, systolic blood pressure & diastolic blood pressure. However, body mass index cycling group female students are better score in comparison to walking group female students. On the other hand the cardio-vascular endurance significantly differs between the groups where a Cycling group female student improves better than walking group female students. This shows that regular cycling exercise produces health related physical fitness improvements.

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## “The Influence Of Socio-Conomic Status On Locus Of Control Of Sportsperson”

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### Abstract

The purpose of the present investigation was to assess the influence of socio-economic status on locus of control of sportsperson. Research method is ex-facto research and to achieve this purpose 200 sportsperson were selected randomly as subject. Their age ranged from 20 to 25 years. They were administered by two questionnaires i.e., socio-economic status scale constructed by Bharadwaj and Chawan and another scale i.e., locus of control constructed by Rompal, 1989. The data pertaining to the variable in this study was examined by using 'r' test (person correlation). The calculate value is 0.124 and the table value being at 0.005. The significant positive correlation was found between socio-economic statuses with locus of control of the sportsperson. It is concluded that higher SES would facilitate to possess the internal locus of control, where as lower SES leads to possess the external locus of control among the personality of the sportsperson.

**Keywords:** Socio-Economic status Locus of control and sportsperson.

### Introduction:

The application of psychological principles to the improvement of performance on sports has received greater attention in these days. There are certain accepted psychological principles, which have to be applied. So that the athletes and players are able to show their best performance and consist for failure. Coaches, physical educationists and sports scientists have always expressed a great need to know more about socio psychological factors which are helpful in improving the behavioral and the motor skills of the player.

It is important to know about the role of SES factors on locus of control. It is also strongly believed that participation in sports is likely to influence the personality and mental health of the sportsperson. The construct of locus of control is being increasingly emphasized in personality functioning (Lefeaurt, 1978, Phares, 1976). Since it appears to be related to or influence several classes of behavior locus of control has been found to be predictive of different social behavior, learning, performance more or less achievement related activities.

The construct of locus of control was originally derived from Rotter's (1954) small learning theory. However, Rotter's (1966) later modification of the construct has been the focus of research interest in recent years. The dictum made in locus of control theory was between external and internal control, thus, the construct locus of control distributes individual according to the degree, to which they accept personal responsibility for what happen to them in contrast to their attribution of responsibility forces outside their control. At one extreme we those who fail to perceive any causal relationship between their action and the reinforcement that follow such people tend to hold responsible either luck, star, fate or chance for both that failure and success. They seldom believe on their capabilities or shortcoming and ultimately such people believe that they have little or no control over the occurrence of reinforcement. Thus, people with external locus of control perceive no causal relationship between action and reinforcement. The other entire extreme, are the persons who feel that they are responsible for all happenings in their life and other factors like fate, chance, luck or star have little or nothing to do in their life. Such internal controllers perceive their behavior as a major determinant of the reinforcement received in any situation. They are usually bubbling with self-confidence (Psychology of sports Indian perspective Jitendra Mohan N. K. Chada and Sultana Akhatar).

There are two major theories related to locus of control that give the rational explanation of the development of locus of control and its operation. The self-efficacy theory propounded by Bondur addresses people's feelings of competences regarding an activity. This theory studies how people perceive their own ability to act successfully in the world.

If people feel they will be successful at an activity, they express successfulness i.e., they put more active, persistent, efforts into that activity and are more likely to succeed, and one more theory that is learned helplessness explains the long expose to the helpless situation that makes people to perceive their own outcomes to be uncontrollable. It is because learned helpless people do feel that they have control over outside events. They act passive and persist less in activities learned helpless people resemble those in their external locus of control. They do not perceive a contingency between their efforts and their outcomes. The learned helplessness construct has been used as a model for depression.

Socioeconomic culture differences is produced by environment, whether it is past or present, family constitutes the most important part of the environment. The influences of family income and social status, customs and traditions have a great role to play in determining the types of personality of an individual. His attitudes belief systems towards life as well as towards games and sports.

Socioeconomic status appears to be the resultant of the position of an individual in a society by virtue of a complex. Fusion of both of them, and its status or ranking of an individual given by the society where he lives. In terms of his material belongings and cultural possessions along with the degree of respect, power and influences he wields. The study carried out by M. V. Ujjal Rani (1996) states that effects of social economic disadvantages on locus of control, the result revealed when economic factors disregarded the socially disadvantage groups is significantly more externally oriented than social non disadvantage groups.

**Problem:** To assess the influence of socioeconomic status on locus of control of sportsperson.

**Hypothesis:**

The higher socioeconomic status leads to internal locus of control whereas, lower level of socioeconomic status leads to external locus of control among the sportsperson.

There would be no influence SES on locus of control of sportsperson..

**Objectives:**

To know the nature of socioeconomic status with locus of control of the sportsperson.

**Methodology:**

In the present study a total of 200 samples have been taken, out of which 50 sportsperson. Of high SES and remaining 50 from lower SES has been selected from the 100 sportsperson. The sample age ranging from 20 to 25 years. Both scales SES and locus of control were administered to collect the relevant data in order to make a detail analysis of the study.

**Simple Size:**

High SES of locus of control	Low SES of locus of control	Total
50	50	100

**Tools:**

The socioeconomic scale constructed by Dr. Rajeeva Lochan, Bharadwaj and locus of control constructed by Rompal (1989) were used.

**Statistical Tools:** Keeping in the view the t-test was applied to test data to assess the influence of SES on locus control of sportsperson.

**Discussion And Analysis Of The Result:**

It is a well-known fact that attributing success or failure in the process of learning is greatly influenced by the reward and punishment sequence. If an individual achieves success or failure according to his expectation in many situation for a longer period. This will result in the development of the internal locus of control. The development of internal locus of control once developed firmly then an individual becomes confident in his way of achievement of success.

On the other hand student socio and economic status also play an important role in determining the internal or external locus of control because the very exposure to the higher or lower socio and economic status will mould and re mould the style of perception and attribution of its members.

The hypothesis that there is a significant difference in locus of control of high and low SES sportsperson is formulated on the rationale that the sportsperson of low SES is suppressed by socio-cultural deprivation, low social dignity, maladjustment, lack of opportunities, frustrations, orthodox conservatism, helplessness and disappointment. And these factors might contribute for his acceptance of the influence of external conditions or external locus of control.

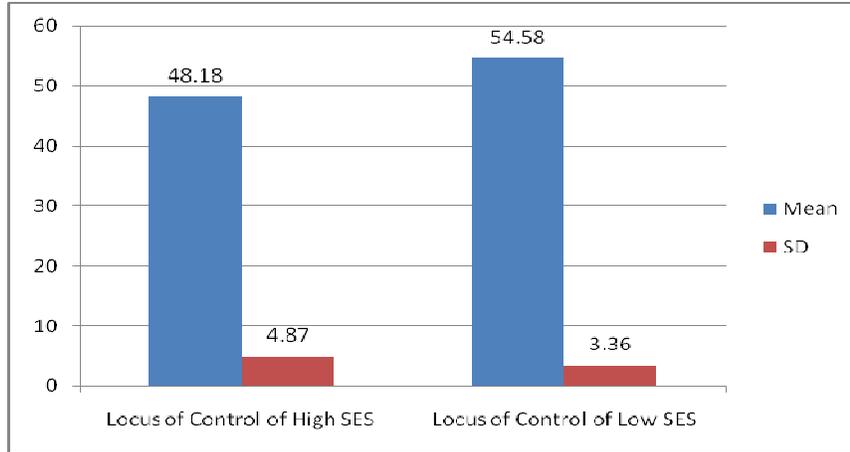
**Table-1**  
**Table Showing the Mean, SD and t' values of Locus of Control of High and Low SES sportsperson**

Variables	Locus of Control of High SES	Locus of Control of Low SES
Mean	48.18	54.58
SD	4.87	3.36
t-value	12.23* *	

\*\* Significant at 0.01 level

It becomes clear from the above table that, on locus of control, the sportsperson of high and low SES have scored the mean scores of 48.18 and 54.58 respectively. The higher mean scores of low SES sportsperson indicate that they are having external locus of control and the low mean score of high SES sportsperson indicate that they are having internal locus of control. The obtained t-value for these two groups is 12.13 which is highly significant at 0.01 level. The significant difference in t- value shows that there is a significant difference of locus of control between high and low SES sportsperson. Thus, the hypothesis that there is a significant..

The graph showing mean & SD in the locus of control between High SES and Low SES of sportsperson.



Difference of locus of control between low and high SES sportsperson is confirmed. This is because, the sportsperson of high SES are rich in social and sport experiences, and having high quality education and training, scientific knowledge and exposure to the mass media make them to believe in their own potentials. And this self-confidence helps them to take intelligent decision on various occasions. The influence of all these factors helps him to believe in internal locus of control. Hence, the above-mentioned hypothesis is accepted.

**Conclusion:** Belief and attributive behavior of the sportsperson is very important factor that is determined by the various factor like social, economic and psychological background of them. If they have good social and economic status and provided healthy psychological environment in the family as well as in society, they are likely to grow with scientifically and more critical mind and a emotionally intelligent individuals. Socio-economic condition of sportsperson would plays detrimental factors in personality of sportsperson. Hence, government and responsible authorities should think positively to influence their socio-psychological background in order to develop personality of sportsperson.

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## Effect Of Touchdown Parameters On The Performance Of Fosbury Flop High Jump

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### Abstract

The high jump comprises three distinct phases the approach run to the bar, the plant and takeoff, and the flight phase and bar clearance. When projected into flight the center of mass of any object follows a predetermined, predictable, unalterable parabolic curve. Thus establishment of the proper flight path is totally dependent upon proper application of force during ground contact. Since all takeoff forces are applied while still in contact with the ground, any resultant rotations are produced during ground contact as well. These rotations continue into flight and assist or interfere with efficient clearances and landings. In light of these facts it is obvious that proper force application at take off is the only way to produce good performance in high jump event.

Although good takeoffs produce good jumps, there are prerequisites to the execution of correct takeoff mechanics a person running at relatively low speed can demonstrate greater accuracy in aligning the body into positions favorable for efficient takeoffs because prior mechanical errors can be easily corrected. Dapena (1988) observed that the purpose of the approach is to set the appropriate conditions for the beginning of the takeoff phase. The takeoff phase is defined as the period of time between the instant when the takeoff foot first touches the ground (touchdown or plant) and the instant when it loses contact with the ground (toe-off).

The peak height of the mass centre during the flight over the bar is dependent on the height and vertical velocity of the mass centre at toe-off. The mass centre height at toe-off is largely dependent on the standing height of the athlete and so the high jumper should therefore strive to maximize the vertical mass centre velocity at toe-off. In order to maximize the mass centre vertical velocity at toe-off the approach parameters must be optimized. Alexander (1990) used a two segment simulation model with a single muscle to show that jump height was maximized at intermediate values of approach speed and plant angle. However the optimum technique determined by Alexander's model was not specific to any athlete.

The present study was to determine how the maximum height of the mass centre during flight is dependent on the horizontal movement time of takeoff leg at touchdown, the plant angle, and the knee angle of the takeoff leg at touchdown for each elite national fosbury flop high jumper and examine whether these relationships are consistent.

### Methodology

#### Subjects:

Top five male and five female high jumpers were filmed during their competitive performance in the National open athletics championship from 10<sup>th</sup> September to 13<sup>th</sup> September, 2012 held at Jawaharlal Nehru stadium, Chennai, India. The best valid and failed jumps were taken from each fosbury flop athlete for the further analysis.

#### Tools and equipments:

Biomechanical analysis requires specific tools and equipment to capture and analyze the data. The experimental apparatus used in this research work were two Panasonic-AG-DVX-102B, F11 sensitivity, high image quality, camcorders, measuring tape and the Quintic Biomechanics v21 motion analysis software and computer system.

#### Collection of data and filming protocol:

For the collection of data two Panasonic camcorders was mounted at a distance of ten meters at height of five feet above the ground. First camcorder was mounted at left standard line and the second camcorder was mounted in front of the crossbar with a distance of 15 meters. Two camcorders captured the video clippings of Fosbury flop jumper's last stride. All the attempts of the selected subjects were recorded during the competition. When they cleared the bar on a particular height was taken as successful jump and when they were unable to clear the bar at a particular height was taken as failed jump. The recorded video clippings were converted in AVI format. Analysis was

conducted using the quintic biomechanics V 21 (motion analysis).The touchdown variables which were selected in this study were 1) takeoff foot touchdown time 2) knee angle at the time of touchdown3) the plant angle.

Acquired data were subjected to statistical analysis by coefficient of correlation between bar height vs touchdown parameters. All statistical procedures were conducted using the SPSS software. A level of significance was set at 0.05.

### Analysis

The raw data were arranged separately, tabulated and subjected for the descriptive statistical analysis, followed by coefficient of correlation by using SPSS to distinguish if there were any relation across the bar height vs different touchdown parameters. The researcher reached at the results of this empirical investigation which is presented by the respective tables and graphs.

**Table 1. Showing the anthropometric measurements of the male athletes and their best performance.**

Athletes	Age	Height (cm)	Leg length (cm)	Training age (yrs)	Weight (kg)	Best performance in high jump (cm)
H.Shankar roy	29	177	87	13	72	219
Harshith.S	18	189	99	2	62	216
Jithin Thomas	22	175	95	8	61	222
Nikhil .Ch	23	188	98	7	76	216
K.S.Singh	22	180	93	5	65	210
MEAN	22.8	181.6	94.6	6.8	66.6	
SD	3.96	6.47	4.72	4.21	6.91	

The data indicates that the averages age of the male athletes was 22.8 years with an average height of 181.8cm, average leg length was 94.4 cm and training age was 6.8 years and average weight was 66.6 kg. Among the five subjects Jithin Thomas has shown the highest performance of 222 cm.

**Table 2. Showing the anthropometric measurements of the female athletes and their best performance.**

Athletes	Age (yrs)	Height (cms)	Leg length (cms)	Training age (yrs)	Weight (kg)	Best performance in high jump (cms)
Tintu.N.D	23	173	93	10	50	170
M.Mallika	23	159	84	10	46	170
Siji.N.K	24	165	85	10	52	173
K.C.Chandana	22	176	89	8	50	170
Sahana.k	30	176	94	4	62	184
MEAN	24.4	169.8	89	8.4	52	
SD	3.21	7.53	4.53	2.61	6.00	

The data indicates that the average age of the female athletes was 24.4 years with an average height of 169.8cm, average leg length was 89 cm and training age was 8.4 years and average weight was 52 kg. Among the five subjects Sahana kumari has shown the highest performance of 184cm.

**Table 3. Showing the touchdown variables overall mean averages of each top five male and female Indian fosbury flop high jumpers.**

MALE				FEMALE			
Athlete Name	TD (msec)	Knee (°)	Plant (°)	Athlete Name	TD (msec)	Knee (°)	Plant (°)
H.S.Roy	88.00	162.69	33.69	Tintu.N.D	140.00	161.08	35.53
Harshith.S	104.00	159.23	32.66	M.Mallika	106.67	168.01	27.05
J.Thomas	93.33	165.21	29.70	Siji.N.K	120.00	160.57	30.57
Nikhil .Ch	112.00	170.63	31.21	K.C.Chandana	100.00	161.23	34.80
K.S.Singh	100.00	153.00	40.37	Sahana.k	100.00	154.46	28.45

Above table showed that among five male fosbury flop high jumpers the first and third subjects took less time at the time of takeoff foot touchdown during last stride than other male subjects, in case of five female fosbury flop high jumpers the fourth and fifth subjects took less time than other female subjects. The average touchdown time of male subjects during takeoff foot heel touching the ground was less than female subjects. The faster approach speeds used by the stronger jumpers were shown to produce greater jump heights.

The knee angle at the time of touchdown of male high jumpers the fourth subject had high angle than other male subjects, in case of five female subjects the second athlete had higher knee angle than other female subjects. According few studies of elite athletes of world class the ideal knee angle was 170.3°. This study stated that lower number of subjects (male & female) reached their averages near to the above standard.

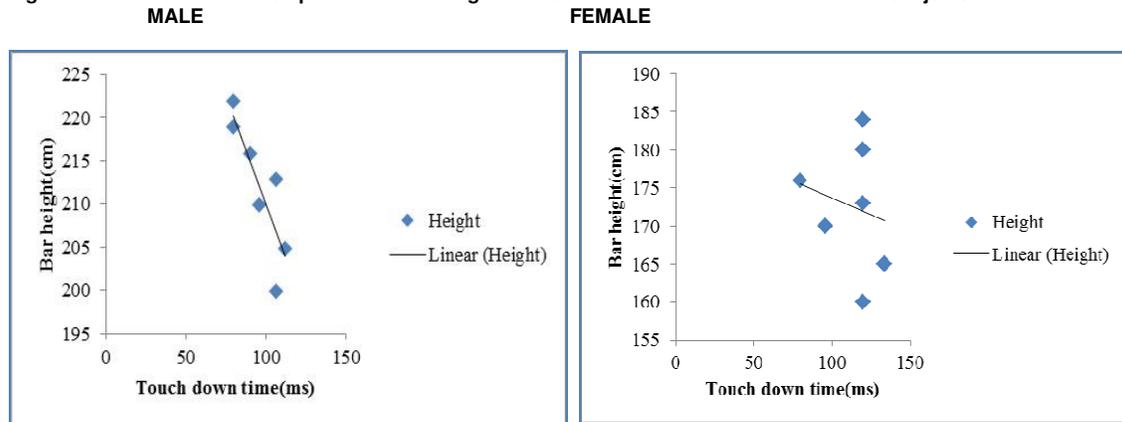
The plant angle at the time of touchdown of male subjects third subject had lower plant angle than other male subjects and in case of female subjects the second subject had lower plant angle than others. As per few studies of elite athletes of world class the ideal plant angle was 34.1°. Hence in this study higher number of subjects (male & female) reached their averages near to the above standard.

**Table 4. Showing the male and female high jumpers touchdown variables of each bar height mean averages.**

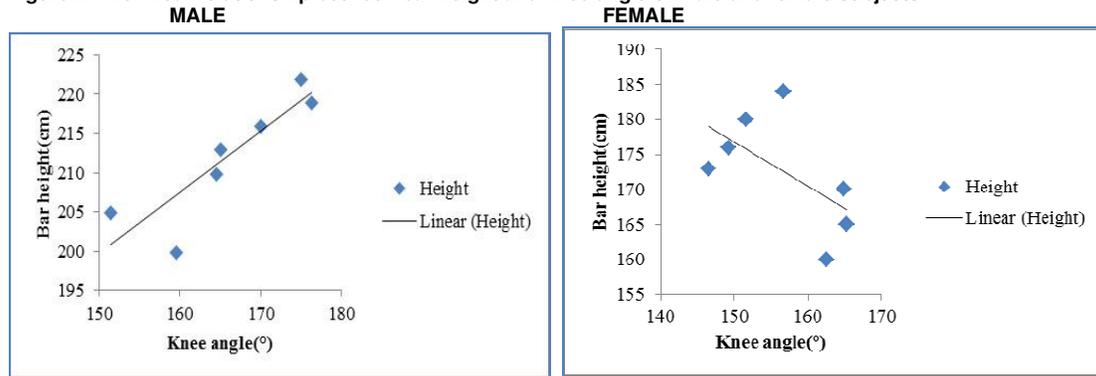
MALE					FEMALE			
Bar Height (Male) (cm)		TD (msec)	KNEE (°)	PLANT (°)	Bar Height (Female) (cm)	TD (msec)	Knee (°)	Plant (°)
200	MEAN	106.67	159.58	38.21	160	120.00	162.51	33.40
	SD	18.86	9.37	4.09		0.00	3.60	2.43
205	MEAN	112.00	151.50	31.76	165	133.33	165.22	29.18
	SD	16.00	9.41	4.02		18.86	5.27	4.14
210	MEAN	96.00	164.59	34.07	170	96.00	164.83	32.49
	SD	19.60	8.33	6.93		32.00	5.44	4.98
213	MEAN	106.67	165.04	31.16	173	120.00	146.45	30.80
	SD	18.86	10.43	2.14		0.00	0.00	0.00
216	MEAN	90.00	170.01	33.00	176	80.00	149.24	32.83
	SD	17.32	6.46	1.13		0.00	0.00	0.00
219	MEAN	80.00	176.36	30.51	180	120.00	151.56	23.89
	SD	0.00	1.36	2.96		0.00	0.00	0.00
222	MEAN	80.00	175.00	31.53	184	120.00	156.61	26.94
	SD	0.00	0.00	0.00		0.00	0.00	0.00

Above table showed that the male and female subjects mean averages of touchdown parameters at different bar heights. As the competition intensified i.e increasing the bar height the mean averages of touchdown parameters showed large changes. Bar height between 216cm to 222cm of male subjects touchdown parameters were showed good technique i.e the ideal (world class) standard. Bar height between 176cm to 184cm of female subjects touchdown parameters were not effective and mean averages of touchdown parameters were inconsistency due to poor technique throughout the competition. This may be attributed that the good performer used good technique and utilized the stored energy levels effectively (entering in the competition not early as well as good technique was used when the bar was higher) as the competition intensified (at a higher bar heights). These data showed that male subjects had good technique than female subjects.

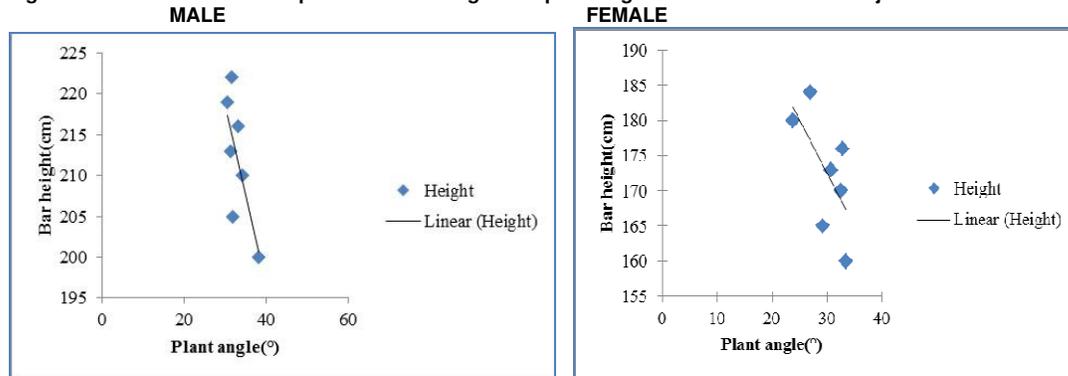
**Figure 1: The linear relationship between bar height and touchdown time of male and female subjects.**



**Figure 2: The linear relationship between bar height and knee angle of male and female subjects**



**Figure 3: The linear relationship between bar height and plant angle of male and female subjects**



Above graphs showed that all touchdown parameters of touchdown time, knee angle and plant angle of male subjects parameters were closed to the bar in case of female subjects parameters were away from the bar. It can be attributed that the female subjects had showed inconsistency throughout the competition.

**Table5: Indicating the 'r' values and significance level between variables.**

Height vs variable	Male (r)	Significance	Female (r)	Significance
Height vs Touchdown	-0.8585	sig	-0.1931	not
Height vs Knee angle	0.8798	sig	-0.586	not
Height vs Plant angle	-0.7322	not	-0.6437	not

\*Significant at 0.05 level (0.754)

Above table clearly indicated that male subjects showed significance relationship between bar height vs touchdown time and knee angle but plant angle was showed insignificant relationship. In case of female subjects showed insignificance relationship all the three touchdown parameters vs bar height.

## **Summary And Conclusion**

This study indicated that touchdown parameters were not same throughout the competition as the competition intensified i.e increasing the bar height the mean averages of touchdown parameters showed large changes. In this research bar height between 216cm to 222cm of male subjects touchdown parameters were ideal (world class) standard but in case of female subjects as the bar height increases the touchdown parameters were not effective. It can be attributed that the good performer used good technique and utilized the energy levels effectively (entering in the competition not early as well as good technique was used when the bar was higher) as the competition intensified (at a higher bar heights). Hence this study showed that male subjects had better technique than female subjects. Graphs showed that all touchdown parameters of touchdown time, knee angle and plant angle of male subjects parameters were closed to the bar line in case of female subjects parameters were away from the bar. It can be attributed that the female subjects had showed inconsistency throughout the competition.

Through statistical analysis it is found that the male subjects had showed significant relationship between bar height vs. touchdown time and knee angle but plant angle was showed insignificant relationship. In case of female subjects it is found that they showed insignificant relationship of all the three touchdown parameters vs. bar height. It may be attributed that difference in performance between male and female is due to structural and physiological factors.

## **Recommendations**

These observations suggest that female athletes focused on consistency on technique point of view. This study advised that in every bar height the touchdown parameters should be changed to stay in the competition for longer span.

This study also suggested that the touchdown parameters and energy levels to be utilized according the bar height.

Every coach should provide the knowledge about the entry level of the competition (use of pass option) and utilization of strengths at various bar heights to his trainees.

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## Effects Of Medicine Ball Training On Selected Performance Variables Of Gitam University Cricketers

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### Abstract

The purpose of the study is to find out the Effects of Medicine ball training on selected performance variables among cricketers. To achieve the purpose of this study, a total of twenty four subjects were selected randomly from Gitam University, Visakhapatnam, A.P., India. The selected subjects were divided in to two groups of twelve each. Group I underwent Medicine ball training for 6 Weeks with three days per week and group-II acted as control. This study was delimited to the students who are between the age group, of 18-25 years. Medicine ball training was selected as independent variable and batting and bowling were dependent variables. The collected was analyzed statistically by using the dependent 't'-test and analysis of covariance (ANCOVA) was used. All of the statistical analysis tests were computed at 0.05 level of significance ( $P < 0.05$ ). From the analysis of the data, the following conclusions were drawn. The experimental group namely Medicine-ball-training group had achieved significant improvement on batting and bowling When compared to the control group.

**Keywords:** Medicine ball, Batting, Bowling.

### Introduction

The game of cricket has a known history spanning from the 16<sup>th</sup> century to the present day, with international matches played since 1844, although the official history of international test cricket began in 1877. During this time, the game developed from its origins in England into a game which is now played professionally in most of the common wealth of nations.

The history of cricket in India can be traced to Eighteen century with reference of a friendly match between two means of visiting sailors at a seaport in Kutch in 1725. This English game soon caught the fancy of the natives with Pasis coming up with the first non-British cricket club of the country, the orient cricket club in Mumbai in 1848.

MAHARAJA BHUPINDER SINGH of Patiala, one of the chief patrons of cricket in India, led the first unofficial tour of an, "ALL INDIA" team to England in 1911. The Board of control for cricket in India (BCCI) took root largely due to the Maharaja along with A.S.De Mello, Lord Harris and R.E. Grant Govan.

The strenuous efforts of these visionaries bore fruit when India was admitted to the International Cricket council (ICC) in 1929 and subsequently granted test status in 1932. The day June 25, 1932, would be a red-letter day in the history of India cricket as on this fateful day India made its Test debut at Lord's the Mecca of cricket.

Cricket is not a continuous steady State sport - there are frequent changes in running speed and intensity of effort, plus various strength and power movements like batting, bowling and fielding the ball at pace. Players, therefore, require a 'fuel mix' of aerobic and anaerobic energy to sustain performance. Cricket players need to follow strength and conditioning pro-gram that aims towards them peaking at certain stages of the year. Strength programmes will be improved all-round strength, especially in vital areas such as the abdominal oblique's, and also shoulder girdle. To prevent, injury, and to enable a full season to hopefully be completed, its essential that a correct warm up and stretching routine be implemented prior to the start of each match, along with dynamic movements to enable bowlers and bats man to stay in optimum

performance during long matches. Along with building a good base of strength and fitness, the skills of the game should be worked on, ideally as a team in order to produce a higher level of combined skills, as cricket is a sport that is played in two important forms, batting and bowling. Batsman aims to stay at the crease for as long as possible, sometimes for periods of over 4 hours. In order to occupy this position, a good batsman is able to stay focused, have good ball / eye skills, and have the strengths and fitness to make each shot played. The power will come from having a strong core, abdominal mid-section and the ability to generate explosive upper body actions, however with that said, using the kinetic energy of the ball as it speeds towards us, only requires a slight change in direction in order to score 4 runs - unfortunately this skill has only be given to a few class batsman.

Bowlers require both explosive strength and speed, combined with good muscular endurance, in order to be able to maintain a high number of over's. Poor fitness and muscular strength will result in inaccurate bowling, and greater risk of injury, especially for high speed bowlers. Because all players will at some time in the game, play a combination of batting and fielding, the below training program will aid all players.

Medicine ball training has been around since the ancient Greeks discovered health benefits from exercising with weighted balls. It is one of the oldest forms of strength and conditioning used to improve health, explosive power, and speed. Medicine balls are versatile, portable and a fad that lasted the test of time. Power in relation to batting and bowling is the product of strength and speed or force and velocity. The medicine ball serves as an excellent tool that can be used to enhance power output. The freedom of movement allows for endless variations of exercises that can be tailored to needs and more importantly, it teaches the body to work as an integrated system, which is key for improving cricket performance.

A program of Medicine ball exercises to compliment regular strength training may be able to improve the strength of more isolated muscle groups such as the rotator cuff. Additionally, training these otherwise neglected muscles may even improve batting and bowling performance. Strength training and conditioning plays an important role in chronic and acute injury prevention, particularly in asymmetrical sports such as cricket (i.e. batting and bowling with a dominant arm or stance). Conditioning for cricket should not only be sport specific but also position specific. Fast bowlers require different preparation from spin bowlers for example. Of course, there are many aspects of cricket training applicable to all players as each individual will be required to batting and bowling during a game.

**Statement Of The Problem**

The purpose of the study was to find out the Effect of Medicine Ball Training on selected performance variables among cricketers.

**Methodology**

This chapter describes the selection of subjects, selection of variables, selection of tests, reliability of the instruments, reliability of data, tester's competency, and orientation to the subjects, collection of the data, administration of the test and statistical procedures.

**Subjects**

To achieve the purpose of this study total of twenty four subjects were selected randomly from GITAM University, Visakhapatnam, Andhra Pradesh, India). The selected subjects were divided in to two groups of twelve each. Group I underwent Medicine ball training for 6 weeks with three days per week and group II acted as control. This study was delimited to the students who are between the age group of 18-25 years.

**Variables**

Independent Variables

Medicine ball Training

DEPENDENT VARIABLES

Batting - expert rating method

Bowling - expert rating method

**Statistical Procedure**

No attempt was made to equate the groups in any manner. Hence, to make adjustments for difference in the initial means and test the adjusted posttest means for significant differences, the dependent't'-test and analysis of covariance (ANCOVA) was used. All of the statistical analysis tests were computed at 0.05 level of significance (P<0.05).

**Analysis Of Data**

The analysis of dependent't'-test on the data obtained for selected dependent variables of the pre-test and post-test of experimental and control group have been analyzed and presented in Table I.

Table 1

The Summary Of Means And Dependent 'T'-Test Forthepre And Post Tests On Criterion Variables Of Experimental And Controlgroups

Criterion Variables	Mean And 'T'-Test	High Velocity Group	Control Group
Batting	Pre Test	4.31	4.25
	Post Test	7.79	4.26
	'T' Test	7.54*	0.37
Bowling	Pre Test	4.16	4.08
	Post Test	7.23	4.07
	'T' Test	5.66*	0.48

\*Significant at .05 level.

(Table value required for significance at .05 level for 't'-test with df 11 is 2.20)

From the table I the dependent 't'-test values of batting and bowling between the pre and post tests means of experimental (medicineball) and control groups were greater than the table value 2.20 with df 11 at .05 level of confidence, it is concluded experimental groups had significant improvement in the performance of batting and bowling. However, control group has no significant improvement in the performance of batting and bowling. The analysis of covariance on batting and bowling of experimental and control group have been analyzed and presented in Table II.

**Table II**  
**Analysis Of Covariance On Criterion Variables Of Experimental And Control Groups**

Criterion Variables	Adjusted Post Test Means		Source of Variance	Sum Of Squares	Df	Mean Squares	'F' Ratio
	Exp.Lgroup	Con.Group					
Bating	7.62	4.20	B	4.49	1	4.49	4.58*
			W	20.77	21	0.98	
Bowling	7.21	4.03	B	3.08	1	3.08	5.22*
			W	12.43	21	0.59	

\*Significant At .05 Level Of Confidence. (The Table Value Required For Significance At .05 Level With Df 1 And 21 Is 4.32)

### Results And Discussion

Form the Table II, the obtained F-ratio of batting and bowling for adjusted post test mean were more than the table value of 4.32 for df 1 and 21 required for significant at .05 level of confidence. The results of the study indicate that there is significant difference among the adjustment post test means of experimental (Medicineball) and control groups on the development of batting and bowling.

### Conclusions

From the analysis of the data, the following conclusions were drawn.

The experimental group namely Medicine ball training group had achieved significant improvement on batting when compared to the control group.

The experimental group namely Medicine ball training group had achieved significant improvement on bowling when compared to the control group.

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## **A Comparative Study of Speed and Explosive Strength among High Jumpers and Triple Jumpers of Hyderabad**

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### **Abstract:**

The high jump is a track and field event in which competitors must jump over a horizontal bar placed at measured heights without the aid of certain devices. The triple jump, sometimes referred to as the hop, step and jump or the hop, skip and jump, is a track and field sport, similar to the long jump, but involving a "hop, bound and jump": the competitor runs down the track and performs a hop, a bound and then a jump into the sand pit. The sample for the present study consists of 20 Male High Jumpers and 20 Male Triple Jumpers of Hyderabad District. The 50 M Run is used to assess the speed and Standing Broad Jump is used to assess the Explosive Strength. The results of the Study shows that Triple Jumpers are having good Speed and High Jumpers are having the good explosive strength. It is concluded that Triple Jumpers are good in speed and High Jumpers are good in the explosive strength. Coaches must give Coaching to the High Jumpers and Triple Jumpers to improve their motor qualities to excel in the performance.

### **Key words:**

Speed, Explosive Power, motor qualities etc.

### **Introduction:**

The high jump is a track and field event in which competitors must jump over a horizontal bar placed at measured heights without the aid of certain devices. The **high jump** is a track and field event in which competitors must jump over a horizontal bar placed at measured heights without the aid of certain devices. In its modern most practiced format, auxiliary weights and mounds have been used for assistance; rules have changed over the years. Over the centuries since, competitors have introduced increasingly more effective techniques to arrive at the current form. Javier Sotomayor (Cuba) is the current men's record holder with a jump of 2.45 m (8 ft 0¼ in) set in 1993, the longest standing record in the history of the men's high jump. Stefka Kostadinova (Bulgaria) has held the women's world record at 2.09 m (6 ft 10¼ in) since 1987, also the longest-held record in the event.

The first recorded high jump event took place in Scotland in the 19th century. Early jumpers used either an elaborate straight-on approach or a scissor technique. Another American, George Horine, developed an even more efficient technique, the *Western roll*. American and Soviet jumpers held the playing field for the next four decades, and they pioneered the evolution of the straddle technique. Fosbury added a new twist to the outmoded Eastern Cut-off. He directed himself over the bar head and shoulders first, sliding over on his back and landing in a fashion which would likely have broken his neck in the old, sawdust landing pits. After he used this Fosbury flop to win the 1968 Olympic gold medal, the technique began to spread around the world, and soon *flop*ers were dominating international high jump competitions. The last straddler to set a world record was Vladimir Yashchenko, who cleared 2.33 m in 1977 and then indoors in 1978.

The triple jump, sometimes referred to as the hop, step and jump or the hop, skip and jump, is a track and field sport, similar to the long jump, but involving a "hop, bound and jump": the competitor runs down the track and performs a hop, a bound and then a jump into the sand pit.

The triple jump has its origins in the ancient Olympic Games and has been a modern Olympics event since the Games' inception in 1896. The athlete sprints down a runway to a takeoff mark, from which the triple jump is measured. The takeoff mark is commonly a physical piece of wood or similar material embedded in the runway, or a rectangle painted on the runway surface. In modern championships a strip of plasticine, tape, or modeling clay is attached to the far edge of the board to

record athletes overstepping or "scratching" the mark, defined by the trailing edge of the board. There are three phases of the triple jump: the "hop" phase, the "bound" or "step" phase, and the "jump" phase. These three phases are executed in one continuous sequence. Explosive power drills are often used by athletes who need to generate a quick burst of maximal effort, such as movements required in football, track and field sports, court sports and even cycling. The types of exercises used to build this quick, explosive power are movements that require a maximum or near maximum power output from the athlete in a short amount of time. Explosive exercise training routines are one way to increase power output. The goal of explosive exercise training is to ultimately move heavy weights very quickly. But to get to that point safely, without risking injury, it's important to start with light weights and slow controlled movements. Over a matter of training session (several weeks), but the weight lifted and speed at which it's lifted will be increased

High Jumpers in action



Triple jumpers in Action



**Method:** The sample for the present study consists of 20 Male High Jumpers and 20 Male Triple Jumpers of Hyderabad District. The 50 M Run is used to assess the speed and Standing Broad Jump is used to assess the Explosive Strength.

**50 M Run:** Aim: The aim of this test is to determine acceleration and speed.

equipment required: measuring tape or marked track, stopwatch, cone markers, flat and clear surface of at least 70 meters.

procedure: The test involves running a single maximum sprint over 50 meters, with the time recorded. A thorough warm up should be given, including some practice starts and accelerations. Start from a stationary standing position (hands cannot touch the ground), with one foot in front of the other. The front foot must be behind the starting line. Once the subject is ready and motionless, the starter gives the instructions "set" then "go.". The tester should provide hints for maximizing speed (such as keeping low, driving hard with the arms and legs) and the participant should be encouraged to not slow down before crossing the finish line.

Two trials are allowed, and the best time is recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system is triggered, and finishes when the chest crosses the finish line and/or the finishing timing gate is triggered.

**Standing Broad Jump**

Aim: to measure the explosive power of the legs

equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The take off line should be clearly marked.

procedure: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed. Best of Three Trial is recorded.

**Result:**

The results of the Study shows that Triple Jumpers are having good Speed and High Jumpers are having the good explosive strength.

Table – I

Test Items	Group	N	Mean	Std.Deviation	df	t	Sig.(2tailed)
50 M Run	Triple Jumpers	20	7.51	0.294	38	4.58	0.00
50 M Run	High Jumpers	20	7.64	0.376			

In Table –I the Mean Values of the Triple jumpers in 50 M Run is 7.51 and High Jumpers is 7.64. The Standard Deviation of Triple jumpers is 0.294 and standard deviation of High Jumpers is 0.376 . The Mean Score shows that Triple Jumpers are having the good speed compare to High Jumpers there is a difference of mean score 0.13.

Table – II

Test Items	Group	N	Mean	Std.Deviation	df	t	Sig.(2tailed)
Standing Broad jump	Triple Jumpers	20	2.15	0.05	38	3.68	0.00
Standing Broad jump	High Jumpers	20	2.24	0.11			

In Table –II the Mean Values of the High jumpers in Standing Broad Jump is 2.24 and Triple Jumpers is 2.15. The Standard Deviation of High Jumpers is 0.11 and standard deviation of Triple Jumpers is 0.05. The Mean Score shows that High Jumpers are having the good explosive strength is 2.24 and Triple jumpers is 2.15 there is a difference of 0.09 between High Jumpers and Triple Jumpers.

**Conclusion:**

It is concluded that Triple Jumpers are good in speed and High Jumpers are good in the explosive strength. Coaches must give Coaching to the High Jumpers and Triple Jumpers to improve their motor qualities to excel in the performance.

**Recommendations:**

Similar Studies can be conducted on female High jumpers and Triple Jumpers.  
 Similar studies can be conducted on other track and field events in athletics.  
 The Coaches must give proper coaching to all the athletes as per the requirements to achieve high level performance in the competition.

**Acknowledgements:**

I am thankful to Triple jumpers and High Jumpers of Hyderabad and Technical Officials of Hyderabad District Athletics Association for their help in accomplishment of the study.

**References:**

Top End Sports  
 Wikipaedia, High jump and Triple jump

## **A Psychological Factors Of Football Players & Hockey Players – A Study**

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### **Introduction**

The importance of sport psychology in football or soccer is becoming increasingly well recognized with many professional clubs employing psychologists. Sport psychology is sometimes called mental preparation or training, mind games, or mind over matter. The aim is for the team to play football at peak performance in every match. Sport psychology is no substitute for skills, and it is vital to emphasize the importance of skills, particularly when coaching youth football. Since the main aim of psychological training is to attain peak performance, it will not help much if your peak performance is poor! The first step is to decide what you want to achieve. Do you have a dream that you wish to make a reality? It's important to discover what motivates you, and to write down a mission statement or creed to provide motivation. Psychology of sport means applying psychological theories and concepts to aspects of sport such as coaching and teaching. The sport psychologist uses psychological assessment techniques and intervention strategies in an effort to help individuals to achieve their optimal performance. While sport psychology is concerned with analyzing human behaviour in various types of sport settings, it focuses on the mental aspects of performance.

#### **Anxiety:**

Anxiety has long been recognized as a prominent symptom of many psychiatric disorders. It was Freud (1859) who first suggested that cases with mainly anxiety symptoms should be separated under the name of anxiety neurosis.

#### **Aggression:**

Aggression in its broadest sense is behaviour, or a disposition, that is forceful, hostile or attacking. It may occur either in retaliation or without provocation. Aggression can take a variety of forms and can be physical or be communicated verbally or non-verbally. Aggression differs from what is commonly called assertiveness.

#### **Motivation:**

Motivation is an internal energy force that determines all aspects of our behavior, it also impacts on how we think, feel and interact with others. In sport, high motivation is widely accepted as an essential prerequisite in getting athletes to fulfill their potential.

### **Significance Of The Study**

The study was to determine the psychological factors of football and hockey players. Testing the personality of the player may prove beneficial; the coach can have an idea of the differences in personality between players and thus learn how to better handle the issue. Tests have shown that successful footballers possess superior mental and emotional health (less anger, tension and more vigor) than others who may need psychological support/counseling.

#### **Hypotheses:**

1. There may not be any significant difference between football players and hockey players of Osmania University in relation to their Anxiety.
2. There may not be any significant difference between football players and hockey players of Osmania University in relation to their Aggression.
3. There may not be any significant difference between football players and hockey players of Osmania University in relation to their Motivation.

#### **Statement of the Problem**

The purpose of the study is to find out whether or not any significant difference found on Anxiety, Aggression, and Motivation of football and hockey players in Osmania University.

**Significance of the Study:** The study investigates the existing difference between football players and hockey players in relation to their Anxiety, Aggression, and Motivation.

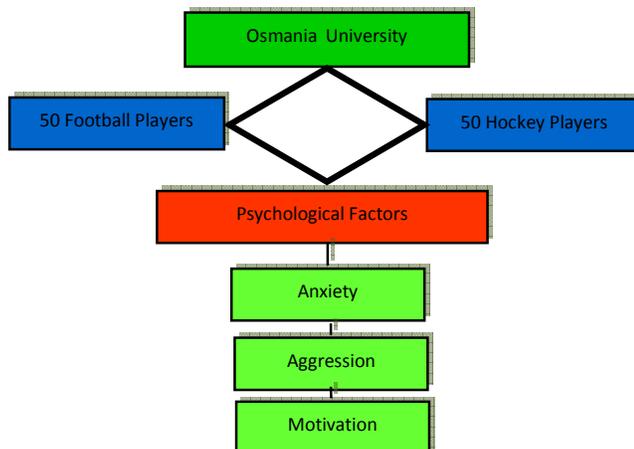
- The finding of the study may provide guidance to the physical education teachers and coaches to prepare training programmes on the basis of the study.
- It may further help the researchers who are interested in football and hockey game.
- The findings of the study may add to the quantum of knowledge in the area of sports and physical education.

**Objective of the Study**

The research will find out the Anxiety, Aggression, and Motivation of football and hockey players in Osmania Universities.

**Design of the Study**

The diagrammatic presentation was presented hereunder.



**Sample of the Study**

The study was formulated based on the simple random sampling. The samples were collected from the 50 football players and 50 hockey players in the age group of 20- 25 years from Osmania University.

**Tools Used**

- Sport Competition Anxiety Test (SCAT), which was developed by Martens, Vealey, and Burton in 1990.
- Aggression - The aggression questionnaire Buss, A. H., & Perry, M. P. (1992).
- Motivation- The Sport Motivation Scale (SMS-28) - Luc G. Pelletier, Michelle Fortier, Robert J. Vallerand, Nathalie M. Brière, Kim M. Tuson and Marc R. Blais, 1995.

**Data Collection Procedure**

The subjects of the study were in the age group between 20 to 25 years, 50 football players and 50 hockey players of Osmania University players were considered. The study is delimited for the Osmania University football & hockey players. The researcher has collected the data separately for foot ball players and hockey players. The subjects were tested three categories of psychological factors i.e. Anxiety, Aggression and Motivation.

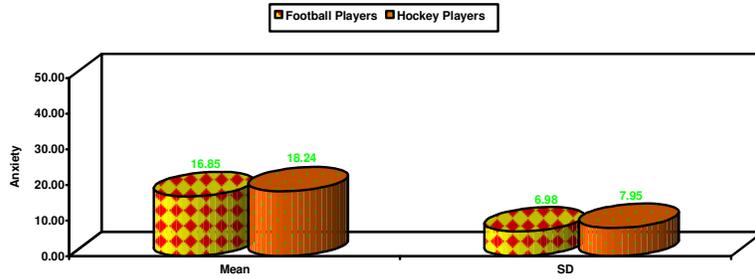
**Results And Discussion**

The results pertaining to the study were present in the following

**The table showing significant differences between football and hockey players of Osmania university players in relation to their Anxiety.**

Sl. No.	Subjects	N	Mean	S.D.	't'-ratio	P -value
1.	Football Players	50	16.85	6.98	2.18	0.01
2.	Hockey Players	50	18.24	7.95		

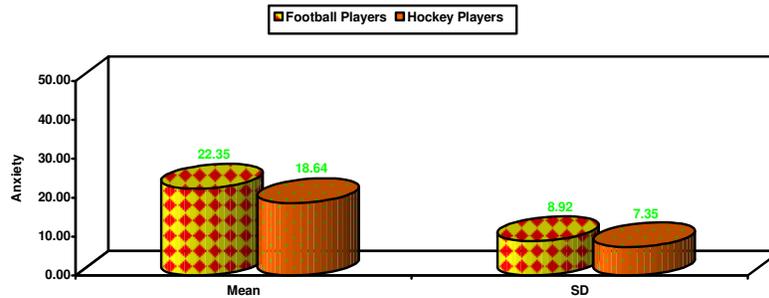
The Graph Showing the mean, SD, df and t-values between Football Players and Hockey Players in relation to their Anxiety



The table showing significant differences between football and hockey players of Osmania university players in relation to their Aggression.

Sl. No.	Subjects	N	Mean	S.D.	't'-ratio	P -value
1.	Football Players	50	22.35	8.92	2.88	0.01
2.	Hockey Players	50	18.64	7.35		

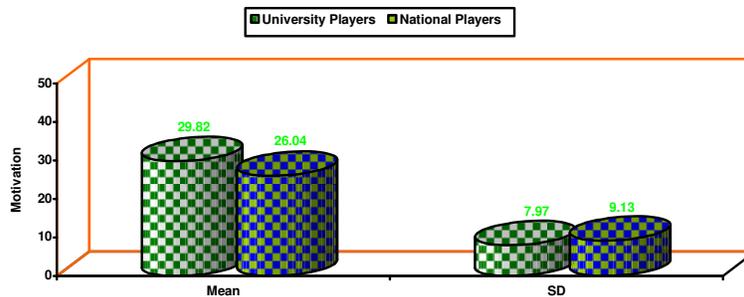
The Graph Showing the mean, SD, df and t-values between Football Players and Hockey Players in relation to their Aggression.



The table showing significant differences between football and hockey players of Osmania university players in relation to their motivation.

Sl. No.	Subjects	N	Mean	S.D.	't'-ratio	P- value
1.	Football Players	50	29.82	7.28	3.86	0.00
2.	Hockey Players	50	27.08	9.46		

The Graph showing the mean, SD, df and t-values between Football Players and Hockey Players in relation to their Motivation



**The table: 1** Presented the mean, standard deviation, t-value and P- Value foot ball Players and hockey Players in relation to their Anxiety. The mean value of football Players was 16.85, standard deviation was 6.98 and the mean value of hockey Players was 18.24 and standard deviation was 7.95. The obtained t-ratio was 3.18, which was found to be significant at 0.01 levels.

**The table: 2** Presented the mean, standard deviation, t-value and P- Value foot ball Players and hockey Players in relation to their Aggression. The mean value of football Players was 22.35, standard deviation was 8.92 and the mean value of hockey Players was 18.64 and standard deviation was 7.35. The obtained t-ratio was 3.18, which was found to be significant at 0.01 levels.

**The table: 3** presented the mean, standard deviation, t-value and P- Value foot ball Players and hockey Players in relation to their Motivation. The mean value of foot ball Players was 29.82, standard deviation was 7.28 and the mean value of hockey Players was 27.08 and standard deviation was 9.46. The obtained t-ratio was 3.86, which was found to be significant at 0.00 levels.

### **Conclusion**

In conclusion the major role of the sport psychologist is to impart knowledge and help the team players to cope with the effects of sport by offering techniques and strategies to increase concentration, confidence, consistency, control and motivation. Sport psychologists can help the team players to cope with the pressures of sport by helping individual athletes to learn different coping skills and stress management skills. Cook (1990) also commented on the important role that sports psychologists have in helping athletes to overcome mood swings and assist recovery from injury.

An athlete's performance can be negatively affected when they are overcome by nervousness during competition or lack discipline during training sessions and competition. Some student athletes experience pre-competition anxiety. This may negatively affect their ability to perform well consequently; they experience depression and disappointment that they have let the team down. The psychological factors like anxiety, aggression and motivation are playing a significant role in the present sports and games. The advanced sports and games techniques have greatly influenced the psychological factors of the standard of players. The results of the study will certainly contribute to the promotion and betterment of football and hockey game not only in Andhra Pradesh but in India as well.

### **Suggestions**

The Autogenic training is recommended for Foot ball & Hockey players to control the levels of Anxiety during competition.

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## Physical Education Programmes In Schools At Pre-Primary And Primary Stages

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### Abstract:

Physical Education is an indispensable area of education as it contributes to the health, to the social emotional and mental development of an individual. In the modern era we cannot undermine the importance of relationship between general education and physical education. These are complementary and supplementary to each other. Their aims and objectives lead towards common goal – the all round development of personality, enabling the man to lead enriched, abundant and harmonious life. Therefore, physical education is an integral part of general education and their relationship cannot be ignored. They are inter-related and inter-dependent, and constitute an indivisible whole.

The main Objectives of Physical Education Programmes are:

To develop the concept of good health, physical fitness, grace and poise, healthy habits

To develop the ability for making an enjoyable use of leisure.

To promote talent in sports and to achieve international standards.

**Free Movements:** Movements like walking, running, throwing are a part of movement education. For free movements and for exploration some improvised gadgets like hoops, old tyres, old boxes, old chairs, obstacles (prepared or existing) could be used. These activities facilitate free exploration, contribute to poise and body coordination and above all provide fun and enjoyment.

**Rhythmic:** Dance and action songs come under this category. Dance is an excellent medium of free healthful activity through which students can express their emotions. They are – various stimuli for dancing are necessary at this stage. These may be provided by audio-stimuli like mouth sounds, clapping, drums and also visual stimuli like demonstration, community songs and some other poems and songs selected from language readers. Examples group dance, action songs, flag drill etc. These activities help develop an agile body, balance and physical poise, graceful movements, a sense of rhythm and above all they yield joy and satisfaction.

**Imitation, Story Plays And Mimetic:** Enacting a story with appropriate movements is not only highly interesting but also offers wholesome exercise. Examples of imitation exercises could represent elephant, frog, rabbit, lion, train, motor car, washerman, rickshaw puller, beggar, doctor, old man, ball-catch and throw etc. imitating people the children know and watch, viz., grandmother, mother, teacher which is a very enjoyable exercise.

Examples of mimetic could be horse gallop, bell-ringing etc. Story plays like fox and grapes, thirsty crow, visit to a circus, trip to a forest etc. could be enacted. These activities help develop creative self-expression, formation of concepts regarding form, size etc., ability for expression through modes other than the word of mouth that yield joy and fun.

**Small Area Games:** These are simple games played within a small area involving running, chasing, dodging etc. Students could play these individually, in pairs or in groups. The interest of children could be sustained for a very long time through them

**Gymnastics:** Physical activities of this type should be so selected that the children, of the age-group in question, are able to perform without any special equipment, rabbit jumping, displaying the postures of standing, sitting, lifting, bending and stretching, forward, backward roll, monkey walk, cart wheel, wheel-barrow, shoulder roll, balance walk etc.

**Simple Combative:** Simple combative like pushing, pulling, toppling help children in sublimating their aggressive drives and desires. Examples: drake fight, cock fight, lame duck fight, hand wrestle, pushing off the bench or the stool, stepping on toes, knee slap etc. these activities help children to know about their strength in relation to others and help develop courage and self-confidence.

**Calisthenics:** These are exercises without apparatus. They involve continuous movement of the head, arms, trunk, legs without any rigid positions being held. These developmental exercises have to be done in a formal prescribed way for a sufficiently long time. These are normally 6 to 8 exercises of 2 to 4 counts for this age-group. Calisthenics help develop coordination of bodily movements leading to the growth and development of the body and better postures.

**Athletics:** Athletics play an important role in the programme of physical education. Activities in this area involve movements or running, jumping and throwing which are measurable and hence comparable.

**Games:** Games though important in their own right, have to be suggested with the full awareness of the fact that, playground facilities and specialist coaches or instructors are not available in many schools. Children may be offered opportunities for playing lead-up games leading them finally to major games. Next, they may be encouraged to learn and practice a few fundamental skills and finally, to play the games in the modified simple form. An exposure and opportunity is expected to finally enable students to select the games of their choice. Games help children to develop the ability to participate in vigorous activities to learn new skills, to cultivate an interest in games and to derive fun and enjoyment. Relays constitute a commonly practiced form of games. They could be simple relays, zig-zag relays, hop and run, potato race, three-legged race, jumping over the stick etc. Lead-up games are miniature forms of big games. In a lead-up game of football or hockey, for example there could be a small field with say 5 vs 5 players. In a lead-up cricket children may play tennis ball cricket etc.

**Yogic Exercises:** Yoga is an Indian contribution to the field of Health Education. Yogic Asanas are performed in a calm atmosphere, produce desirable effects on the body mind and are an excellent carry over activity. It will develop the ability to concentrate, has a carry over effect for it contributes to physical fitness and is now being increasingly used for therapeutic to cure a number of ailments. Asanas in which students could be trained at this stage are Swastikasana, Veerasana, Bhujangasana, Ardhasala-bhasana, Utkatasana, Tandanasana, Vrikshasana, Padahastanasana and Shavasana.

**Drill And Marching:** Drill and Marching are to be introduced at this stage as a compulsory activity. They develop uniformity in orderly movement, sense of discipline and enable the formation of a habit for maintaining good posture leading to proper and effective control of the body.

**Swimming:** Very few schools have swimming pools. However, whenever, natural facilities like a river, a sea, a pond are available nearby, swimming could be made a core programme children ought to be encouraged and guided to get over the fear of water through confidence drills. Swimming leads to the removal of the fear of water, helps develop confidence, fun and pleasure.

### **Conclusion:**

Opportunities ought to be provided to the children for learning and practicing the skills and playing the games with suitable modification in the school, as physical education is the integral part of the educational programme. These programmes aim at promoting the development of the body and the mind and also develop the qualities in children that are essential for a happy and well-adjusted life in a free and democratic world. Therefore we can conclude that, these activities can develop the total personality of the child, to its fullness and perfection.

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## The impact of cognitive style totalitarian to learn and retain skilled beating overwhelming fronting Volleyball

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### Introduction:

Characterized our current scientific progress and technical occurred in the various fields of life , have confirmed trends in education contemporary importance of cognitive learning for the learners and what was the learners do not respond to the process of learning motor skills in one way because there are individual differences among themselves because of what was confirmed and Do not be (Witkin), in defined the concept of cognitive styles " as the differences in the process of gaining experience " ( 1), so it was necessary to use multiple methods and new education for detecting individual possibilities for learners and their intellectual and cognitive . Through the work of a researcher in the field of teaching observed there is a weakness in learning skill beating overwhelming fronting for the upgrading of skills for learners and here Artie researcher study this problem to find out, the impact of use totalitarian cognitive method - analytical learning and retention .

**Research objectives:** -Identify the impact of use totalitarian cognitive method - in learning and analytic skill retention beating overwhelming fronting.

**Research Methodology:** The researcher experimental method and design fractional consisting of more designs of scientific appropriateness to resolve the problem of the research because it is looking at more than one independent variable one and it gives accurate results has chosen researcher three groups and applied them skill, and was selected sample of students in secondary Arabian Gulf for girls and the number of sample (280 ) female students from the fourth secondary literary, dividers into five groups (a, b, c, d, e),The sample was selected after the distribution of the questionnaire method (totalitarian - analytical), to identify the three groups as follows.

A - The first experimental group, the number of members (15) student of the students who are characterized by cognitive-style totalitarianism in the fourth row (a) their number (57) student their education skill beating overwhelming fronting.

B - The second experimental group consisted of 15 students from students who are characterized by cognitive-style analytical row IV (b) of their number (56) was student their education skill beating overwhelming fronting.

C - The third group, consisted of 15 female students from totalitarianism-style who are characterized by analytic understanding of the middle in the fourth row and (c) of their number (56) students, their education skill beating overwhelming fronting.

The (4) students were excluded for inadequacy ages,( 3) students not commitment their attendance (2) student for being simple possess an experience in the game, bringing the number members the sample at the final application (45), student any 16 % of research community.

And for purpose determining start line and one at the Bedouin with the research sample has homogeneity in the variables height and weight, was excluded because they are old age and stage congeners one, and according to what explained in the follows table: -

**Table (1)  
 Showing the homogeneity of the sample in the height and weight variables**

Torsion factor	median	standard deviation	mean	variables
0.322	162.000	3.494	161.133	Length
0.762	52.000	4.384	52.000	Weight

Has been extracted parity between the three groups after it has been under-skills education for the three groups and three units appeared identifiable according to the results shown in the followingtable

**Table (2)Showing equal skill vehicle (kinetic chain)**

Statistical decision		Calculated Value(f)	Average squares		Standard deviation	mean	groups	Skill
The Difference	Real significance	0.879	inside groups	Between groups	0.36839	1.2000	Totalitarian	Batting skill overwhelming
	Moral		0.423	0.117	0.156	0.31161	1.2667	
					0.50709	1.4000	Control	

### **Tools, devices and aids used in the research:**

- Sources and references of Arab and foreign and Internet (International).
- Measure of cognitive style (totalitarian - analytic accessory)
- Exploratory experiments and form for data logging and discharged.
- Staff Assistant and Stopwatch type (Casio).
- Codified the balance of to measure weight and Modern camera type Digital and CD.
- Tape measure Cm. and whistle.

Determine the variables used in the search:

The tests used in the research:

tests the accuracy of the skill batting overwhelming fronting

Draws a square dimensions (3x3 m) in the centre of the backcourt, where they are put ranked in the middle of square misguided, the player strike overwhelming from the centre and strike towards ranked of existing and direction rectum given to each player attempts to give 4 degrees with the fall of the ball on the ranked and 3 of the fall of the ball in the region misguided Two degrees awarded when the ball fell out of boxes, and at one point the fall of the ball in the front area and zero when the ball fall outside these areas.

3 -3-2 determine the variables of cognitive style (authoritarian - analytical):

3 - 3-2-1 cognitive test method (totalitarian - analytical):

The researcher on the scale that was used by Tariq Mohammed Badr (2006), a check -verbal way of multiple choice , have been drafted paragraphs of this test in the form of position with two alternatives , one represents a dimension of totalitarianism and the other represents a dimension analytical , and effector choosing one most likely to use if the exposure individual for this position so given class alternative Holistic given class the alternative analytical , and this is consistent with what indicated to him that (Schmeck 1983) "tests based on the position to be more important than attitude, demo in determining the style knowledge , because the effector in position demo be enthusiastic to the requirements of the situation , including the content of the performance characteristics and test instructions "

The preparation of the position of this choice is compulsory forcing responder on the show dimensions style cognitive clearly because of discrimination in these parts occurs in the dimensions of style knowledge required to measure the one hand, on the other hand be screened if used dimension cognitively certain it will excludes the other dimension of that style and thus bemeasuring how it handles Screened with the tasks of the tool instead of measuring the style to be measured.

### **What distinguishes this measure for other metrics?**

- 1 - Novelty test. And Appropriateness for the Iraqi environment.
- 2 - Can be used for any of the stages of study and appropriate to study Preparatory School For.
- 3 - Measures the psychological aspects while the other metrics measure the emotional aspects.
- 4 - Some metrics that measure aspects of learning and there is a difference between learning styles and cognitive styles.
- 5 - Other standards are not clear in giving degree for their substitute's weights.

### **Test Instructions:**

Try researcher be instructed test clear and accurate measure of where I asked the students to answer openly and honestly and objectively for the purpose of scientific research and reported that No answer is correct and the other wrong as far as express their opinion note that the answer will not be seen by one of only a researcher and includes standard on (36) paragraph As time to answer was selected from ( 3-13 ) minutes , and the test instructions tick (true) on one of the two alternatives for each paragraph of this measure. And reference after the answer to the key according to the correction in Supplement No. (1). It should be noted that the totalitarian alternative given degree (1) analytical alternative given C (2).

The questionnaire was distributed on the cognitive a scale totalitarian - analytical sample members in the Hall High School for Girls Arab Revolt, either tests stunning technique propagated dated on 21/10/2011, Where the measures effected by Teacher of Physical Education and under the direct supervision of the researcher and the proceedings continued for three days until 23/10/2011 note of that there are three identifiable units and rate of every day about the skill set under consideration these units are outside the educational units of the educational curriculum.

### **Exploratory experiments:**

This experiment was conducted on 1/10/2011 to know a possibility to answer questions from the questionnaire for cognitive style (totalitarian - analytic), and see how the students understanding of the paragraphs, and know the time needed to answer, and to extracted the validity and reliability required for the measure. This experience has been applied to a sample of outside research sample used the Division - e - which reached its members (15) students in a way the lottery has been re-application of the scale at 11/10/2011.

**pre-tests:**

The test was conducted by me for the skill in question dated 21/10/2011 and in the light of the results of the tests have been extracted parity between the three groups, has been evaluating the performance of students by specialists a game of volleyball \*.

**educational curricula:**

The researcher its procedures dated 28/10/2011 and follow the Special approach Preparatory School For phase of the preparatory fourth class, is demonstrate by the Teacher of Physical Education and under the direct supervision of a researcher has been divided educational unit to (45 minutes) as follows:

**Preparatory section:**

Total duration (10 minutes) and the goal of this section is to emphasize the technical and administrative matters, as well as the initialize of tools and attendance for the purpose of initialize the full body for the performance, has been to divide this section into three parts.

- Introduction: - The total duration (3) minutes, was the initialize of tools and taking attendance and the performance sports salute.
- Warm-up: - The total duration (7) minutes to the department:Warming up-General: - The total duration (4) minutes to initialize all the members of the body for perform.
- Warming up the Special: - The total duration (3) minutes to give special exercises that help performance the main section, as well as assistance exercises on the wall.

**Main section: -**

Total duration (15 minutes) and the aim was to learn the skills selected in the artistic gymnastics, giving exercises for the development of performance, has been divided into two parts:

- Educational aspect: amounted duration (5) minutes, and was in this section explain the chosen skill, then the performance of the skill.
- The practical side: amounted duration (10 minutes).

**Concluding section:**

Amounted duration (10 minutes) and it has been give calm exercises with feedback and the emphasis on good performance.

**The Steps To Implement The Educational Curriculum:**

After testing tribal groups of the three with style cognitive (totalitarian - analytic) and the control group of students from middle school to fourth grade preparatory, and applied the School of Physical Education and under the direct supervision of the researcher the educational curriculum itself totals of research the three, having been sorting group of students totalitarian from the Division (a) students analytical of the Division (b) For the first two experimental groups and the second in a respectively, respectively, either the control group was the group of Central Division for (c)The follow researcher set of steps when implementing Vocabularies the educational curriculum, which has given researcher students an idea of the game is to be there is a perception, and giving exercises own and warm up public and private itself to totals of the three were presented paradigm the Special skill by a teacher of physical education and after the show guide teacher questions about the skill, have to start applying methodology of all groups in the same way and learn each group in its ownAccording to what exists in the schoolClass Schedule

**posterior tests:**

Researcher conducted posteriori tests on the sample research dated 13-14-15/1/2012 by the school hall, and to create conditions similar to the pre-tests in terms of (place, time, and staff assistant .... etc.).

**- Results and analysis and discussion**

Displays results of the pre- post-tests the skill beating overwhelming fronting and analysed and discussed.

**4-1-1 View the results of the pre- post-tests a group students (totalitarian - analytic).**

The Difference	(t) Calculated	F <sub>n</sub>	F'	Post tests		Pre tests		Batting skill overwhelming
				ع+	ع-	ع+	ع-	
Moral	16.430	0.150	2.466	0.698	3.666	0.368	1.200	Totalitarian
Moral	31.134	0.168	5.233	0.377	6,5	0.371	1.266	analytical
Moral	11.374	0.272	3.100	1.101	4.5	0.507	1.400	Control

\* crosstabulated-degree (2.14) when the degree of freedom (14) when the moral > 0.05

By the results obtained by the researcher of the pre- post- tests, showing that aggregates the three had evolved in all educational units because of the gradient in receiving information and build programs psychomotor the appropriate to the nature of skill given, this has led gradient to stability in the level of learning and progress in a positive result for the organization of units and they continue, and this was clearly evident in the median, which rose in the post-test. Because the skill of beating overwhelming skills closed as are controlled motor skills through closed-circuit based on the feedback source for correction and fitness level that enjoy their students analytic make them learn the skill economy effort making it easier their access to good performance and integrated Recalling Susan Abdel Moneim(1983) to "movements working to develop capacities and affect the strength of the internal organs when they are acting pursuant on a high degree of intensity" Moreover, the feedback obtained by all aggregates during performance has played an important role in the high level of learning and correction of errors and the transition between the stages of learning better and this was confirmed by Schmidt saying that "feedback increase the capacity of individuals and their motives, and enhance the performance right and avoid performance wrong"(The researcher believes that superiority of female students analytic in the post-test dating back to their ability to analyse the situation, which make them self-reliant in the completion of duty after mastering skills and this was confirmed by (Johnb. Carroll), quoting Nuha care "that the student self-reliant in the completion of duty and this are not taken to only after the student achieving 85% of the level of accuracy in duty and therefore works on retains the level without the help of the teacher, but the presence of feedback "As for the control group , it is through the results that have been reached shows that the curriculum has taken into account the progress in getting students of this group also information and use it in the duties of motor required , as confirmed educational curriculum importance of taking advantage of high mental processes that address all stimuli , and thus predispose a warehouse physically useful can be retrieved at any time, and reduce the so individual differences among students in the process of acquiring and retrieving information and use it in order to achieve accuracy in performance , as well as it has created an educational curriculum atmosphere appropriate to invest in mental processes such as attention, perception , memory , thinking and then became greater understanding of the information process , and this is what increased the educated ability to learn . And reduced the individual differences among them Recalling (Habieb 2001) that "the methods of learning is a crossroads modalities thinking and personal motivation are related to the type of strategies that individuals tend to be applied when faced with a stand or a preferred route for information processing

#### **Conclusion:**

The aggregates all have learned all the skills and to varying degrees.

#### **Recommendations:**

In light of the above, the researcher recommends the following:

- 1 - Taking into account the cognitive methods when placing educational curricula for learners in a game of volleyball.
- 2 - Emphasis on these methods when teaching the various materials and conduct courses for staff in the field of education because of its impact on learning.

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## Effect Of Green Tea And Oolong Tea Supplementation On Plasma Glucose, Immunoglobulin A&B, And Calcium Among Metabolic Syndrome Affected People

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**Types Of Tea:** The three major categories of tea that result from different processing techniques are black (fully fermented) green (unfermented), and oolong (partially fermented).

**Green Tea:** tea made from unfermented a leaf that is pale in colour and slightly bitter in flavour, produced mainly in China, India and Japan. Green tea is an herb that differs from black and oolong teas because it is not fermented.

**Oolong Tea:** Is a traditional Chinese tea (*Camellia sinensis*) produced through a unique process including withering under the strong sun and oxidation before curling and twisting. In terms of degree of fermentation, it can range from 8% to 85%, depending on the variety and production style.

**Statement Of The Problem:** The purpose of the study was to find out the effect of green tea and oolong tea supplementation on physical biochemical and psychological variables among metabolic syndrome patient

**Selection Of Variables:** The significant of the study was to find out the effectiveness of the green tea and oolong tea supplementation on on physical biochemical and psychological variables among metabolic syndrome people.

**Dependent Variables:** Plasma Glucose, Immunoglobulin, And Calcium

**Independent Variable:** 1. Experimental group I- fifteen selected subjects were supplemented with green tea 2. Experimental group II- fifteen selected subjects were supplemented with oolong tea 3. Control group- fifteen selected subjects were not given any supplements.

**Statistical Technique:** Analysis of Covariance statistical technique was used, to test the significant difference among the treatment groups. If the adjusted post-test results were significant, the scheffe's post hoc test was used to determine the paired mean significant difference. Thirumalaisamy R. (2004).

**Discussions And Findings Of Plasma Glucose:** This result indicated that the effect of green tea and oolong tea supplementation had significantly increased the plasma glucose among metabolic syndrome people. When compared with control group in terms of mean gains. Green tea has decreased plasma glucose than the oolong tea. The further findings of the study indicated that combined oolong tea and green tea had significantly greater reduction in plasma glucose.

During the supplementing period the result indicated that the green tea and oolong tea decreased the plasma glucose among the control group because of the supplementing is influenced and utilized the plasma glucose. Results show that there was a vast significant difference in pre and post test among the metabolic syndrome people.

**Discussions And Findings Of Immunoglobulin A (Iga):** This result indicated that the effect of green tea and oolong tea supplementation had not significantly increased the immunoglobulin A (IgA) among metabolic syndrome people. When compared with control group in terms of mean gains. Green tea and oolong tea has not increased immunoglobulin A when compared to the control groups. The further findings of the study indicated that combined oolong tea and green tea had significantly greater reduction in immunoglobulin A (IgA).

During the supplementing period the result indicated that the green tea and oolong tea does not increase the immunoglobulin A among the experimental group because of the supplementing is not influenced and utilized the immunoglobulin A. Results show that there was a not significant difference in pre and post test among the metabolic syndrome people.

**Discussions And Findings Of Immunoglobulin B (IgB)**

This result indicated that the effect of green tea and oolong tea supplementation had significantly increased the immunoglobulin B (IgB) among metabolic syndrome people. When compared with control group in terms of mean gains. Green tea and oolong tea has decreased immunoglobulin A among the control groups. The further findings of the study indicated that combined oolong tea and green tea had significantly greater reduction in immunoglobulin B (IgB).

During the supplementing period the result indicated that the green tea and oolong tea has increase the immunoglobulin B among the control group because of the supplementing is influenced and utilized the immunoglobulin B. Results show that there was a significant difference in pre and post test among the metabolic syndrome people.

**Discussions And Findings Of Calcium:** This result indicated that the effect of green tea and oolong tea supplementation had not significantly increased the calcium among metabolic syndrome people. When compared with control group in terms of mean gains. Green tea and oolong tea does not increased calcium when compare to the control groups. The further findings of the study indicated that combined oolong tea and green tea had significantly greater increased in calcium

During the supplementing period the result indicated that the green tea and oolong tea has not increase the calcium among the control group because of the supplementing is not influenced and utilized the calcium. Results show that there was not significant difference in pre and post test among the metabolic syndrome people.

**Conclusion:** The following conclusions were drawn within the limitation of this study

The obtained result shows that there was significant improvement in green tea

1. a with physiological and psychological variables among the metabolic syndrome people.
2. The obtained result shows that there was significant improvement in oolong tea with physiological and psychological variables among the metabolic syndrome people.
3. It was hypothesized that experimental group I would have significant effect on physiological and psychological variables greater than that of experimental group II.

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## **Effect of Achievement, Motivation and Socio- Economic Status on sports performance of womens in Karnataka state.**

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### **Abstract:**

The objective of the study is to analyse Effect of Achievement, Motivation and Socio- Economic Status on sports performance of womens in Karnataka state. The various districts from different parts of the Karnataka state were selected 400 samples from various district were selected through random sampling to find out influence of socio economic conditions on the Achievement, Motivation in sports. This project is an attempt to analyze the problems that a girl, who wants to shape her life as a sports woman. Research has suggested that participation in sport can be an invigorating and personally empowering experience for women. Being an athlete, especially a skilled athlete, can change the way a woman sees herself. It can make her feel physically stronger, more competent, and more in control of her life as individual. Sport participation also provides girls and women with opportunities to reconnect with the power of their own bodies. The data were collected through questionnaire and Oral interviews.

**Key Words:** Women sports, Socio-economic status, Motivation factors and Achievements in sports.

**Introduction:** A sport is a part of basic human behaviour and is among the world effective means of socialization of man Sports and games are the integral part of human life. Along with the entertainment it also helps to shape the personalities of the sports persons having provided with physical fitness and mental soundness. Sports give special identification to persons particularly those who participated inter university or state level or national level or international level competitions. To be successful in sports field one should dedicate himself fully to the field of sports. Age, education, religion, ethnic and socioeconomic background, place of residence, parental values, changes over time, characteristics coming from creation and peer pressures are just a few of the variables that may influence students or youngsters knowledge, perceptions and attitudes.

### **Women and sports:**

Education, lifestyle, money and income, sources of income, eating habits, dressing habits, dwellings and attitudes, everything is different from one region of India to another. This particularly is true for the life of women in India. In the metros and the bigger cities we see girls and women going out, being educated and making careers. They are at par with any man, in many ways they are even better. We see them in all possible careers and professions; we also see them in sport. So we see the women Anju Bobby George, K Malleshwari, Mamatha Poojari and Badminton players like Aparna Popat. It is a great struggle and requires great efforts to become so proficient and successful in any game.

### **Significance Of The Study**

In view of competitive sports gaining significance the study of achievement, motivation, and socio-economic status assumes importance in the context that,

1. Woman's general attitude about the sports and games.
2. These studies will be able to know the achievement, motivation, socio-economic status and how it effects on sports performance of woman sports persons.

### **Variables**

The socioeconomic status is an independent variable.

The dependent variables are Achievement Motivation.

## Methodology

The present study was conducted to analyse the Effect of Achievement, Motivation and Socio-Economic Status on sports performance of women in Karnataka state. The various districts from different parts of the Karnataka state were selected. 400 samples from various districts were selected through random sampling to find out the influence of socio-economic conditions on the Achievement, Motivation in sports. The required data was collected from a standardized questionnaire. The questionnaire was administered to the subjects and the data pertaining to the study was collected. The data so collected through questionnaire and oral interview was analysed to find the findings of the study.

## Sample

The 400 subjects were selected from various districts from different parts of the Karnataka state. The sample was taken in 17 different disciplines from sports and games.

## Sample Design

Athletics-54, Badminton-22, Basketball-26, Handball-30, Taekwondo-26, Volleyball-33, Hockey-46, Kabaddi-34, Football-16, Cricket-4, Swimming-13, Softball-14, Kho Kho -23, Archery-12, Throw ball-17, Power Lifting-13, Weight Lifting 12.

## Tools

Personal data schedule was used to collect the information related to personal and socio-demographic status of the subject.

Socio-economic status scale developed by Bharadwaj and Chavan (1989).

Achievement Motivation Test developed by Dr. Beena Shah.

Qualitative method of data collection was used in this study. The two tools that we used were

1. Interview
2. Questionnaire

## Scoring

Answers were scored as per the scoring key provided in the respective manuals of test.

## Collection of Data

Questionnaires and interviews with players. 400 data was collected using a detailed questionnaire. 312 respondents responded by 400 female players. We interviewed 372 players for this purpose. Out of these 312 interviews we retained 28 because the remaining three were only partially complete. A separate questionnaire was developed and administered to achievement motivation. Each variable observed has been clearly depicted in the respondents table which is supported by suitable graphical representation.

## Statistical Analysis

Collected data was entered in a computer with the help of a data entry operator for the purpose of analysis through software Statistical Package for Social Sciences (SPSS). Descriptive statistics (frequency and percentage) and inferential statistics the 't' test, ANOVA and correlation, were calculated and data were organized. Mean, standard deviation and t-test were used to analyze the data.

## Results and Discussion

Level of Participation		
Participation	Representation	Percentage
Inter-University	136	(34.00%)
State	179	(44.75%)
National	85	(21.25%)
International	----	----
Total	400	100

It is quite evident from the above table that there has been a level of participation of an individual in sports activities viz; 34.00% Inter-university, 44.75% state and 21.25% national level participation from over all Karnataka state. Regarding participation by students at the state level meet it is clearly shown that there are more participants in inter-university level. At the higher levels of participation the number is lesser. The level of participation international is nil. Some of the respondents particularly the Hockey players have played in national level but they have not selected for international level. The reason they have said is the selection will be biased, only north Indian will have an opportunity, they neglect south Indian. Similarly there is significance in participation of rural and urban participants; there is an equal number of participation from rural and urban areas in various national and Inter-university level competitions.

## Achievement Motivation.

Sports performance of high and low SES sportswomen

Variables	High SES	Low SES
Sports performance	Mean 17.30	19.20
	SD 4.70	3.92
	t-value 3.51*	

\* Significant at 0.01 level

The above table No.4.7.3 presents the mean, SD and t values of need for Sports performance between high and low SES sportswomen. The high and low SES sportswomen have the mean scores of 17.30 and 19.20 respectively. The comparison of the mean score suggests that the low SES sportswomen have the higher need for Sports performance than the high SES sportswomen. The obtained t value is 3.51, which is significant at 0.01 level shows that there is a significant difference of need for Sports performance between the high and low SES sportswomen.

In the above table the irrespective of their condition, the low SES sportswomen have the high need for Sports performance success due to their strong desire to learn, will to win, and a strong desire to improve their condition in the society. Therefore, the hypothesis that there is a significant difference between high and low SES sportswomen in need for Sports performance success is accepted. On contrary, the low SES sportswomen would be in a low need for Sports performance due to deprived condition, low income, low standard of living, and education. They would make them to be pessimistic and results in low need for Sports performance.

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## “A Study of Anxiety, Self-confidence and Stress of State Level Male and Female School Players”

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### Abstract

**Objective** of the study was to find out the anxiety, self confidence and stress of state level male and female school players.

**Hypothesis:** 1. there will be significant difference between state level male and female school players with respect to anxiety, self confidence and stress.

**Sample:** For the present study 100 Sample were belongings to in Maharashtra state districts school players in various games i.e . Football, hockey, cricket, tennis and runner. The age range of subjects was 16-20 years. Purposive non-probability sampling technique was used.

**Tools:** 1) Sports Anxiety Test (SAT) this scale was constructed and standardize by Dr. Quadri Syed Javeed. That test consists of 30 items. 2) Sports Self confidence inventory (SSCI) this scale was constructed and standardize by Dr. Quadri Syed Javeed. That test consists of 30 items. 3) Singh persona stress source inventory.

**Result:** 1. State level female school had significantly high anxiety than the state level male school.  
2. State level male school had significantly high self confidence than the state level female school.  
3. State level female school had significantly high anxiety than the state level male school.

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### Introduction:

The stressful nature of elite sport, and the competitive environment surrounding it, places many demands on participating athletes. In sport psychology many researchers are interested in assessing anxiety responses of athletes to competitive events. A recent approach that accounts for the positive aspects of the arousal performance relationship is that of reversal theory (Kerr, 1993). Based upon the work of Apter (1982, 1984), the theory suggests that motivation is influenced by changes or reversals between four paired alternate meta-motivational states. In a telic state, high physiological arousal will be interpreted as anxiety; whereas in a par atelic state, high physiological arousal will be experienced as excitement. Equilibrium in the desired meta-motivational state is achieved when minimal differences arise between an individual's preferred and actual arousal state. In addition, contingent upon the perceived pleasure or hedonic tone of the individual, performers can also suddenly reverse from the experience of high arousal as excitement to one of anxiety (Kerr, 1997). Unlike the inverted-U hypothesis, high levels of physiological or felt arousal may not automatically lead to detrimental performance consequences and may actually be beneficial. Although some support exists for the tenets of reversal theory (Kerr, 1997), and the fact that it attempts to explain the more positive aspects of the individual's competitive affective experience, the approach has been suggested as offering little in terms of explaining *how* and *why* anxiety (through changes in arousal states) might affect motor performance (cf. Woodman and Hardy, 2001). In contrast to Hanin's approach that suggests an appropriate emotional zone exists for optimal performance (e.g., high levels of anxiety can have positive performance effects), multidimensional anxiety theory (MAT; Martens, Burton, et al., 1990) describes the relationship between the specific components of the competitive state anxiety response and performance. While self-confidence is predicted to exhibit a positive linear association with performance and somatic anxiety a quadratic or inverted-U relationship (i.e., performance increases up to a given level of symptom intensity), cognitive anxiety is suggested to exhibit a negative linear relationship with performance. Burton's (1998) review of the relationship between the separate components of anxiety and performance indicated that of the sixteen studies examined, only two strongly supported the theoretical predictions (i.e., Burton, 1988; Taylor, 1987); six provided moderate or partial support (i.e., Barnes, Sime, Dienstbeir, and Plake, 1986; Gould et al., 1987; Jones and Cale, 1989; Krane, Williams, and Feltz, 1992; Maynard and Cotton, 1993; Williams and Krane, 1993); and eight provided weak support that was unable to

demonstrate any anxiety-performance relationship (i.e., Caruso et al., 1990; Gould et al., 1984; Hammermeister and Burton, 1995; Karteroliotos and Gill, 1987; Martin and Gill, 1991; Maynard and Howe, 1987; Maynard, Smith, et al., 1995; McAuley, 1985). Although MAT provides some indication of the positive influence that somatic anxiety (up to moderate levels) and self-confidence can have upon invariably be negative and detrimental, with no positive consequences. In addition, the findings from recent meta-analyses suggest weak to moderate relationships between the subcomponents of multidimensional anxiety and performance (e.g., Craft et al., 2003; Woodman and Hardy, 2003) and emphasize both conceptual and methodological shortcomings (Burton, 1988, 1998; Jones, 1995a, 1995b; Raglin, 1992; Woodman and Hardy, 2001). One particular criticism is that MAT attempts to explain the additive as opposed to interactive effects of the competitive anxiety subcomponents upon performance (Hardy, 1990; Woodman and Hardy 2001). Based upon Eysenck's (1986) work in the field of cognitive psychology, the experience of high anxiety symptoms is suggested to lead to positive performance consequences (cf. Hardy 1997). Eysenck (1992) purported that cognitive anxiety served two principal functions. Firstly, it consumed some of an individual's attentional capacity for the task, effectively reducing working memory capacity due to task irrelevant cognitive activity or worry, thereby impairing processing efficiency. Secondly, cognitive anxiety or worry also signals the importance of the task to the individual and may lead to an increased investment in the task if a below par performance is perceived. The stress response (also called the fight or flight response) is critical during emergency situations, such as when a driver has to slam on the brakes to avoid an accident. It can also be activated in a milder form at a time when the pressure's on but there's no actual danger like stepping up to take the foul shot that could win the game, getting ready to go to a big dance, or sitting down for a final exam. A little of this stress can help keep you on your toes, ready to rise to a challenge. And the nervous system quickly returns to its normal state, standing by to respond again when needed. But stress doesn't always happen in response to things that are immediate or that are over quickly. Ongoing or long-term events, like coping with a divorce or moving to a new neighborhood or school, can cause stress, too. Long-term stressful situations can produce a lasting, low-level stress that's hard on people. The nervous system senses continued pressure and may remain slightly activated and continue to pump out extra stress hormones over an extended period. This can wear out the body's reserves, leave a person feeling depleted or overwhelmed, weaken the body's immune system, and cause other problems.

**Objective of the study:**

- 1) To find out the anxiety, self confidence and stress of state level male and female school players.

**Hypotheses:**

- 1) There will be significant difference between state level male and female school players with respect to anxiety, self confidence and stress.

**Methods:**

**Sample:**

For the present study 100 Sample were belongings to in Maharashtra state districts school players in various games i.e . Football, hockey, cricket, tennis and runner. The age range of subjects was 16-20 years. Purposive non-probability sampling technique was used.

**Tools**

**Sports Anxiety Test (SAT)**

This scale was constructed and standardize by Dr. Quadri Syed Javeed. That test consists of 30 items, each item 'YES' 'NO' type alternatives. Reliability of the test was found by test retest method, and it was found to be .89 for the anxiety measure. Validity the test was also validated by correlating the scores obtained on this test with the scored obtained by the subject on Dr. Ravikant and Dr. V N Mishra (2003) Sports Competition Anxiety Inventory. The Concurrent Validity coefficient obtained is .84 which is significant beyond .01 levels.

**Sports Self Confidence Inventory (SSCI)**

This scale was constructed and standardize by Dr. Quadri Syed Javeed. That test consists of 30 items, each item 'YES' 'NO' type alternatives. And highly reliable and valid inventory.

**Singh Personal Stress Source Inventory (Spssi):**

For The Present Study, Manual For Personal Stress Source Inventory Spssi was used for measuring the stress of teacher educators. For calculating test-retest reliability the inventory was administered twice with a gap of 14 days on an unselected sample of 200. The test-retest reliability was found to be .79 which was not only high but also statistically significant. Holmes and Rahe (1967) on a sample 100 of 100 and the obtained correlation was .68 which was significant one providing evidence for sufficient concurrent reliability of the test.

**Procedures of data collection**

Sports Anxiety Test (SAT) and Agnihotri's Self-confidence Inventory (ASCI) test and stress inventory administered individuals as well as a small group. While collecting the data for the study the later approaches was adopted. There seating arrangements was made in a classroom. Prior to administration of test, through informal talk appropriate rapport form. Following the instructions and procedure suggested by the author of the test. The test was administered and a field copy of test was collected. Following the same procedure, the whole data were collected.

**Variable**

**Independent variable-**

- 1) Gender      a) Male b) Female

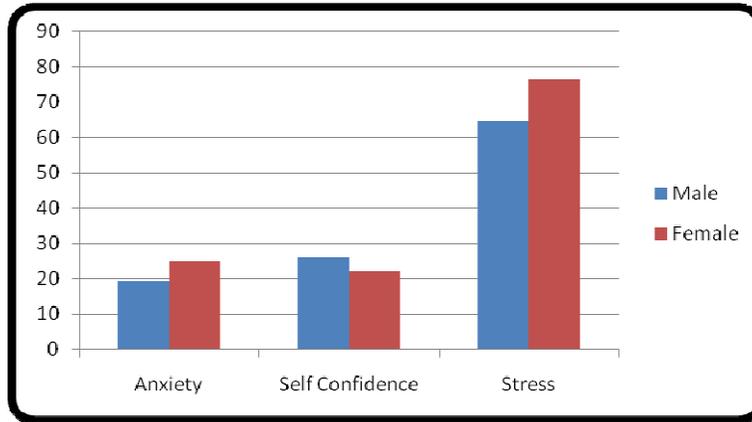
**Dependent Variable**

- 1) Anxiety
- 2) Self Confidence
- 3) Stress

**Statistical Analysis and Discussion**

't' showing the significance of difference between the state level male and female school players with respect to Anxiety, Self Confidence and Stress.

Dimensions	State level Male School Players (N=50)			State level Female School Players (N=50)			t- ratio	df	p
	Mean	SD	SE	Mean	SD	SE			
Anxiety	19.07	3.81	0.53	24.89	4.02	0.56	7.43	98	< .01
Self Confidence	26.12	3.48	0.49	21.78	3.94	0.55	5.83	98	< .01
Stress	64.55	7.72	1.09	76.34	9.05	1.27	7.00	98	< .01



The results related to the hypothesis have been recorded. Mean of anxiety score of the state level male school players Mean is 19.07 and that of the state level female school players Mean is 24.89 The difference between the two mean is highly significant ('t'= 7.43, df = 98, P < 0.01) it was found that the state level female school have Significantly high anxiety than the state level male school. Martens and his collaborators (1990) reported that women exhibit higher cognitive anxiety and lower self-confidence than men. The findings of Vosloo, Ostrow and Watson (2009) support that claim. In a study of 151 young swimmers, they reported that the women exhibited higher levels of somatic anxiety and lower levels of self-confidence than the men. Tabernero and Márquez (1993) argued that women, to a greater extent than men, tend to attribute their competitive anxieties to doubting themselves and their potential, an effect that becomes more pronounced with age. Mean of self confidence score of the state level male school players Mean is 26.12 and that of the state level female school players Mean is 21.78 The difference between the two mean is highly significant ('t'= 5.83, df = 98, P < 0.01) it was found that the state level male school have significantly high self confidence than the state level female school. Mean of stress score of the state level male school players Mean is 64.55 and that of the state level female school players Mean is 76.34 The difference between the two mean is highly significant ('t'= 7.00, df = 98, P < 0.01) it was found that the state level female school have Significantly high anxiety than the state level male school.

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## A Comparative Study of Explosive Strength among Volley Ball Players and Basket Ball Players of Vijayawada

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### Introduction:

**Volleyball** is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules.<sup>[1]</sup> It has been a part of the official program of the Summer Olympic Games since 1964. The complete rules are extensive. But simply, play proceeds as follows: a player on one of the teams begins a 'rally' by serving the ball (tossing or releasing it and then hitting it with a hand or arm), from behind the back boundary line of the court, over the net, and into the receiving team's court. The receiving team must not let the ball be grounded within their court. The team may touch the ball up to 3 times but individual players may not touch the ball twice consecutively. Typically, the first two touches are used to set up for an attack, an attempt to direct the ball back over the net in such a way that the serving team is unable to prevent it from being grounded in their court. The rally continues, with each team allowed as many as three consecutive touches, until either (1): a team makes a *kill*, grounding the ball on the opponent's court and winning the rally; or (2): a team commits a *fault* and loses the rally. The team that wins the rally is awarded a point, and serves the ball to start the next rally.

**Basketball** is a sport played by two teams of five players on a rectangular court. The objective is to shoot a ball through a hoop 18 inches (46 cm) in diameter and 10 feet (3.0 m) high mounted to a backboard at each end. Basketball is one of the world's most popular and widely viewed sports. A team can score a field goal by shooting the ball through the basket during regular play. A field goal scores two points for the shooting team if a player is touching or closer to the basket than the three-point line, and three points (known commonly as a *3 pointer* or *three*) if the player is behind the three-point line. The team with the most points at the end of the game wins, but additional time (overtime) may be issued when the game ends with a draw. The ball can be advanced on the court by bouncing it while walking or running or throwing it to a team mate. It is a violation to move without dribbling the ball, to carry it, or to hold the ball with both hands then resume dribbling. Explosive Strength a component of Speed and strength is very important in Volley Ball and Basket Ball to Jump High to score more points.

### Methodology:

The sample for the present study consists of 20 Male Volley Ball and 20 Male Basket Ball between the age group of 18-22 Years from Vijayawada.

To assess the explosive Strength the standing broad jump were conducted on Volley Ball and Basket Ball Players by the qualified Technical Officials.

Standing Broad Jump:

The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power.

purpose: to measure the explosive power of the legs

equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The take off line should be clearly marked.

procedure: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Scoring: The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts. attempts are allowed.

### **Results and Discussion:**

This study shows that Volley Ball Players are having good explosive strength compare to the Basket Ball Players.

### **Conclusion:**

1. It is concluded that Volley Ball Players are having better explosive strength than Basket Ball Players.
2. It is concluded that Volley Ball requires more strength to jump high to smash the volley ball.
3. Weight training exercises plays a major role for improvement of physical fitness and Strength for Volley Ball and Basket Ball Players.

### **Recommendations:**

1. Similar studies can be conducted on other sports and girls and also among female players.
2. This study also helps the physical educators and coaches to improve their training regime to excel in performance in all sports and games.

### **References:**

Wikipedia – Volley Ball and Basket Ball  
[www.topendsports.com](http://www.topendsports.com)

## **A Comparative Study of Speed among Foot Ball Players and Hockey Players of Guntur**

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### **Introduction:**

**Football** refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. The most popular of these sports worldwide is association football, more commonly known as just "football" or "soccer". Unqualified, the word *football* applies to whichever form of football is the most popular in the regional context in which the word appears, including association football, as well as football, Australian, Canadian football, Gaelic football, rugby league, rugby union.

Hockey is played on gravel, natural grass, sand-based or water-based artificial turf, with a small, hard ball approximately 73 mm (2.9 in) in diameter. The game is popular among both males and females in many parts of the world, particularly in Europe, Asia, Australia, New Zealand and South Africa. In most countries, the game is played between single-sex sides, although they can be mixed-sex.

The governing body is the 126-member International Hockey Federation (FIH). Men's field hockey has been played at each summer Olympic Games since 1908 (except 1912 and 1924), while women's field hockey has been played at the Summer Olympic Games since 1980.

Modern field hockey sticks are J-shaped and constructed of a composite of wood, glass fibre or carbon fibre (sometimes both) and have a curved hook at the playing end, a flat surface on the playing side and curved surface on the rear side. All sticks are right-handed – left-handed sticks are not permitted. While current field hockey appeared in mid-18th century England, primarily in schools, it was not until the first half of the 19th century that it became firmly established. The first club was created in 1849 at Black heath in south-east London. Field hockey is the national sport of Pakistan.<sup>[7]</sup> It was the national sport of India until the Ministry of Youth Affairs and Sports declared that India has no national sport in August 2012.

### **Method:**

The sample for the present study consists of 20 Male Foot Ball Players and 20 Male Hockey Players of Guntur District . The 50 M Run is used to assess the speed .

### **50 M Run:**

**Aim:**The aim of this test is to determine acceleration and speed.

**equipment required:** measuring tape or marked track, stopwatch, cone markers, flat and clear surface of at least 70 meters.

**procedure:** The test involves running a single maximum sprint over 50 meters, with the time recorded. A thorough warm up should be given, including some practice starts and accelerations. Start from a stationary standing position (hands cannot touch the ground), with one foot in front of the other. The front foot must be behind the starting line. Once the subject is ready and motionless, the starter gives the instructions "set" then "go.". The tester should provide hints for maximizing speed (such as keeping low, driving hard with the arms and legs) and the participant should be encouraged to not slow down before crossing the finish line.

Two trials are allowed, and the best time is recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system is triggered, and finishes when the chest crosses the finish line and/or the finishing timing gate is triggered.

**Result:**

The results of the Study shows that Foot Ball Players are having the good speed compare to Hockey Players.

Table – I: Showing the Mean values in 50 M Run of Foot Ball and Hockey Players

Test Items	Group	N	Mean	Std.Deviation	df	t	Sig.(2tailed)
50 M Run	Foot Ball Players	20	7.61	0.294	38	4.58	0.00
50 M Run	Hockey Players	20	7.74	0.376			

The Foot Ball Players Mean speed is 7.61 and Hockey Players

**Conclusion:**

It is concluded that Foot Ball Players are good in speed Compare to Hockey Players. Coaches must give Coaching to the Foot Ball and Hockey Players to improve their motor qualities to excel in the performance.

**Recommendations:**

Similar Studies can be conducted on female Foot Ball Players and Hockey Players

Similar studies can be conducted on other track and field events in athletics.

The Coaches must give proper coaching to all the athletes as per the requirements to achieve high level performance in the competition.

**References:**

Top End Sports

Wikipaedia, Foot Ball and Hockey