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Effect of Selected Yogasanas on Pulse Rate of Govt. High School Girls in Vizianagaram

M.Sudhakar Babu, Research Scholar, A.N.U.Guntur
Dr.P.P.S.Paul Kumar, Principal,Univ.College of Phy.Edn.ANU,Guntur

Abstract
The purpose of this study is to find out the effect of selected Yogasanas on the pulse rate among school girls. The significance of this study is based on the fact that the effect of Yogasanas on pulse rate is established. It may provide good and harmonious living of the people in the society. Decrease in the pulse rate accompanied by increased stroke volume and greater oxygen supply due to the practice of Yogasanas will help the Athletes in activities which require Cardio-Vascular endurance. A system of exercises practiced as part of this discipline to promote control of the body and mind. Yoga is suspension of the modifications of the thinking principles which is obtainable through different methods such as controlling the vital breath and steady pose both of which intimately with mind."

Keywords— Yogasana, Pulse rate, School Girls, Volume.

Introduction

Yoga is an ancient scientific system which brings harmony in body and mind. It has been developed by sages for the spiritual advancement of an individual. It takes all the aspects of human personality. The aim of Yoga on its Physical side is to avoid disease and ensure health by establishing and maintaining Physical harmony in the human body. Though Yogic practices, Yogic therapeutics aims at restoring the internal recreations to their normality by securing the health of the endocrine systems. Since Yogic exercises develop most of the components of Physical fitness. It is expected that it will develop the Cardio respiratory endurance also. Yogic culture is divided into eight angas viz., YAMA, NIYAMA, ASANA, PRANAYAMA, PRATYAHARA,DHARANA, DHYANA and SAMADHI.

Stages Of Yoga

The right means are just as important as the end in view. Pathanjali enumerates these means as the right limbs or stages of Yoga for the quest of the Soul." They are

1) Yama 2) Niyama 3) Asana 4) Pranayama
5) Pratyahara 6) Dharana 7) Dhyana 8) Samadhi.

Ii. Previous Work: Devires states as "Training progresses the heart rate for any given work load decreases pulse rate. The physically fit or athletically trained individual has a lower heart rate for any given exercise work load. Furthermore at the maximum heart rate which is similar for the trained and untrained states the trained individual will be able to produce a great work load". Klafs and D.Aruheim selected "Yogasanas training reduce the pulse rate some times by as much as ten to twenty beat per minute. During the period between pre training and post training measurements". Letounov of Soviet Socialist Republic states, "As a result of training the action of the cardio vascular system becomes more economical as revealed by a drop in the pulse rate, lengthening of the ventricular contractions and relaxation phases and lowering of the systolic and diastolic blood pressures, decrease in the velocity of the blood flow and a better utilization of oxygen".Jokl states that "During exercise the human heart decreases in size, the extent of this reduction is related to the intensity of the muscular effort. During moderate exertion all clinical exercise tests fall into this category. The most immediate response is an increase of cardiac rate. A slight diminution in size occurs at this stage only in systolic volume does not undergo any change. It is during more strenuous exertion, when heart rate rises to between 130 and 150 pulse per minute. That the systolic volume is further reduced and that corresponding change of diastolic size occurs. However it is only during maximal physical efforts of prolonged duration that diastolic volume becomes markedly smaller and that systolic volumes are maximally diminished". The final test was conducted statistical treatment revealed that the first two groups increased their fitness levels (P=5) than the exercise groups at the third test period (P=0.05). At the fourth test period (P=01) and that no significant differences existed between the two exercise groups at any time during the 12 weeks of training.

Experimental Methodology: Prior to the start of the experiment the subjects were trained for the proper performance of the exercise selected yogagsanas by the method of demonstration and explanation. The subjects were asked to perform the Asanas in by count as shown in appendix 'B'. All the selected yogasanas are practiced morning 6.30 am to 7.00 am by all the subjects for four days a week for a total of six weeks. The Yogasangas selected for the experiment are:

Halasana,Paschimottasana,Dhanurasana,Chakrasana,Matsyasana andSarvangasana.

Observation, Analysis & Discussion The Data collected as per procedure mentioned in the previous chapter, was suggested to the t-ratio test of analysis for the significance. "The level of confidence set for the test was 0.01 level of significance. The degree of the freedom chosen N-1. The table value of't' for twenty nine degree of freedom was 2.76. This required t value is taken from the table given"1 by Clarke and Clarke. The null hypothesis was put to test by subjecting the difference between the means for statistical significance by calculating the t-ratio using the following formulae recommendation by Clarke and Clarke.$t = \frac{DM}{\sigma DM}$. The mean, standard deviation, standard error of means and co-efficient of correlation used in the t-ratio calculations were taken from Table III.

TABLE-I: computation of mean, standard deviation and standard error of the mean of pulse rate of the subjects before the experimental period

X	X	X^2
88	10	100
84	6	36
79	1	1
75	-3	9
86	8	64
82	4	16
75	-3	9
71	-1	1
82	4	16
81	3	9
69	-9	81
74	-4	16
83	5	25
71	-7	49
69	-9	81
71	-7	49
88	10	100
72	-6	36
89	11	121
74	-4	16
85	7	49
65	-10	100
76	-2	4
80	2	4
78	0	0
90	12	144
77	-1	1
75	-3	9
80	2	4
72	-6	36
2350		1186

TABLE–II: computation of mean, standard deviation and standard error of the mean of pulse rate of the subjects after the experimental period

X	X	X^2
82	8	64
78	4	16
76	2	4
72	-2	4
80	6	36
76	2	4
62	-12	144
72	-2	4
80	6	36
78	4	16
66	-8	64
77	3	9
81	7	49
69	-5	25
72	-2	4
68	-6	36
81	7	49
75	11	1
82	8	64
67	-7	49
79	-5	25
70	-4	16
68	-6	36
75	-1	1
72	-2	4
83	-9	81
68	-6	36
72	-2	7
71	-3	9
65	-9	81
2217		971

TABLE–III: mean, standard deviations, standard error of means and the co-efficient of correlations of pulse rate of the subjects before and after the experimental period

	Mean		**Standard Deviation**		**Standard Error of Mean**		**Co-efficient of correlation**
	Before Experimental Period	**After Experimental Period**	**Before Experimental Period**	**After Experimental Period**	**Before Experimental Period**	**After Experimental Period**	**r**
	M_1	**M_2**	**SD**	**SD**	**σM_1**	**σM_2**	
Pulse Rate	78	74	6.396	5.783	1.17	1.06	0.81

TABLE-IV: computation of co-efficient of correlation between the pulse rate taken before and afterexperimental period

X	Y	X	Y	X^2	Y^2	XY
88	82	10	8	100	64	80
84	78	6	4	36	16	24
79	76	1	2	1	4	2
75	72	-3	-2	9	4	6
86	80	8	6	64	36	48
82	76	9	2	81	4	18
75	62	-3	-12	9	144	36
77	72	-1	-2	1	4	2
82	80	4	6	16	36	24
81	78	3	4	9	16	12
69	69	-9	-8	81	64	72
74	77	-4	3	16	9	-12
83	81	5	7	25	49	35
71	69	-7	-5	49	25	35
69	72	-9	-2	81	4	18
71	68	-7	-6	49	36	42
68	81	10	7	100	49	70
72	75	-6	1	36	1	-6
89	82	11	8	121	64	88
74	67	-4	-7	16	49	28
85	79	7	5	49	25	35
67	70	-10	-4	100	16	40
76	68	-2	-6	4	36	12
80	75	2	1	4	1	2
78	72	0	2	0	4	0
90	83	12	9	144	81	108
77	68	-1	-6	1	36	6
75	72	-3	-2	9	4	6
80	71	2	-3	4	9	-6
72	65	6	-7	36	81	54
2350	2217			1186	971	89324
						869

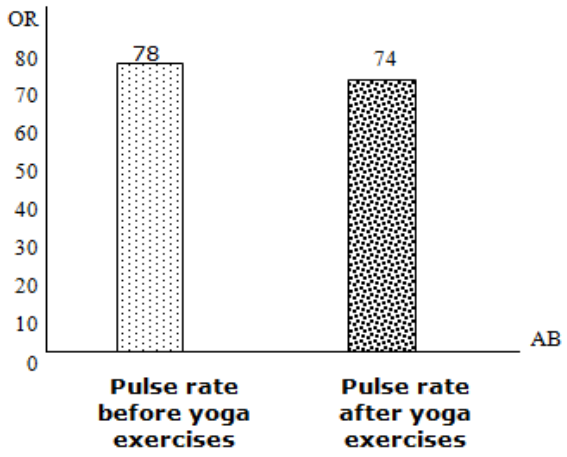

Fig .1: The Bar Diagram Clearly Shows The Degrees Of The Mean Of Pulse Rate Before And After The Practice Of Selected Yogasanas

Conclusion

The practice of selected Yogasanas has reduced the normal pulse rate of school girls significantly. With the obtained results of the effect of selected Yogasanas, it is clear that those who have high pulse rate shall be advised to practice selected Yogasanas to reduce the Pulse rate. Selected Yogasanas, as it is a simple form of exercise, may be introduced as compulsory activity under Yoga to be taught and practiced in High schools. As Asanas have been prescribed to teach under compulsory physical education programme, the benefits of yogasanas may be explained to the students, to motivate them further. Similar study may be taken on School boys and college students. This study can be conducted on middle age people and can be recommended for their curative aspects of modern ailments.

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A Study On Physical Fitness Levels Of Engineering And Non-Engineering Students Of Osmania University

Dr. G. Shyam Mohan Reddy Chaitanya Bharathi Institute Of Technology Hyderabad, India

Introduction

Regular activity of physical exercise stimulates the growth and development. Fitness improves general health and is essential for full and vigorous living. The range of physical fitness is from no fitness to physical fitness needed to make the adjustments necessary for a high degree of endurance and skill. The present concept of physical fitness is not only free from disease but also enough strength, speed, agility, flexibility, endurance, co-ordination and skill to meet the demands of daily life and sufficient reserve to withstand stress and strain.

Fitness is a competency or preparedness for life. It implies in relation to human beings an ability to adjust their lives properly to the needs of their environment. Such competency for life arises out the following factors:

1. Freedom from disease and from inherited or acquired abnormalities.
2. An efficient and strong body, capable of use without strain in all the normal tasks of life. Also an ability to withstand severe pressure without breaking down. Such bodily efficiency implies the possession of qualities like speed, strength, agility and endurance.
3. A keen and alert mind which is responsive to rapidly changing situations and is also so poised that it is free from tension, worry or fear and can relax without difficulty.
4. Lastly a spirit that keeps alive human kinship and endows the individual with ideals of service and devotion to humanity in all its trials and privations.

Education pattern of today is conceived not merely as a vast reservoir of knowledge, but also as a source of human development in all aspects, leading to the highest achievement. An educated individual is physically fit, mentally alert, and intellectually sharp, emotionally balance and socially well adjusted. Physical fitness is an important factor for an individual.

Need For The Study

An individual needs physical fitness to carry out daily task, with vigor and alertness without undue fatigue. Physical fitness is the nature and degree of adjustment in activities requiring muscular effort. All activities require muscular effort. Therefore physical fitness includes all activities. The amount of effort, however, varies from slight demands, which are great. Students must be made to realize the effect of well designed and regular exercise programme. They must be made to understand the advantage that one can get by maintaining excellent physical fitness.

Statement Of The Problem

The purpose of this study was to determine the measures and relationship of physical fitness between engineering and non-engineering students of Osmania University.

Significance Of The Problem

The present study may bring the true facts and importance of physical fitness between engineering and non-engineering students of Osmania University for the improvement in level of sports performance.The results of this study may help the physical educators in preparing suitable programmes for the engineering and non-engineering students depending upon their curriculum and potentialities. The results of the study may help in motivating the physical educators to adopt an attitude of scientific

Methodology

To achieve the purpose fifty engineering and fifty non-engineering students were taken as subjects at random from five engineering and non-engineering colleges of Osmania University. They ranged in age from 18 to 21 years. Some of the engineering and non-engineering students have attended National level coaching camps. Both types of students comes from different region, socio-economic background, different traditions and cultures and different living conditions. However all of them are good as far as performance in their events are concerned.In order to assess the physical fitness, the AAHPER youth fitness test was conducted on the engineering and non-engineering athletes for the purpose of the present study. The AAHPER youth fitness test has been conducted ie., PULL-UPS, SIT-UPS, SHUTTLE RUN, STANDING BROAD JUMP, 50 METERS DASH AND 800 METERS RUN.

Results And Discussion

The calculated t-value is compared with the table t-value at 98 degrees of freedom at 0.05 level of significance, which was given by Clarke and Clarke. The computation of mean, standard deviation, standard error of the mean and t-value of pull-ups, sit-ups, standing broad jump, shuttle run, 50 meters run and 800 meters run of engineering and non-engineering students of Osmania University are represented in the table from I to VI respectively.

TABLE – 4.1

Mean, Standard Deviation, Standard Error of the mean & t-Ratio for the pull-ups of engineering & non-engineering students.

Sl.No	Category Of Subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of freedom	t-Ratio	Sig.(2tailed)
1.	Engineering Students	50	7.8600	2.4579	0.3476	98	1.705	0.091
2.	Non-engineering Students	50	8.7000	2.4682	0.3491			

Insignificant. It shows that the Non-engineering students having more shoulder strength than the Engineering students.

TABLE – 4.2

Mean, Standard Deviation, Standard Error & t-Ratio for the sit-ups of engineering & non-engineering students.

Sl.No	Category of subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of Freedom	t-Ratio	Sig (2-tailed)
1.	Engineering Students	50	42.4400	6.3701	0.9009	98	3.944	0.000
2.	Non- Engineering Students	50	48.0400	7.7590	1.0973			

Significant at 0.05 level. It shows that the Non-engineering students having more abdominal strength and endurance than the Engineering students.

TABLE – 4.3

Mean, Standard Deviation, Standard Error & t-Ratio for the standing broad jump of engineering & non-engineering students.

Sl.No	Category of subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of Freedom	t-Ratio	Sig (2-tailed)
1.	Engineering Students	50	1.9816	0.1975	0.0279	98	0.50	0.960
2.	Non- Engineering Students	50	1.9844	0.3425	0.0484			

Insignificant. It shows that the Non-engineering students and Engineering students are not differing in the component of power.

TABLE – 4.4

Mean, Standard Deviation, Standard Error & t-Ratio for the shuttle run of engineering & non-engineering students.

Sl.No	Category of subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of Freedom	t-Ratio	Sig (2-tailed)
1.	Engineering Students	50	10.5264	2.0752	0.2935	98	0.461	0.646
2.	Non- Engineering Students	50	10.3820	0.7750	0.1096			

Insignificant. The results shows that the Non-engineering students and Engineering students are not differing in the component of aped and agility.

TABLE – 4.5

Mean, Standard Deviation, Standard Error & t-Ratio for the 50 meters dash of engineering & non-engineering students.

Sl.No	Category of subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of Freedom	t-Ratio	Sig (2-tailed)
1.	Engineering Students	50	7.6602	1.0230	0.1447	98	3.219	0.002
2.	Non- Engineering Students	50	7.1360	0.5291	0.0748			

Significant. The result shows that the Non-engineering students are having more in the performance of speed than the engineering students.

TABLE – 4.6

Mean, Standard Deviation, Standard Error & t-Ratio for the 800 meters run of engineering & non-engineering students.

Sl.No	Category of subjects	No. of subjects	Mean	Standard Deviation	Standard Error	Degrees of Freedom	t-Ratio	Sig (2-tailed)
1.	Engineering Students	50	1.4526	0.0793	0.0112	98	7.681	0.000
2.	Non- Engineering Students	50	1.3340	0.0750	0.0106			

Significant. The result shows that the Non-engineering students are having more endurance than the engineering students.

Classification Results 4.7

			Predicted Groups Membership		Total
			Non- Engineering	Engineering	
Original	Count	Non-Engineering	45	5	50
		Engineering	6	44	50
	%	Non-Engineering	90.0	10.0	100.0
		Engineering	12.0	88.0	100.0

a. 89.0% of original grouped cases correctly classified

Conclusions:

Non-engineering students are having better performance than engineering students in pull-ups, sit-ups, standing broad jump, shuttle run, 50meters run and 800 meters run.

It means that the non-engineering students are superior in flexibility, speed and endurance than the engineering students. The other components of shoulder strength and power are not showing the significant results. This may be due to concentration on studies more. The study of comparison of physical fitness of engineering and non-engineering students shows that both are not equal in physical fitness.

Recommendations:

1. It advised to take the results of this research as information to the students for their improvement.

2. Educational institutions are the main agency to promote physical fitness among students. Educational institutions must provide adequate facilities and time to the students to become fit by taking part in various physical activities.

3. Engineering and Technology Institutions almanac should consider and provide opportunity to the students to participate in games and sports.

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Socio Economic Differences Between Team And Individual Game Players

Mr.G.Gowtham Kumar, Research Scholar,
Jawaharlal Nehru Technological University, Kukatpally , Hyderabad.

Dr. Y. Gopi Krishna,
Professor Of Physical Education, Jawaharlal Nehru Technological University
Kukatpally , Hyderabad. 500 085.

Abstract
The purpose of the study was to find out the socio economic differences between team and individual game players. To achieve the purpose fifty men team game players and fifty men individual game players studying in the J N T College, Hyderabad, Andhra Pradesh, India were selected as subjects at random. The age of the subjects were ranged from 18 to 28 years. Socio economic status was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable by using Socio-economic status scale of Kapoor and Kocher (1984). The independent't' ratio was used to analyses the significant difference, if any between the groups. The level of significance to test the't' ratio was tested at .05 level of confidence, which was considered as appropriate.
The results of the study revealed that there was a significant difference between team game players and individual game players on selected criterion variable such as socio economic status.
KeyWords: Socio Economic Status, Team Game Players, Individual Game Players ,Independent'T'Ratio

Introduction
Primary education is the most basic formal education and is valued very highly for preparing learners for secondary education, world of work, Scientific and technical application of knowledge and Life skills. Socioeconomic status depends on a combination of variables, such as occupation, education, income, wealth, and place of residence. Sociologists often use socioeconomic status as a means of predicting behavior.
It has been recognized that socio-economic factors play a vital role in an individual's performance in sports. The Socio-economic status make-up of an individual plays an important role in their achievements in every field of life. Considerable research have been conducted on the socio-economic status of sports persons, team sport versus individual sport, Men players versus Women players. But very few research studies are available in published from a socio-economic status of games like team and individual game players. There are many psychological factors like socio-economic status attitudes, motives, spectators, self concept, motivation, adjustment etc., which influence the participation and performance of sportsmen in games and sports.
The socio-economic status of the group and the status of an individual in his group influence competitive and co-operative behavior for different reasons and the different factors that those motivating people in the middle and upper economic group influencing the well being of the players

Methodology
The purpose of the study was to find out the socio economic differences between team and individual game players. To achieve the purpose of the study, fifty men team game players and fifty men individual game players studying in the J N T College, Hyderabad, Andhra Pradesh, India were selected as subjects at random. The age of the subjects ranged from 18 to 28 years. The socio economic status was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable using Socio-economic status scale by Kapoor and Kocher (1984). The independent't' ratio was used to analysis the significant difference, if any between the groups. The level of significance to test the't' ratio was tested at .05 level of confidence, which was considered as an appropriate.

Analysis of the Data
The differences between team game players and individual game players on socio economic status were analyzed separately and presented below.

Socio Economic Status

The mean, standard deviation and't' ratio values on socio economic status between team game players and individual game players was analysed and presented in Table I.

Table I

The Mean, Standard Deviation And'T' Ratio Values On Socio Economic Status Of Team Game And Individual Game Players

Groups	Mean	Standard Deviation	The Obtained 'T' Ratio
Team Game Players	11.64	0.98	14.486*
Individual Game Players	14.69	0.87	

(The Table Value Required For Significance At .05 Level Of Confidence With Df 98 Was 1.99).

Table I showed that the mean values of team game and individual game players were 11.64 and 14.69 respectively. The obtained' ratio value of 14.486 was more than the required table value 1.99 for significance at .05 level of confidence with df 98.

The results of study showed that a significant difference exists between team game players and individual game players on socio economic status..

Conclusions

Based on the results of the study, the following conclusion was drawn.

1. There was a significant difference between team game players and individual game players on socio economic status.

2. Among the groups, the individual game players were better in socio economic status than team game players

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Sports as a Physical activity, people's participation, Issues and Considerations

B.Venkanna (Ph.D) Research Scholar, Department of Public Administration, Osmania University, Hyderabad.-500 007.

Introduction

Sport (or sports) is all forms of usually competitive physical activity which through casual or organised participation, aim to use, maintain or improve physical ability and skills while providing entertainment to participants, and in some cases, spectators. Hundreds of sports exist, from those requiring only two participants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. Sport is generally recognised as activities which are based in physical athleticism or physical dexterity, with the largest major competitions such as the Olympic Games admitting only sports meeting this definition, and other organisations such as the Council of Europe using definitions precluding activities without a physical element from classification as sports.[2] However, a number of competitive, but non-physical, activities claim recognition as mind sports. The International Olympic Committee (through ARISF) recognises both chess and bridge as bona fide sports, and Sport Accord, the international sports federation association, recognizes five non-physical sports, although limits the amount of mind games which can be admitted as sports.

Sports are usually governed by a set of rules or customs, which serve to ensure fair competition, and allow consistent adjudication of the winner. Winning can be determined by physical events such as scoring goals or crossing a line first, or by the determination of judges who are scoring elements of the sporting performance, including objective or subjective measures such as technical performance or artistic impression. In organized sport, records of performance are often kept, and for popular sports, this information may be widely announced or reported in sport news. In addition, sport is a major source of entertainment for non-participants, with spectator sports drawing large crowds to venues, and reaching wider audiences through sports broadcasting.

Etymology

"Sport" comes from the Old French disport meaning "leisure", with the oldest definition in English from around 1300 being "anything humans find amusing or entertaining". Other meanings include gambling and events staged for the purpose of gambling; hunting; and games and diversions, including ones that require exercise. Roget's defines the noun sport as an "activity engaged in for relaxation and amusement" with synonyms including diversion and recreation.

Competition

There are opposing views on the necessity of competition as a defining element of a sport, with almost all professional sport involving competition, and governing bodies requiring competition as a prerequisite of recognition by the International Olympic Committee (IOC) or Sport Accord. Other bodies advocate widening the definition of sport to include all physical activity. For instance, the Council of Europe include all forms of physical exercise, including those completed just for fun. In order to widen participation, and reduce the impact of losing on less able participants, there has been an introduction of non-competitive physical activity to traditionally competitive events such as school sports days, although moves like this are often controversial.

In competitive events, participants are graded or classified based on their "result" and often divided into groups of comparable performance, (e.g. gender, weight and age). For each group, the first in the list will usually be the "winner". The measurement of the result may be objective or subjective, and corrected with "handicaps" or penalties. In a race, for example, the time to complete the course is an objective measurement. In gymnastics or diving the result is decided by a panel of judges, and therefore subjective. There are many shades in between, like boxing or mixed martial arts, where victory is assigned by judges if neither competitor has lost at the end of the match time.

History

There are artifacts and structures that suggest that the Chinese engaged in sporting activities as early as 2000 BC. Gymnastics appears to have been a popular sport in China's ancient past. Monuments to the Pharaohs indicate that a number of sports, including swimming and fishing, were well-developed and regulated several thousands of years ago in ancient Egypt. Sports have been increasingly organized and regulated from the time of the ancient Olympics up to the present century. Industrialization has brought increased leisure time to the citizens of developed and developing countries, leading to more time for citizens to attend and follow spectator sports, greater participation in athletic activities, and increased accessibility. These trends continued with the advent of mass media and global communication. Professionalism became prevalent, further adding to the increase in sport's popularity, as sports fans began following the exploits of professional athletes through radio, television, and the internet all while enjoying the exercise and competition associated with amateur participation in sports.

Sportsmanship

Sportsmanship is an attitude that strives for fair play, courtesy toward teammates and opponents, ethical behavior and integrity, and grace in victory or defeat. Sportsmanship expresses an aspiration or ethos that the activity will be enjoyed for its own sake. The well-known sentiment by sports journalist Grant land Rice, that it's "not that you won or lost but how you played the game", and the modern Olympic creed expressed by its founder Pierre de Coubertin: "The most important thing... is not winning but taking part" are typical expressions of this sentiment.

Cheating

Key principles of sport include that the result should not be predetermined, and that both sides should have equal opportunity to win. Rules are in place to ensure that fair play to occur, but participants can break these rules in order to gain advantage. Participants may choose to cheat in order to satisfy their desire to win, or in order to achieve an ulterior motive. The widespread existence of gambling on the results of sports fixtures creates the motivation for match fixing, where a participant or participants deliberately work to ensure a given outcome.

Doping and drugs

The competitive nature of sport encourages some participants to attempt to enhance their performance through the use of medicines, or through other means such as increasing the volume of blood in their bodies through artificial means. All sports recognised by the IOC or Sport Accord are required to implement a testing programme, looking for a list of banned drugs, with suspensions or bans being placed on participants who test positive for banned substances.

Violence

Violence in sports involves crossing the line between fair competition and intentional aggressive violence. Athletes, coaches, fans, and parents sometimes unleash violent behaviour on people or property, in misguided shows of loyalty, dominance, anger, or celebration. Rioting or hooliganism are common and ongoing problems at national and international sporting contests. Female participation continues to rise alongside the opportunity for involvement and the value of sports for child development and physical fitness. Despite gains during the last three decades, a gap persists in the enrollment figures between male and female players. Female players account for 39% of the total participation in US interscholastic athletics. Gender balance has been accelerating from a 32% increase in 1973–74 to a 63% increase in 1994–95. Hessle (2000).

Youth participation

Youth sports present children with opportunities for fun, socialization, forming peer relationships, physical fitness, and athletic scholarships. Activists for education and the war on drugs encourage youth sports as a means to increase educational participation and to fight the illegal drug trade. According to the Center for Injury Research and Policy at Nationwide Children's Hospital, the biggest risk for youth sports is death or serious injury including concussion, with the highest risk coming from running, basketball, football, volleyball, soccer, and gymnastics.

Spectator involvement

The competition element of sport, along with the aesthetic appeal of some sports, result in the popularity of people attending to watch sport being played. This has led to the specific phenomenon of spectator sport. Both amateur and professional sports attract spectators, both in person at the sport venue, and through broadcast mediums including radio, television and internet broadcast. Both attendance in person and viewing remotely can incur a sometimes substantial charge, such as an entrance ticket, or pay-per-view television broadcast. It is common for popular sports to attract large broadcast audiences, leading to rival broadcasters bidding large amounts of money for the rights to show certain fixtures.

Issues and Considerations

Amateur and professional

Sport can be undertaken on an amateur, professional or semi-professional basis, depending on whether participants are incentivised for participation (usually through payment of a wage or salary).The popularity of spectator sport as a recreation for non-participants has led to sport becoming a major business in its own right, and this has incentivised a high paying professional sport culture, where high performing participants are rewarded with pay far in excess of average wages, which can run into millions of dollars.

Some sports, or individual competitions within a sport, retain a policy of allowing only amateur sport. The Olympic Games started with a principle of amateur competition with those who practiced a sport professionally considered to have an unfair advantage over those who practiced it merely as a hobby.

Technology

Technology plays an important part in modern sport, with it being a necessary part of some sports (such as motorsport), and used in others to improve performance. Sports science is a widespread academic discipline, and can be applied to areas including athlete performance, such as the use of video analysis to fine tune technique, or to equipment, such as improved running shoes or competitive swimwear. Sports engineering emerged as a discipline in 1998 with an increasing focus not just on materials design but also the use of technology in sport. In order to control the impact of technology on fair play, governing bodies frequent have specific rules that are set to control the impact of technical advantage between participants.

Conclusion

Sports and politics can influence each other greatly. When apartheid was the official policy in South Africa, many sports people, particularly in rugby union, adopted the conscientious approach that they should not appear in competitive sports there. Some feel this was an effective contribution to the eventual demolition of the policy of apartheid, others feel that it may have prolonged and reinforced its worst effects. The 1936 Summer Olympics held in Berlin was an illustration, perhaps best recognised in retrospect, where an ideology was developing which used the event to strengthen its spread through propaganda. In the history of Ireland, Gaelic sports were connected with cultural nationalism. Until the mid 20th century a person could have been banned from playing Gaelic football, hurling, or other sports administered by the Gaelic Athletic Association (GAA) if she/he played or supported football, or other games seen to be of British origin. Until recently the GAA continued to ban the playing of football and rugby union at Gaelic venues.

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Comparison Of Coordinative Abilities Among 11-14 Year School Boys

Dr. G.P.Raju[1] Dr.P.Johnson[2] P.S.Raja Marison Babu[3]
Assistant Professor of Physical Education, JNTUK-UCEV, Vizianagaram A.P.
Assistant Professor of Physical Education, UCPESS, ANU Guntur,A.P. India
Lecturer in Physical Education, KRK Govt Degree. College, Addanki,Praksam Dist, A.P. India

Abstract
The purpose of the study was to compare the coordinative abilities of 11 to 14 year school boys total 120 boys studying in 6th, 7th, 8th and 9th standards were selected as subjects. A sample of 30 boys from each age group from11, 12, 13, and 14 years school boys at Municipal high school, Narasaraopet, Guntur district, Andhra Pradesh were selected at random after obtaining the date of birth of the each subjects from the school records. Four coordinative abilities namely differentiation ability of the hands, space orientation ability, dynamic balancing ability, reaction ability were selected for the purpose of the study. Four standardized tests suggested by Peter Herts were used to measure these coordinative abilities. One way analysis of variances was used to compare the coordinative abilities among 11 to 14 years school boys. The level of significant was.0.5.
Key words*:* coordinative abilities of 11 to 14 year school boys.

Introduction
When we were born, we were born with a mind and body. Therefore, we must learn to use mind and body tighter. This is the natural way. By practicing mind and body coordination, we can learn to keep a calm spirit and live our life with a positive attitude.

Coordination the ability to use senses together with body parts to perform a motor task "It may be defined as the ability of the performer to integrate types of movements into specific patterns."

Especially in sports and games coordinative abilities play a vital role to active a good performance. The requirements of coordinative abilities are differ from game to game and these abilities ensure higher moment efficiency and movement economy. In sports and games seven coordinative abilities are important; they are differentiation ability orientation ability, reaction, ability, balance ability, rhythm ability and adaptation ability.

Statement of the Problem
The purpose of this study was to compare the coordinative abilities among boys of 11 to 14 years of age groups.

Delimitations
The study was delimited to one hundred and twenty subject were selected. The study was delimited to 30 boys in each group. The subjects ranged Between 11 to 14 years of boys. The study was delimited to the coordinative ability test as suggested by Peter Hirtz. The study was further delimited to four different coordinative abilities like. The differentiation ability of the hands, Space orientation ability, Dynamic balancing ability, the reaction ability.

Limitations
Non – availability of sophisticated instruments were not used to measure the coordinative abilities of boys, No special motivation technique was used during the assessment of test, the performance given by the subjects were consider as genuine, participation of the subjects in physical activity of different nature in and out of the school, which might have affected on coordinative ability of the subject was taken as another limitation.

Significance of the study
The results of the study may be helpful to the physical education teachers and coaches to understanding the pattern of development of various coordinative abilityamong11 to 14 year school boys, The result of the study may helpful to coaches and physical education teachers for formulating appropriate training programmes for the development of different coordinative abilities, the study may be helpful to identify sports talents based on coordinative abilities and also identify suitable events based on their abilities.

Methodolgy

The purpose of the study was to compare the coordinative abilities of 11 to 14 year school boys total 120 boys studying in 6th, 7th, 8th and 9th standards were selected as subjects. A sample of 30 boys from each age group from11, 12, 13, and 14 years school boys at Municipal high school, Narasaraopet, Guntur District, Andhra Pradesh were selected at random after obtaining the date of birth of the each subjects from the school records.The four age groups with one-year interval were formed by calculating the exact age of each subject from the date of test by converting the present age into decimal age.

Table-ITanner Decimal Age Conversion

Age Range	Year
10.50-11.49	11
11.50-12.49	12
12.50-13.49	13
13.50-14.49	14

Table-IiSelected Coordinative Abilities And Tests

S.L.No	Coordinative Abilities	Tests
1	Differentiation Ability Of The Hands	Back Ward Medicine Ball Throw Test
2	Space Orientation Ability	Numbered Medicine Ball Run Test
3	Dynamic Balancing Ability	Balancing Ability Test
4	The Reaction Ability	Ball Reaction Exercise Test

Table-IiiReliability Coefficients Of Test-Re-Test Scores

S.L.No	Tests	'R' Values
1	Back Ward Medicine Ball Throw Test	.91*
2	Numbered Medicine Ball Run Test	.89*
3	Balancing Ability Test	.90*
4	Ball Reaction Exercise Test	.88*

Significant At .05 Level R (Df13)-.514

Findings And Discussion

The data on coordinative abilities obtained from the subjects was statistically analysed by using one way analysis of variance. Post–Hoc test was applied f-ratio was found significant. For the hypothesis, level of significance was set at .05 level.

Table-IvOnaway Analysis Of Variance For Differentiation Ability Of The Hands Among 11 To 14 Year School Boys

Source Of Variance	Df	Sum Of Squares	Mean Square	'F' Ratio
Between Groups	3	37.091	12.3639	3.089*
Within Groups	116	464.230	4.0020	
Total	119	501.321		

*** Significant .05level F .05 (3.116) = 2.68**

Table IV shows that was significant difference in differentiation ability of the hands among 11,12,13, and year old boys as the calculated 'F' ratio 3.089 is greater than table value 2.68.As 'F' ratio was found significant scheffe's post-hoc test was employed to find out which are the groups significantly different

Table-VPost-Hoc Analysis Od Data Od Differention Ability Among 11 To14 Year School Boys

11 Years	12 Years	13 Years	14 Years	Mean Difference
9.76	10.00			0.24
9.76		10.83		1.07
9.76			11.10	1.34*
	10.00	10.83		0.83
	10.0	10.83	11.00	0.27
			8.04	1.96

***Significant At.05 Level Confidence Interval=1015**

Table-ViOne- Way Analysis Variance For Space Orientaton Ability Among 11 To14 Year School Boys

Source Of Variance	Df	Sum Of Squares	Variance(Mean Squares)	'F'
Between	3	15.496	5.1667	5.238*
Within Group	166	114.471	.9868	
Total	199	129.967		

***Significant At.05 Level Confidence Interval=1015**

Table- ViiPost-Hoc Analysis Of Data Od Space Orientation Ability Among 11to14 Years School Boys

11years	12 Years	13 Years	14 Years	Mea Differences
10.26	10.36			0.10
10.26		9.83		0.43
10.26			9.46	0.80*
	10.36	9.83		0.53
		9.83	9.46	0.37
	10.36		9.46	0.90*

***Significant At.05 Level Confidence Interval=.564.**

Table-ViiiOne-Way Analysis Of Variance For Dynamic Balancing Abolity Among 11 To 14 Years School Boys

Source Of Variance	Df	Sum Of Squares	Variance (Mean Squares)	'F'ratio
Between	3	286.542	95.514	79.199
Within Groups	116	139.955	1.206	
Total	119	426.497		

***Significant At.05 Level. F.05 (3.116) =2.68**

Table-IxPost-Hoc Analysis Of Data On Dynamic Balancing Ability Among 11 To 14 Years School Boys

11years	12 Years	13 Years	14 Years	Mea Differences
11.83	11.76			0.07
11.83		9.94		1.89*
11.83			8.04	3.78*
	11.76	9.94		1.82*
		9.94	8.04	1.90*
	11.73		8.04	3.72*

***Significant At.05 Level, Confidence Interval=.594**

Table-XOne-Way Analysis Of Variance For The Reaction Abolity Among 11 To 14 Years School Boys

Source Of Variance	Df	Sum Of Squares	Variance (Mean Squares)	'F'ratio
Between	3	10.93	3.643	26.208
Within Group	116	16.17	0.139	
Total	119	27.10		

***Significant At.05 Level, F.05 (3.116) =2.68**

The result of the present study revealed that there were significant differences existing in differentiation ability, orientation ability, dynamic balancing ability and reaction ability. In the case of differentiation ability, 14 years school boys had shown the best performance 11 years school boys had the lowest scoring. A linear improvement was found in differentiation ability from 11 years to 14 years. This linear improvement might be due to their improvement in intelligence, discussion making ability, perception and orientation. Another reason could 14 year old had more playing exposure compared to lower age group, which might have let to their differentiate.In the case of orientation ability, the same trend was observed. 14 year school boys were superior in orientation ability compared to all other age groups. Similar trend were also found in dynamic balancing ability and reaction ability. This shows that as the age advance, all these coordinative ability improve. This improvement might be due to exposure, regular physical exercises, and improvement in intelligence, perception and orientation.

Recommendations

In light of the finding and conclusions drawn, the following recommendations are made.

1) While designing the physical education programme, the coordinative abilities of the group Boys may be considered.
2) Suitable programmes may be chalked out for the development of the coordinative ability Considering the age factor.
3) Based on the coordinative abilities of the boys, sports talent may be spotted out.
4) Similar study can be conducted by taking female subjects.
5) Similar study can be taken on different age group and coordinative abilities other than the age group and coordinative abilities used in this study.

Conclusions

Within the limitation of the present study and on the basis of the findings, the following conclusion may be drawnFourteen-year- school boys were found superiors in diffraction ability compared to the other age groups.Fourteen-years-school boys were superior in orientation ability compared to the age groups.Fourteen-years-school boys were superior in balancing ability compared to the age groups.Fourteen-years-school boys were superior in reaction ability compared to the other age groups.A Linear improvement in all the coordinative ability was found from 11to 14 years age groups

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Developing Leadership Skills And Inter Personal Relationship Among Elementary School Children – A Play And Movement Approach

***Ravikumar Korukanti**
Research Scholar JNTU,Hyd.

**** Dr. N.S. Dilip**
JNTU,HYD

Abstract
Play provides opportunities for children to learn social interaction, and all parents aspire for their children to be successful in these interactions. This success is a measure of the children's social well-being and is marked by the ability of children to develop and sustain friendships, to cooperate, to lead, and to follow. The aim of this study was to find out the influence of play and movement activities in developing leadership skill and interpersonal relationship of elementary school children. The investigator formulated suitable play and movement activities consisting of minor games and movement activities. The 12 weeks play and movement activities approach significantly improved leadership skill and interpersonal relationship of the children as assessed through Personality Index developed by Kaliappan (1996). It was concluded that the experimental protocols tried in this research can be implemented among the elementary school children which would be helpful for the all round development of the children right from their early ages in developing leadership skills and interpersonal relationship.

Key Words: Play and Movement Approach, Leadership Skill, Interpersonal Relationship

Introduction

Play provides opportunities for children to learn social interaction, and all parents aspire for their children to be successful in these interactions. This success is a measure of the children's social well-being and is marked by the ability of children to develop and sustain friendships, to cooperate, to lead, and to follow. Unstructured active play with others, including with parents, siblings, and peers, is a major opportunity to cultivate social skills, especially leadership and inter personal relationship. This is because all play with others requires solving some form of a leadership problem, such as deciding what to play, who can play, when to start, when to stop, and the rules of engagement. Solving these dilemmas and conflicts that arise in play encourages children to compromise and to cooperate. This process can cultivate a range of leadership skills and inter personal relationship capabilities such as empathy, flexibility, self-awareness, and self-regulation. Such capabilities, sometimes referred together as "leadership skills," are essential for successful inter personal relationship in adult life. Thus, leadership skills and inter personal relationships contribute to success in the workplace, and it is the foundation for success in the intimate social relationships, such as between parents, that become the primary models for children's development.

Physical activity or movements throughout the school day is necessary for children to reenergize themselves and to be able to maintain focus on their school work. Being involved in movement positively affects children both cognitively and physically. Movement activities can be initiated by teachers throughout the day and especially during classroom transitions. Using songs and rhymes that reinforce lessons improve children's listening and memory skills. Activities, games, seat-changes, role plays, and dance actively contribute to children developing basic timing, balance, coordination and concentration. The elements of physical activities which are pivotal for the optimal health, growth and development of children contribute to the children to develop their leadership and inter personal relationships. While play is game centered and group centered among elementary school children, movement education or physical activities are structured activities focusing on individuals' or group's specific fitness levels. The "Journal of Adolescent Education" recommends extracurricular activities for teaching leadership skills. Part of leadership is the interaction between leader and follower, according to a 2012 article in the journal. Coaches and players, directors and actors, band leaders and band members fall into the leader and follower relationship. Children will pick up the leadership skills shown to them by their own leaders. Through extracurricular activities, children learn how to be leaders and how to be part of a team.Young children are physically active in different ways than older

children, adolescents, or adults. Because most physical activity in young children is equivalent to gross motor play, we suggest that the term "play," not the terms "physical activity," "exercise," or "sports," be used to promote movement in young children. As preschoolers play, they have brief bouts of varied activities with frequent rest periods. Compared with exercising adults, children at play have more spontaneity and less interest in sustaining a single activity. These differences may result from differing needs of the developing brain to provide itself, through activity, with a pattern of varied stimulation from the environment that subserves its own optimal development.

Although it is simple to compile a list of play activities, it is much more difficult to define play. Scales, et al., (1991) called play "that absorbing activity in which healthy young children participate with enthusiasm and abandon". Csikszentmihalyi (1981) described play as "a subset of life..., an arrangement in which one can practice behavior without dreading its consequences". Garvey (1977) gave a useful description of play for teachers when she defined play as an activity which is: 1) positively valued by the player; 2) self-motivated; 3) freely chosen; 4) engaging; and 5) which "has certain systematic relations to what is not play". These characteristics are important for teachers to remember because imposing adult values, requirements, or motivations on children's activities may change the very nature of play.

Even though there are number of researches proving the usefulness of play activities among school children, there was further scope for research find out the influence of play and movement approach on school children, especially on selected psychological variables leadership skills and inter personal relationship. Hence, the investigator undertook this research.

Methodology

To achieve the purpose of the study, the investigator randomly selected 40 elementary school children, 20 girls and 20 boys who were studying in Hydrabad, Andhra Pradesh. The randomly selected subjects were asked to undergo twelve weeks programmed play and movement activities as experimental treatment. The play and movement activities consist of ten minor games and nine movement activities. The play and movement activities were provided to the subjects on alternate days and allowed to participate voluntarily under the supervision of the investigator. The subjects' leadership and interpersonal relationship abilities were determined using Personality Development Index (Kaliappan, 1996). The personality index is aimed at measuring ten distinct personality characteristics of early adolescents. Among the 85 statements developed to measure ten characteristics, 6 statements (Statement Nos. 5, 15, 25, 35, 45 and 55) were devoted to measure leadership and 7 statements (Statement Nos. 9, 19, 29, 39, 49, 59 and and 65) were devoted to measure interpersonal relationship of the subjects. Pre and Post test randomized group design was used in this study. The selected subjects were measured of their pre test scores in leadership and interpersonal relationship and post test scores after the treatment of play and movement. The obtained data were statistically analyzed using 't' test.

RESULTS

The obtained data on leadership among elementary school children due to 12 weeks play and movement approach was statistically analyzed and results presented in Table I.

Table I: Effect of Play and Movement Approach on Leadership of Elementary School Children (Boys and Girls)

BOYS – LEADERSHIP					
TEST	**MEAN**	**MD**	**SD**	**'t' Value**	
				Obtained	**Significance**
Pre Test	**19.4**	**2.05**	**2.54**	**3.6***	**0.05**
Post Test	**21.45**				
GIRLS – LEADERSHIP					
Pre Test	**20.75**				
Post Test	**23.1**	**2.35**	**3.43**	**3.05***	**0.05**

The pre and post test data on the influence of play and movement approach on interpersonal relationship was analysed using 't' test and the results are presented in Table II.

Table II: Effect of Play and Movement Approach on Interpersonal Relationship of Elementary School Children (Boys and Girls)

BOYS – INTERPERSONAL RELATIONSHIP					
TEST	**MEAN**	**MD**	**SD**	**'t' Value**	
				Obtained	**Significance**
Pre Test	**23.95**				
Post Test	**27.8**	**3.85**	**3.86**	**4.45***	**0.05**
GIRLS – INTERPERSONAL RELATIONSHIP					
Pre Test	**21.2**				
Post Test	**25.35**	**4.15**	**4.47**	**4.14***	**0.05**

Discussions

The results presented in Table I proved that the play and movement approach among the elementary school children significantly improved leadership skill of the boys (MD: 2.05) and among girls (MD: 2.35) as the obtained 't' values 3.60 and 3.05 respectively were significant at 0.05 level. The results presented in Table II proved that the play and movement approach among the elementary school children significantly improved interpersonal relationship of the boys (MD: 3.85) and among girls (MD: 4.15) as the obtained 't' values 4.45 and 4.14 respectively were significant at 0.05 level. The observation of the investigator proved that at the elementary school students were not provided with any physical education programme and the supervised play and movement approach experimented in this research helped them to involve in these activities very enthusiastically and it was proved that the elementary school children improved their leadership skill and interpersonal relationship as the obtained 't' values were greater than the required table values to be significant at 0.05 level and the improvement was found to be significant. Participation in experimental treatment enabled the children's relationships with peers, and teachers, and identifies some interpersonal relationships and development and the interventions suggested in this study enhanced relationship building. The improvements in leadership skills are attributed to the fact that as children develop and mix with other children at play and movement situation they develop a range of leadership and interpersonal skills that will become the foundations of their personality in their life. The findings of this study are in agreement with the findings of R. Steve McCallum, and Bruce A. Bracken (1993), Coakley, 2000; Mckenzie & Sallis, 1996 who found that physical as well as play activities give psychological advantage.

Conclusions

The experimental protocol suggested in this study was well received by the elementary school children experimented and the children participated enthusiastically and the play and movement approach developed their overall personality as assessed through leadership and interpersonal relationship of the children. It was suggested that the experimented protocols can be implemented among the elementary school children which would be helpful for the all round development of the children right from their early ages.

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Designing Of A Model For Talent Identification And Development - An Indian Perspective

Gerald Santhosh DSouza,
Deputy Director
Department of Physical Education, Mangalore University,Mangalagangotri 574199

Abstract
Sport at present has nearly ceased to be the main source of recreation or of enhancing the quality of life. The modern day mantra is 'Sport means excellence', the paradigm that 'participation is more important than winning' has shifted to 'winning is all.' Most of the countries have left no stone unturned in order to get their share of sports excellence at the global level. This paper examines the present scenario regarding talent identification and development in India. It presents the procedures and phases of talent identification and the lacunae that is haunting India in its path towards sports stardom. As a result of the discussion and theoretical precepts and taking into account the practical difficulties the researcher has suggested a sports talent development model starting from the grass root levels and continuing towards the pinnacle of sports performance. A flowchart is presented to get the plan into action.
Keywords: Talent Identification, Talent Identification and Development Model.

Introduction

A basic definition of talent identification (TI) encompasses the recognition of a natural endowment or ability of superior quality. But, identifying a talented athlete within sport is multifaceted and complex. Talent in sport is identified by characteristics that are at least partially genetically determined, affected by numerous environmental conditions and currently difficult to determine accurately. Talent hunting has been going on for centuries though not very well popularised till recently. The Eastern Bloc countries in the seventies had developed a state sponsored programme in order to identify talented sportspersons so that they could be groomed to become superstars of the future. Western countries also initiated systematic TI programmes, albeit with their own unique variation and mostly without the associated political ideology. Australia was the first Western country to implement such a programme, the Sport Search Programme, in 1994. South Africa, in an endeavour to find solutions for the disproportionate representation of the South African population in representative teams, commissioned research in the early nineties to investigate solutions to the problem.

Procedures of Talent Identification

The various parameters that are tested to identify talents are

a) Physiological : Measuring maximum oxygen uptake (VO^2 max), blood lactate concentration, various lung capacities etc. which correlate highly with selection of a particular activity.
b) Anthropometric: Measurements of various body segments, x-ray techniques to determine bone growth in an athlete, can help one to approximately forecast the maximum growth which could happen in that athlete.
c) Psychological: Assessing the aptitude of a person for a team or an individual event, drive and mental strength of an athlete is indispensable to perform to potential at higher levels.
d) Heredity: Physical, Physiological and psychological characteristics are inherited by the children would determine the potential of the particular child in the chosen sport.
e) Socio economic status and facilities: The social strata which the athlete belongs to decides his/her fate, as his or her economic conditions might restrict an athlete's participation at the higher level of competition..
f) Technical skills: This is specific game related parameters. Each game/sport has its own specific skills and the requirements for it, for which tests can be conducted.
g) Establish test batteries: Once the requirements of a particular sport is established it is necessary to establish tests and norms based on testing larger populations. Similarly the qualities of highly accomplished athletes in a particular sport can be investigated and correlated with the athletes being tested.

To sum up, a structured talent identification system includes physiological, psychological and sociological tests which provide a coach or the sports authorities with relevant information regarding an athlete's potential in natural ability.

Phases of Talent identification testing: Talent identification is undertaken, both in terms of chronological age and biological development of an athlete. Bompa (1985) feels that comprehensive talent identification needs to be carried out a number of years with three main phases.

(a) The primary phase of talent identification should occur during the years 3-8 which aims at physician's examination and is aimed at detecting body malfunctions and physical deficiencies which may restrict future sporting endeavours.

(b) The secondary phase of talent identification should be conducted between the ages of 9-17, however this age range will vary between sports e.g. 9-10 for gymnastics, 10-15 for girls and 10-17 for boys in other sports. This phase of talent identification needs to be conducted on athletes who have already experienced organised training and requires a comprehensive assessment of physiological and anthropometric parameters. Psychological assessment and profiling commence in this phase.

(c) The final phase of talent identification is mainly concerned with high calibre athletes e.g. national team members. Talent identification in this phase needs to be very sport specific and painstaking, with particular attention paid to the athletes health, physiological adaptation to training and their potential for further improvement.

The relevance of talent identification in India

From a discussion of the above it can be fairly assumed that talent identification is extremely scientific in its concept and execution. India has been touted as an emerging economic and a military power, but it takes the backseat where sports performance is concerned. So it is imperative to evaluate the dynamics of a talent development system in the context of the conditions existing in the Indian sports scenario. In light of the synergetic effect of the talent identification processes, the various factors leading to the effective implementation of such processes are examined:

1. Sports in educational institutions: There are absolutely no strategies of sports talent search in educational institutions. The idea of existing potentialities in the children based on heredity, physical or psychological parameters are nonexistent. Sports is considered as a co-curricular activity and not a compulsory activity. There is no plan for sports coaching, sports quota for admissions, sports scholarships, incentives in cash or kind. Sport is not a cash producing agency. As such high investment on sport infrastructure is not encouraged. Therefore most of the schools and colleges have meager infrastructure. The sports fees that is collected from the students is the major source of funding for sports activities, and in most of the institutions even that is not used up to a large extent. Almost all schools and colleges irrespective of the student population have only one physical education teacher. In most instances except the departmental or the university inter college competitions there is no other stage where a sportsperson can taste competition and can develop his talents.

2. Government support for sports: Most coaches feel the absence of facilities for the games in which they are appointed, absence of any scheme or finance to develop the games in which they are specialized. The schemes like selection to sports hostels or coaching centers happen are not publicized through televisions or through educational institutions. Lack of adequate staff, incentives for performance, modern upto date facilities and modern gadgets and equipment are virtually absent, which is available only at international level camps.

3. Societal acceptance of sports: Academic achievements take precedence over all other school activities. Sponsorships for sportsperson are rare to come by and usually they come only after interventions by educational institutions, or other socially influential persons do a few philanthropists come forward to sponsor a talented sportsperson. Education and academic percentage is the mantra in today's educational circles. But at the developmental stage only the coach or the physical education director has to slog without adequate backing by the educational institutions, parents or the society.

4. Existence of a sports culture: There are only a few voluntary sports clubs which mostly play only cricket. In recent years even open public parks and small playgrounds have been converted to bus-stands and other commercial structures. A majority of the people though theoretically in the know about the benefits of regular sports participation, do not apply the rule to themselves. Even the basics of theory and the scientific nature of sport is alien to most people. This can be considered as one of the biggest hurdles towards the development of a sports culture.

The Talent Identification And Development Model In light of the above existing scenario the chances of success that could be achieved by following the western countries system of talent identification and development looks very bleak. At present the existing situation warrants a localized scheme of sports talent search. The potential athletes from cities and those with highly genetic endowment stay away from sports due to career compulsions, societal indifference and lack of professionalism from the sports bodies.

It is imperative from the point of interest in sports, a talent identification system be developed in line with the facilities and talent at our disposal along with broad-basing and popularizing sports.

The Talent Identification and Development Pyramid: On the basis of the activities and inclination for games shown by children during different age groups, the different levels at which different tasks could be executed can be fixed at 5-10 years, 10 to 14 years, 14 to 18 years, and above 18 years.

Units of Talent Sourcing: The educational institutions like schools and colleges are the most appropriate units from which talents can be spotted. If every physical education personnel contribute even a handful of athletes from his or her school, there would be no dearth of human resource from which future winners could be unearthed.

Personnel in Charge: At the 5-10 and 10-14 years the physical education teacher will be in a better position to provide physical activity in order to improve the innate physical and skill gifts that the child is endowed with. Periodically however, the coach or the technical expert has to orient the physical education teacher in the progression of teaching and also monitor the teaching learning process.

At the collegiate level, the physical education director will direct the athletes more towards the coach or expert and will be more of a manager or motivator. In all the teacher has to be better judge if he could handle the athlete or take the help of qualified coaches as the athlete progresses. Keeping in mind the benfit of the athlete, personal ego should not come in the way of accessing better coaching facilities through other agencies

Technical Expertise: Though the number is less, there are knowledgeable experts in the talent identification process. Their expertise must be utilized to guide and orient the physical education teachers in the various nuances of spotting talent and developing them.

Tasks: The tasks should be specific to the level at which talent is developed. From utilizing more or fun and play way method of developing motor abilities at the age of 5 the complexities and technicalities should progress to the stage of advanced lab testing and participation in advanced level of competition at later stages.

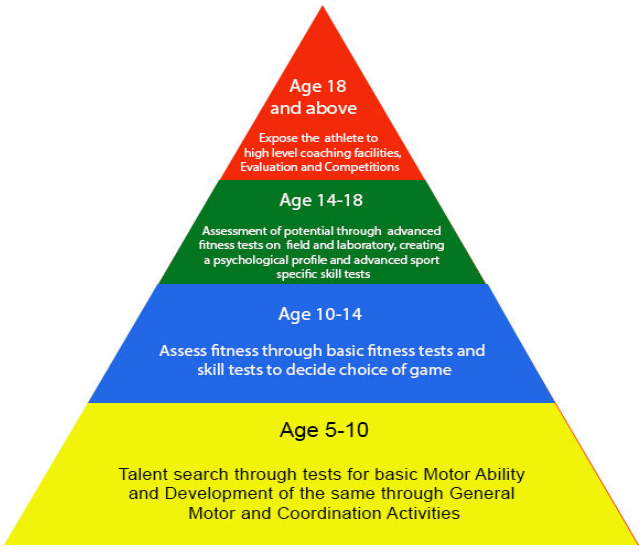

FIGURE 1. TALENT IDENTIFICATION AND DEVELOPMENT PYRAMID

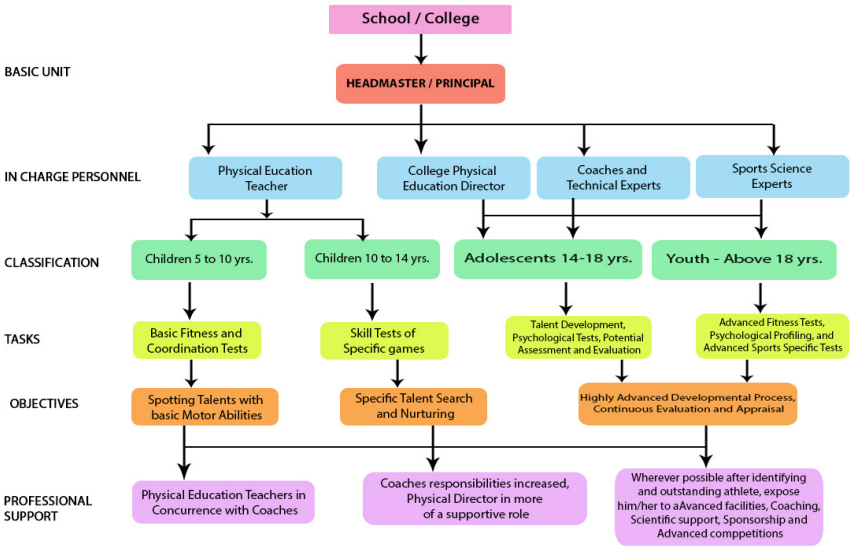

Figure 2. Flowchart showing various Classifications, Tasks, Objectives and Personnel in charge

Conclusion

Talent hunting is not just a formality; rather it is a scientific process whereby talented youngsters are identified through various procedures which indicate the potential in the related field. India with its huge human resources is an ideal ground for talent hunt provided the status for sports was at par with its western counterparts. Talent selection loses its meaning when sport as a whole is not popular and attracts only a minimal of students and that too from lower economic strata. The suggested model is an attempt to make the most of the resources to identify talent and develop them.

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An Analysis Of Playing Pattern Of Tamilnadu State Junior Badminton Players

Dr. R. SAVARIRAJAN, Director Of Physical Education,
Arignar Anna Govt. Arts & Science College, Karaikal – 609 602Puducherry State

Abstract :
A total of 10 matches from the 2012 tamilnadu state junior badminton ranking tournament were video taped and notated. The analysis profiled the percentage distribution of shots with respect to court-areas; the frequency the players used the different serves; the area the players returned the most shots to; a rank order of the different return shots; and the playing effectiveness in relation to each court-area. The study further identified the types of strokes used for killing shots and isolated the critical factors influencing winning or losing a match.
Key Words: notation, badminton, playing pattern, game strategy, tactics

Introduction:
Methods of notation have been widely used to analyze the playing pattern in sports (Horobin, Kitchen and Hughes, 1995; Miller and Bartlett, 1994; Hughes and Tillin, 1995; Hong, Robinson and Chan, 1998). Badminton is a fast and dynamic sport. To win a game, the proper use of tactics is of vital importance (Downey, 1982). Scientific studies on tactics, strategy, or playing patterns of international level badminton, are, however, very limited. The purpose of this study was to profile playing patterns of tamilnadu state junior badminton players in single games and to establish a comprehensive database of badminton tactics.

Methods: A total of ten single matches played in the 2012 tamilnadu state junior badminton ranking tournament were analyzed. To reduce bias, in addition to the four players competed in the semi-finals and final matches, seven other players from the quarterfinals and second round matches were also selected as subjects. All the players were right-handed. Games were recorded using a 3-CCD video camera placed at the back or at the side of the court. After the games, the videotapes were notated. Court was divided into six areas: right forecourt, left forecourt, right mid-court, left mid-court, right rear court and left rear court. Strokes were identified according to serves and return shots. The serves were: serve low, serve high, and the return shots were: smash, clear, drop, block, lob, drive, push, net, and hit. Each of the return strokes was in turn identified as either straight or cross court shots. In order to depict the quality of strokes, each stroke was classified into one of six categories of effectiveness: effective, ineffective, unconditional winner, conditional winner, forced failure and unforced failure. Each category was defined as: effective, ineffective, unconditional winner, conditional winner, forced failure, and unforced failure shots.The data were analysed by calculating the percentage distribution of shots in relation to the six effectiveness-categories, the 20 kinds of strokes and the six court areas. One-way analysis of variance (ANOVA) was applied for multiple comparison to identify statistically significant difference. Post hoc analysis was conducted by Scheffé Significant Difference Test to evaluate the significant mean differences. T-tests were used to evaluate the significant mean difference between two groups. The 0.05 probability level was used for all tests as the criterion value when determining the presence or absence of statistically significant results. Reliability of the method was evaluated by comparing the results of a repeated analysis of a match containing 108 rallies and 619 shots. (Hong et al., 1996).

Results And Discussion:
The serve: It has been pointed out in literature that the high deep serve is used more often in single than in doubles badminton games (Poole, 1991; Bloss & Hales, 1994; Downey, 1982). The aim is to force the opponent to move to the rear court, blunting the attacking power and developing open space in the forecourt. A weak return allows the server to take the offensive. Data from this study, however, showed that the junior badminton players served virtually the same number of low-short serve (512) as the high-deep serve (516). Moreover, among the eleven players involved, seven played more low-short than high-deep serves. These seven players served low, eliminating their opponent's chance of hitting the shuttle downward. With good blocking at the net, it forced the opponent to lift the shuttle upward, giving the server the opportunity to implement their offensive strategy, for example a smash or a drop. This explanation can be substantiated as the data of this study indicated that the smash (straight and cross-court) was the second most popular shot played. Based on the analysis made, it

was concluded that more players preferred to used low-shot serves to facilitate offensive strategy in the 2012 tamilnadu state junior badminton ranking tournament.

The rally: Table 1 shows that, as would be expected for this level of competition, a much higher rate of "effective" shots was found than that of the "ineffective" shots. Among the six court areas, the left rear court contained the highest rate of "ineffective" shots, with the left forecourt receiving the highest rate of "effective" shots.

Table 1Percentage distribution of the six effectiveness-category shots in eachof the six court-areas (%). (N=20. Values are Means□SD)

	Effective	Ineffective	Unconditional Winner	Conditional Winner	Forced Failure	Unforced Failure	Sum
Fore left	**76.07 □6.44**	**11.05 □4.87**	**4.45 □2.98**	**0.00 □0.00**	**2.40 □2.02**	**6.04 □3.56**	**100**
Fore Right	**74.22 □5.68**	**10.90 □5.73**	**4.63 □3.01**	**0.14 □0.46**	**2.05 □1.85**	**8.07 □3.46**	**100**
Mid Left	**66.11 □9.28**	**13.71 □6.33**	**9.89 □4.53**	**0.18 □0.58**	**4.84 □2.56**	**5.27 □4.61**	**100**
Mid Right	**63.52 □11.15**	**15.12 □6.85**	**8.57 □5.13**	**0.24 □0.75**	**7.86 □4.22**	**4.68 □4.40**	**100**
Rear Left	**67.72 □8.99**	**18.75 □6.21**	**4.65 □3.32**	**0.08 □0.34**	**0.26 □0.65**	**8.54 □4.92**	**100**
Rear Right	**72.15 □6.44**	**14.96 □9.36**	**4.50 □3.92**	**0.12 □0.43**	**0.11 □0.36**	**8.15 □5.33**	**100**

As shown in Table 2, for winning shots, the rate of "unconditional winner" was much higher than that of the "conditional winner" for the whole court, with the greatest rate of the "unconditional winner" shots being found in the mid court. The highest rate of "forced failure" shots was found on the mid-court with the greatest rate of the "unforced failure" shots found in the rear court.The one-way ANOVA test indicated a significant difference ($p<0.05$) in the percentage distribution of shots among fore, mid and rear court areas using. While the Post Hoc tests showed to be between the fore and mid-court and between the fore and rear court. No significant difference was found between mid- and rear court. These findings indicated that players preferred to return shots to the opponent's forecourt as placement there is considered to be safe and offensive. By playing a shot close to the net eliminates the opponent's chance to hit the shuttle downward; and when a good net shot is followed by blocking, it forces the opponent to lift the shuttle up, offering the chance to attack.

Table 2Percentage distribution of the six effectiveness-categories shots in the fore, mid, rear and whole court (%). (N=20. Values are Means□SD)

	Effective	Ineffective	Unconditional Winner	Conditional Winner	Forced Failure	Unforced Failure	Sum
Fore Court	74.99 □5.18	10.95 □4.81	4.51 □2.08	0.07 □0.24	2.29 □1.30	7.18 □3.01	100
Mid Court	64.73 □8.19	14.62 □6.04	9.02 □2.77	0.24 □0.52	6.41 □2.23	4.98 □3.48	100
Rear Court	69.80 □7.80	16.94 □6.75	4.63 □2.92	0.10 □0.38	0.19 □0.36	8.33 □3.99	100
Whole Court	70.34 □4.82	14.02 □4.69	5.76 □1.91	0.13 □0.20	2.82 □0.76	6.92 □2.75	100

The backhand rear court is considered by many as the players' weakest area (Breen & Paup, 1991; Bloss & Hales, 1994; Poole, 1991). When playing a backhand stroke, the body has to twist and the grip changed from the forehand to the backhand position. As a result, time is needed to attain the standby position. Also the backhand is usually less powerful than the forehand stroke and often offer the opponent an offensive opportunity. This study shows that of all returns, 51.94% were played from backhand side, revealing that offensive players preferred to return more shots to the opponent's backhand side (left forecourt, left mid and left rear court for the right-handed players), thus putting pressure on the opponent's backhand. The study further revealed that amongst the six court-areas, returns from the left rear court had the highest "ineffective" rate (Table 1), showing that even in high level competition, the backhand rear court tends to be the weakest one.

Table 3 demonstrated that the number of "effective" shots was much higher than that of "ineffective" shots. Among all the shots, the highest "effective" rate was with the net, block and drop shots.

Table 3Comparative relationship of effective and ineffective rate with the 9 mainshots. (N=20. Value = Means□SD)

	Effective	Ineffective
Smash	77.87□17.99	22.13□17.99
Clear	74.57□28.21	25.43□28.21
Drop	91.12□12.95	8.88□12.95
Block	92.20□8.01	7.80□8.01
Lob	69.18□23.19	30.82□23.19
Drive	82.90□28.55	17.10□28.55
Push	78.83□33.99	21.17□33.99
Net	95.79□24.88	4.21□24.88
Hit	59.26□46.17	40.74□46.17

The net shot was found to have the highest "effective" rate. It has been shown that a good net return can be very useful as it can finish a rally and win a point, in fact it has been found that the net shot was the second ranking killing shot (Table 4). With net blocking, the opponent is forced to lift the shuttle, thus providing opportunity of a smash which was found the top ranking killing shot (Table 4). If, however, a player plays an "ineffective" net return, the opponent will have a chance to hit the shuttle down at the forecourt.The block shot or underhand drop was ranked second in its "effective" rate (Table 3). This shot is usually used to return a smash from the opponent, which is usually executed from the opponent's rear court or mid-court. Using the block shot to make a net return, the opponent is forced to move a long distance to play which places the opponent in an off balance position and causes them to expend considerable energy.The drop shot was the third ranking shot in the "effective" category (Table 3). It is usually played from the rear or mid court, with the aim of hitting the shuttle downward softly to the opponent's forecourt. Returning a good drop usually requires the use of deception to create situations to the player's advantage. For example, when the shuttle is high in the rear or mid court, faking a smash, can cause the opponent to adopt a defensive stance, which makes him more difficult to move quickly to the rear or forecourt. The offensive player then has the option of playing an attacking clear or attacking drop to force a weak return (Downey, 1982).Meanwhile it would be too energy consuming if the smash was used all the time. Comparing the straight and cross court shot, it was found that 66.81% of returns were straight shots and 33.19% were cross court shots. Breen and Paup (1983) stated that the ability to change the direction of shuttle flight is one of the crucial aspects in the strategies of single badminton. For example, if the opponent plays a straight shot the best return is cross court shot. Changing directions makes the opponent run farther but the cross court shot is more difficult and dangerous to return. If the cross court clear is not played high and deep, the opponent may have an easy smash. The straight return of the shuttle is generally the simplest error-free shot to play and it can also give a better positioning for subsequent shots.This study indicated that 84.16□10.33 % of the straight court shots were "effective" and 81.19□12.02 % of the cross court shots were "effective", which showed that the high level junior badminton players studied preferred to play the more safe and conservative straight shots rather than the high risk crosscourt shots.

The kill shots: In order to profile the commonly used playing strategy that leads to winning, the last five shots played in the "unconditional winner" and "forced failure" rallies were analysed. Table 4 shows that the smash was the most frequently used kill shot with net the second and hit the third. This highlights the fact that the smash is a very important shot in badminton game. Although the smash is frequently used to win a rally, it is impossible to smash all the time, as the opponent may not provide such an opportunity. Knowing, therefore, how to "set up" the opponent for a smash is essential.

Table 4Percentage distribution of killing shot and the preceding returns (%)

Killing Shot		Preceding Shots (including serves)									
		1		2		3		4			
1	Smash	53.9	Net	21.89	Lob	21.87	Lob	24.35	Lob	24.04	
2	Net	14.56	Lob	19.93	Smash	15.46	Net	16.85	Net	21.32	
3	Hit	11.27	Smash	18.93	Clear	14.40	Clear	14.61	Smash	15.85	
4	Push	5.03	Drop	8.68	Net	13.06	Smash	13.86	Block	10.38	
5	Lob	4.16	Clear	8.48	Block	9.87	Drop	8.61	Clear	8.74	
6	Clear	3.47	Block	7.89	Drop	7.20	Block	6.37	SH	6.56	
7	Drop	2.95	SL	4.93	SH	5.87	SH	6.37	SL	6.01	
8	Drive	2.42	Push	3.75	SL	5.33	SL	5.23	Drop	5.46	
9	Block	2.24	SH	2.76	Drive	3.47	Push	2.25	Drive	1.09	
10			Drive	1.38	Push	3.47	Drive	1.50	Push	0.55	
11			Hit	1.38							
	N=577		**N=507**		**N=375**		**N=267**		**N=183**		

There are different playing styles, for example the strong player, the touch player, or the fast player. To smash, one must have an overhead return from the opponent. To force the opponent to make an overhead return, a good net shot is the best choice. Findings of this study support this statement as all the shots used in the second last return, the net shot ranked the first, the lob the second, and smash the third. Although the lob is a defensive shot, it can make use of the deep part of badminton court and force the opponent to run a long way to get the shuttle, resulting in a high energy consumption of the opponent. The smash, which ranked third in the second last returns, is usually employed by using power. A strong smash followed by a good net or hit shot is commonly used by the "strong players" (Downey, 1982).

The first three ranking shots used for the third last return were lob, smash, and clear. The net shot was ranked closely at the forth. If the first ranking shots in the last three returns are linked, a commonly used pattern can be found. First, the player plays a lob, forcing the opponent to the rear court; the player plays a good net shot, making the opponent run to the forecourt. If the good net shot is followed by net blocking, the opponent must lift the shuttle up. And if the return is not long enough, the player has the opportunity for a smash.

The winning strategy: The mean and standard deviation of shots returned by match winners and losers with different effectiveness categories in an average match were computed (Table 5). Among all the effectiveness category shots returned, only the "unconditional winner" showed a significant difference ($p<0.01$) between the winner and loser, reflecting the fact that the pressure and attack game was the most important strategy for the top level international players. Players who play with good skill, patience, stamina and a variety of different tactics set up the rally for a kill - an "unconditional winner" shot. The more effective the player, the less error appears.

Table 5 Comparison of different number of shots played by winner and loser in each category of an average game. (N = 10. Values are Means□SD)T is between the Winner and Loser. T critical value for p< 0.05 is 1.96 and p<0.01 is 2.576)

	Winner	Loser	Difference	t
Effective	247.40□87.27	243.50□92.39	3.90	0.13
Ineffective	45.50□24.90	53.70□25.28	-8.20	0.90
Unconditional Winner	22.70□7.75	16.20□6.05	6.50	3.29
Conditional Winner	0.50□0.85	0.50□0.71	0	0.00
Forced Failure	9.30□3.59	9.60□2.80	-0.30	0.21
Unforced Failure	21.20□10.27	25.30□8.23	-4.10	0.97

Conclusion:

More junior badminton single players studied preferred to serve low-short shots to facilitate an offensive strategy. The players returned a higher percentage of shots to the forecourt than the mid- and rear court in order to play an offensive game. The lob was the most preferable return played by the players, followed by the smash, net and clear. Among all the effectiveness categories, the "effective" shots took the predominant place.More "effective" shots were returned from the forecourt, while more "ineffective" shots were returned from the rear court with the left rear court containing the highest "ineffective" index. The smash was the most frequently used shot to kill and win a rally, net the second, hit the third. Among all the effectiveness categories of shots returned, only the "unconditional winner" showed a significant difference between the winner and loser, reflecting the fact that the pressure and attack game was the most important strategy for top levels junior players in producing a winning performance.

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Exercise Protocol for Predicting the Sensitive Zone on Heart Rate Max.Among Untrained School Boys

Prof,.Rajesh Kumar
Chairman,Board of Studies in Physical Education,OU,Hyd
M. Gnanaprasad Reddy
Lect.in Physical EducationMatrusri Engineering College,Hyderabad.

Abstract:
The Heart is a chambered muscular organ in vertebrates that pumps blood received from the veins into the arteries, thereby maintaining the flow of blood through the entire circulatory system. A similarly functioning structure in invertebrates. Heart rate refers to the speed of the heartbeat, specifically the number of heartbeats per unit of time. The heart rate is typically expressed as beats per minute (bpm). The purpose of this study was to compare the Heart Rate Max.Among untrained school children of Hyderabad City. To achieve this purpose, 90 students were selected randomly and were categorized in three different groups, i.e. high intensity group, medium intensity group and low intensity group as random samples. They were ranged in age between fourteen to sixteen years only. In order to assess the Heart Rate Max., the Harvard Step Test method was used. The raw scores of untrained school boys of Hyderabad were converted into Mean, Standard Deviation, Standard Error, t-ratio and ANOVA comparison was made to find out the significance. Among these three groups Medium Intensity group (9 inches) has better average compare to 13 inches High bench and 4 inches Low bench group boys. Hence, it was concluded that the Medium Intensity Exercise Protocol could bring the significant positive improvements for predicting the Sensitive Zone on Heart Rate Max.Among Untrained School Boys. The Present Article/Paper deals with this issue and attempts to focus on the difference between the performance of trained & untrained sportsmen.

Introduction:
A Human being resting heart rate (sitting) is influenced by many factors including age, level of heart and lung fitness, environmental temperature, altitude, anxiety and cigarette smoking. Physical activity can strengthen your heart. The heart will be more efficient and be able to pump more blood per beat. With cardiovascular training, your heart will have to do less work when resting, thus lowering your resting heart rate. How much change occurs varies from person to person. Resting heart rates vary from below 40 beats per minute in highly conditioned athletes to greater than 100 beats per minute in sedentary, unconditioned adults. Women tend to have higher resting heart rates (8-10 beats average) than men. A good average appears to be around 70-75 beats per minute. As exercise begins, heart rate increases. During low levels of exercise, such as walking, the elevated heart rate will level out at a constant rate (this is called steady state). As the workload of the heart increases, the heart rate will increase. A fit person will have a lower steady state heart rate value than an un-fit person. As the exercise workload continues to increase, the heart rate will eventually reach a maximum. This highest attainable heart rate is referred to as an individual's heart rate max (HRmax). During a maximal exercise stress test, your maximal heart rate can be determined. Predicted maximal heart rate can be calculated by using the formula 207 –0.7(age). This predicted HRmax has a standard deviation of +/- 6-8 beats per minute. HRmax decreases we age, and is lower in a more fit individual than in an unfit person of the same age.

Methodology: The purpose of this study was to compare the Heart Rate Max.Among untrained school children of Hyderabad City. To achieve this purpose, 90 students were selected randomly and were categorized in three different groups, i.e. high intensity group, middle intensity group and low intensity group as random samples. They were ranged in age between fourteen to sixteen years only. In order to assess the Heart Rate Max., the Harvard Step Test method was used on the students of Hyderabad City. The students were divided into three different groups of 30 students each randomly, which was thought necessary for the administration of activity smoothly. Before the activity the students initial pulse rate was taken for one minute and immediately after the activity the final pulse rate was also recorded. The students were told to do 30 steps per minute and for administering this,

the apparatus was also used. They were told to perform this activity for one minute. The students were given enough rest before taking up the testing.

Results: The raw scores of untrained school boys of Hyderabad were converted into Mean, Standard Deviation, Standard Error, t-ratio and ANOVA comparison was made to find out the significance. The calculated t-value is compared with the table t-value at '42' degree of freedom at 0.05 level of confidence, which was given by Clarke and Clarke.The computation of Mean Standard deviation, Standard Error of the Mean, t-value and ANOVA of exercise protocol for predicting the sensitive zone on Heart Rate Max. Among untrained school boys between the age group of 14 to 16 years are presented in table from 1.0 to 1.18 respectively.

TableMultiplecomparisons

Heart Rate (Final)		Mean Difference	Standard Error	Sig.
4 inches benchers	benchers	-24.30725	2.1748	0
	benchers	-21.16852	2.1748	0
	Initial	41.24722	2.1748	0
9 inches benchers	benchers	24.30725	2.1748	0
	benchers	3.13873	2.1748	0.152
	Initial	65.55447	2.1748	0
13 inches benchers	benchers	21.16852	2.1748	0
	benchers	65.55447	2.1748	0.152
	Initial	62.41574	2.1748	0
Initial	benchers	-41.24722	2.1748	0
	benchers	-65.55447	2.1748	0
	benchers	-62.41574	2.1748	0

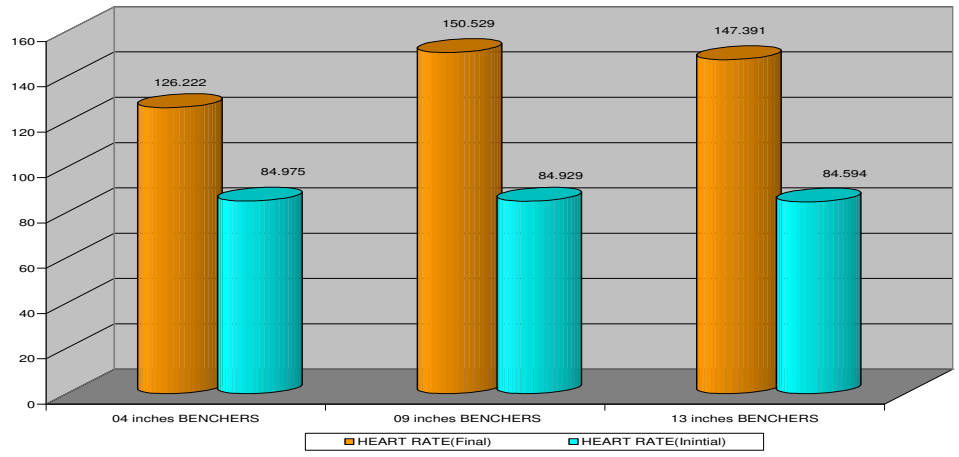

Fig. Heart Rate Final & Initial

The above figure Heart rate final and initial shows that the two different groups final and initial Means are compared among the three groups. 9 inch Medium bench group has highest influences of experimental treatment followed by 13 inch and 4 inch bench exercise.

Discussion: The table indicates that three groups combined influence was found out by multiple comparison method. When Low bench group and High bench group was compared and the value shows that these two groups are significantly influenced by experimental treatment.

When Medium bench group and Low bench group was compared and the value shows that these two groups are significantly influenced by experimental treatment.When High bench group and Medium bench group was compared and the value shows that these two groups are insignificantly influenced by experimental treatment.

Conclusion:

To find out whether there is any significant difference among this three groups, 13 inches High bench, 9 inches Medium bench, 4 inches Low bench of untrained school boys of Hyderabad t-ratio and ANOVA was tabulated. The calculated value of t-ratio was higher than the table value required at 0.05 level of confidence.The results of the study when compared with all the groups shows that all groups are not equal in Heart Rate Max.This speaks that 9 inches Medium group have better average compare to 13 inches High bench and 4 inches Low bench group boys.

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Effect Of Swiss Ball Training On Core Strength And Stability And Flexibility Of Sports Person

Dr.G.VINOD KUMAR, Associate Professor, Department of Physical Education and Sports, Pondicherry University, Puducherry.

Abstract
The purpose of the study was to assess the effect of Swiss ball training on core strength and stability and flexibility of sports person. Thirty male players were selected randomly as subjects, their age ranged from 21 to 25 years. The selected players were divided into two groups of fifteen each. The group I was control group (CG) and group II was the Swiss ball training group (SBTG). The Swiss ball training group was underwent Swiss ball exercise programme for five days in a week for 12 weeks from 6.30am to 7.30am. The selected dependent variables are core strength and stability and flexibility. Swiss ball exercises are Seated Circles, Reverse Twist, Normal Sit-Ups, Hip Rolls, Bridging, Normal Oblique, Reverse Back Extension, Supermans, Leg Roll, Reverse crunch, Abdominal ball. The control group did not take part in any special training programmes. The core strength and stability was tested by core strength and stability test and the flexibility was tested with sit and reach test. The collected data from the CG and SBTG groups prior to and immediate after the training programme on selected criterion variables were statistically analyzed with analysis of covariance (ANCOVA). The result indicates that the SBTG was compared to the CG, it was much improvement on core strength and stability and flexibility.
Key words: Core strength, stability, flexibility, Swiss ball, abdominal strength.

Introduction

Core stability relates to the bodily region bounded by the abdominal wall, the pelvis, the lower back and the diaphragm and its ability to stabilize the body during movement. The main muscles involved include the transverses abdominus, the internal and external oblique, the quadratus lumborum and the diaphragm. The diaphragm is the main muscle of breathing in the human and so breathing is important in providing the necessary core stability for moving and lifting. All movement, even of the arms and legs, begins in the body's core, and any imbalances or malfunctions in the core will lead to problems in the extremities due to incorrect use of the body to accomplish movement. To ensure a strong and centered movement pattern (acceleration, deceleration, and dynamic stabilization) the core muscles must stabilize before the extremities properly activate. Core stability is required to stand up straight, to kick a ball, to throw a ball to, to walk, run, jump, and climb stairs. And also it is more important to sports performance! "Core training" is a phrase on the lips of every fitness professional, fitness magazine writer, and even everyday gym rat. But how many people really understand what "core training" means or even where "the core" is on their body? Currently there is limited and conflicting evidence that improving core stability or core muscle strength improves athletic performance or prevents injury. Perhaps the lack of agreement on the definition and measurement of core strength and stability contributes to the lack of hard scientific evidence and conflicting evidence. Functional strength, stability and flexibility training are all built on the foundation of a strong and stable core. So the researcher interested to make an attempt on impact of Swiss ball training on core strength and stability and flexibility variables.

Methodology

Selection of Subjects: To achieve the purpose of the study thirty male players were selected randomly as subjects. The age of the subjects ranged from 21 to 25 years. The selected subjects were divided into two groups of fifteen each. The group I was named as control group (CG) and group II was the Swiss ball training group (SBTG). All subjects in the experimental group were given Swiss ball training programme for five days in a week for 12 weeks duration in addition to the regular activities of the college as per the curriculum.

Selection of Variable: To find out the significant improvement by through Swiss ball training, core strength and stability and flexibility were the dependent variables selected for this study.

Training Schedule: The Experimental group underwent their respective training for five consecutive days per week for twelve weeks from 6.30am to 7.30am. All the subjects involved in this study were carefully monitored throughout the training programme. The Swiss Ball Training Group (SBTG) underwent Swiss ball exercises are **Seated Circles** (15 Deep Circles in each direction), Chest Press (2 Sets of 12 - 15 lifts each side - with 20 seconds rest), **Reverse Twist** (2 Sets of 10 - 15 turns each side with 20 seconds between sets), **Normal Sit – Ups** (3 Sets of 10 slow lifts. Hold for 3 - 5 seconds in upward phase), **Hip Rolls** (12 Slow rolls each side for 2 sets - 20 seconds rest between sets), **Bridging** (2 Sets of 12 - 15 lifts with 20 seconds rest between sets), **Normal Plank** (2 Sets of 45 seconds lift with 20 seconds rest between sets), **Normal Oblique** (2 Sets of 15 slow lifts with 20 seconds rest between sets), **Reverse Back Extension** (15 Slow lifts aim for 3 - 5 seconds per exercise), **Supermans** (2 Sets of 12 - 15 lifts each hand, with 20 seconds rest between sets), **Leg Roll** (heel dig) (2 sets of 15 repetition with 20 seconds rest between sets) Reverse crunch (2 sets of 15 repetition with 20 seconds rest between sets), **Abdominal ball rotation** (2 Sets of 12 - 15 lifts each side - with 20 seconds rest). The control group did not take part in any special training programmes.

Test Administration: The present study was to find out the effect of Swiss ball training on core strength and stability and flexibility of sports person. From the availability and feasibility of literature, the following standardized tests were used to collect relevant data on the selected variables and they are presented in the following table.

Tests Selection

Sl. No.	Dependent Variables	Test Items	Unit Of Measurement
1.	Core Strength And Stability	Core Strength And Stability Test	In Points
2.	Flexibility	Sit And Reach Test	In Centimeters

Collection of Data: The Pre-test data were collected two days before the training programme and post-test data were collected two days after the training programme. In both cases, the data were collected in two consecutive days.

Statistical Technique: The collected data from the control and experimental groups prior to and immediate after the training programme on selected criterion variables were statistically analyzed with analysis of covariance (ANCOVA) to find out the significant difference between control and experimental. In all the cases 0.05 level of significance was fixed to test the hypotheses.

Analysis Of Data

The influence of Swiss ball training on each dependent variable were analyzed and is presented the below table.

Analysis Of Covariance On Flexibility And Core Strength And Stability Of Cg And Sbtg

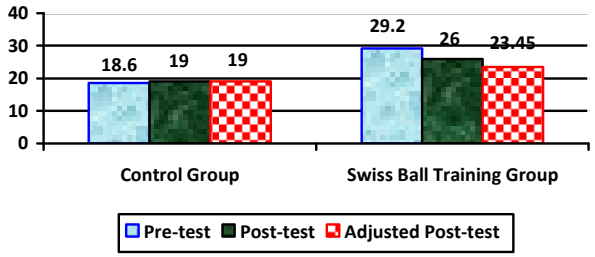
Dependent Variables	Test	Cg	Sbtg	F-Ratio
Core Strength And Stability (In Points)	Pre Test Mean	35.53	46.33	**7.26***
	Post Test Mean	37.93	64.66	
	Adjusted Post Mean	36.23	57.49	
Flexibility (In Centimeter)	Pre Test Mean	18.6	19	**5.48***
	Post Test Mean	19	26	
	Adjusted Post Mean	19	23.45	

*Significant At .05 Level Of Confidence.
(The table value required for significance at .05 level with df 1and 27 is 4.21).

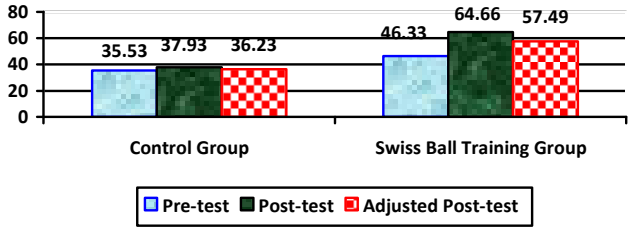
The above table shows that the obtained pre-test and post-test and adjusted post-test means of core strength and stability of control group are 35.53 points, 37.93 points and 36.23, the Swiss ball training group are 46.33 points, 64.66 points and 57.49points. The obtained F-ratio value is 7.26*, which is greater than the table value 4.21 with df 1 and 27 required for significance at .05 level. The result indicates that there is a significant improvement among the groups in the performance of Core strength and stability.

The obtained pre-test, post-test and adjusted post-test means of flexibility of control group are 18.6cm, 19cm and 19cm, Swiss ball training group are 19cm, 26cm and 23.45cm respectively. The obtained F-ratio value is 5.48*, which is higher than the table value 4.21 with df 1 and 27 required for significance at .05 level. The result shows that there is significant difference exist among the groups in improving the flexibility.

Pre, Post and Adjusted Post-test Means of Control and Swiss Ball Training Groups on flexibility (in centimeter)



Pre, Post and Adjusted Post-test Means of Control and Swiss Ball Training Groups on Core Strength and Stability(in points)



Conclusions

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

The Swiss ball training group achieved significant improvement on core strength and stability and flexibility.The Swiss ball training group was compared to the control group; it was much improvement on core strength and stability.The Swiss ball training group compared with the control group there was changes on flexibility.

Recommendations

In the present study, it was concluded that Swiss ball training were improved core strength and stability and flexibility, hence it is recommended that all level players can implemented the Swiss ball exercise training in their training schedule it will improve the core strength and stability and flexibility.

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

***Sandeep.U Lecturer Ph.D Research Scholar**
****Prasanna B.K. Ph.D, Research Scholar**
*****Dr. H. Nagalingappa, Guide and the Chairman,**
Department of P.G. Studies and Research in Physical Education and Sports, Mangalore University, Mangala Gangothri, Mangalore

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. The data required for the analysis of the Socio economic status such as Bio data of the players, Social conditions of the player's, Educational qualification, parents occupation, economic condition of the players also included in questionnaire. In the part B questions include about personal achievement, in the game, motivation, practicing, block time guidance and coaching scholarship, finance equipment, facilities providing, and question about sports in public life etc.factors that influence the change in their life style such as education, Attitude of the people etc., were collected through questionnaire and Oral interviews. Subsequently data was subjected to descriptive analysis. Results clearly indicate on contrary the SES group of sportswomen because of their strong desire to win and succeed, the fear and humiliations associated with failure, the urge to grow and develop might have influenced them to adopt the higher achievement motivation.
Key Words: Women sports, Socio-economic background, Achievement, Motivation.

Introduction:

Study of sports is rapidly growing applied sciences. Sports as a social institution or social system as it is sometime called, is an important concern for all the sport sociologists. The sport scientists is interested in why man gets involved in sports and what effects his involvement in sports has on other aspect of life, so that his social aspect can be developed within the framework of social norms, customs and traditions through participation in 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.

Physical education is a part of the total process of education that utilizes games sports, qualities, dance and other activities to help the individual to achieve the goals of education. Today's physical programmes bear little resemblance to the earlier types of formal gymnastics. They include popular team sport body conditioning recreational sports and various forms of dance. Inter collegiate sports are closely associated with physical education and in most cases handled by the same personal. Intramural sports provide a broad base for releasing the competitive urge of the student body. The required or service programme attempts to reach all student's with a programme i.e., basically instructional in contest and purpose. Sports are an institution which has its own tradition and values normally reflect the patterns in society at large. A sport is accepted as a part of society and culture throughout the world.

Women and sports

Indian women are still trying to establish their own identity. Women in India are still unable to take a stand for themselves. Times have changed and are improving but there is still a lot to be achieved. Men have an upper hand in all spheres of life. Gender inequality is a deep-rooted issue and in order to change the situation drastic steps/measures need to be taken. The worst thing to happen is the female feticide. Latest technology is being blatantly misused for killing the girl child. Far from giving her good education and a happy life we Indians are trying to eliminate women from this earth.

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 an independent individual. Sport participation also provides girls and women with opportunities to reconnect with the power of their own bodies. The motion that men and women are naturally different has been used for many years to justify the exclusion of women from some or all sports.

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. These studies will able to know the achievement, motivation, socio-economic status and how it effects on sports performance of woman sports persons.
2. This study is able to know whether sports women's socio economic status is uplifted by the sports performance.
3. This study helps to know the importance of parents and others Motivation and encouragement towards woman participation in sports and games.
4. This would enable them to understand and know the psychological strengths and weaknesses of players with respect to their participation in different sports.

Variables

The socioeconomic status is an independent variable.
The dependent variables are Achievement Motivation.

Hypothesis

- It was hypothesized that, society shown a favorable attitude towards woman participation and performance in sports and games.
- It was hypothesized that woman considered their family and societal adjustment, achievement, denominated them from participation and performance in sports and games.
- This study was hypothesized that high level of achievement in sports helps to get good name in society.
- It is hypothesized that good educational background leads of number of participation in various level in sports, like state, national, international. Etc.

Methodology

The present study was conducted the 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. The required data was collected from standardized questionnaire. The questionnaire was admitted 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. Various techniques such as statistical tables and graphs were used to analyse the data pertaining to the study. The data so analysed reveal the following conclusions.

Sample

The 400 subjects were selected from various districts from different parts of the Karnataka state. The sample was taken 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 Interviews with players. 400 Data was collected using a detailed questionnaire responded by 400 female players. We interviewed 372 players for this purpose though out of these 31 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 computer with the help of 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

Social Interaction wise respondents

Social Interaction	Respondents	Percentage
Yes	210	(52.50%)
No	190	(47.50)
Total	**400**	**(100%)**

The above table clearly pictures that, out of 400 samples 210 (52.50%) respondents have answered favorably to the query with regarding social interaction being a matter that influences participation in sports. While only 190 (47.50%) of respondents have replied that there is no relation to the rate of participation in sports and social interaction, they have said directly that 'NO'. The study is an eye opener to the fact that the social interaction by students in sports field is better than those in other areas. Very few sportspersons claim that they are not influenced by their involvement in sports. Man is a social being living with interactive responsibilities. Family, society, institutions etc influence the building of individual personality. So social interaction is one area every find where indirectly influences on participation in sports events in general and women in particular take more in sports participation.

Social status

Social Status	respondents	Percentage
Yes	237	(59.25%)
No	163	(40.75%)
Total	**400**	**100%**

About table clearly suggests and very strongly confirmed their opinion that 237 (59.25%) participation in sports activities has improved our social status. Only 163 (40.75%) respondents have felt that their social status does not get influenced by participation in sports. The first group has agreed that they attain recognition and appreciation for their performance and this enhances their social standing.

Improved Social Quality

Social Quality	Adopt herself to group	Break the barriers of caste, religion	Leadership
Yes	253(63.25%)	282(70.50%)	246(61.50%)
No	147(36.75%)	118(29.50%)	154(38.50%)
Total	**400(100%)**	**400(100%)**	**400(100%)**

The above table clearly shows that out of 400 samples there are 253 (63.25%) respondents have answered that they have been adapted to the group and their other barriers have gone out. They also said that in favorably to the query regarding sports activities help the students to adopt her to group situation matter that influences participation in sports. While 147(36.75%) of respondents replied 'NO'. being a matter that influences participation in sports and women take more in sports participation helped has undesirable changes in character and behavior. Remaining 282 (70.50%) respondents have answered favorably to the query regarding sports activities help the students to break through

the barriers of caste, creed, religion matter that influences participation in sports. While 118(29.50%) of respondents replied 'NO'. 246 (61.50%) respondents have answered favorably to the query regarding sports activities help the students to developed the leadership quality. While 154(38.50%) of respondents replied 'NO'. The study is an eye opener to the fact that the social Quality should be developed by students in sports field is better than those in other areas. Very few sportspersons claim that they are not influenced by their involvement in sports. Family, society, institutions etc influence the building of individuality. One area that indirectly influences the social Quality skills is participation in sports events.

Sports women Psychology- wise sports participation.

psychological factors	confidence	Sportive attitudes	Control of Emotion	Intelligence
Yes	247(61.75%)	237(59.25%)	248(62.00%)	253(63.25%)
No	153(38.25%)	163(40.75%)	152(38.00%)	147(36.75%)
Total	**400(100%)**	**400(100%)**	**400(100%)**	**400(100%)**

The above table clearly pictures that 247(61.75%) respondents answered favorably to the query regarding improvement of confidence level matter that influences participation in sports. While 153(38.25%) of respondents replied 'NO'. being a matter that influences participation in sports and women take more in sports participation helped has built her confidence level more.

Remaining 237(59.25%) respondents answered favorably to the query regarding sports activities help the students to developed sportive attitudes like ego, aggression, self-esteemed that influences participation in sports. While 163(40.75%)of respondents replied 'NO'. being a matter that influences participation in sports and women take more in sports participation helped has undesirable changes in character and behavior.

248 (62.00%) respondents answered favorably to the query regarding participation of sports activities help the students to control of their emotions. While 152(38.00%) of respondents replied 'NO'. 253 (63.25%) respondents answered favorably to the query regarding involving in sports activities help the students to development of intelligence. While 152(38.00%) of respondents replied 'NO'. The study is an eye opener to the fact that the social Quality should be developed by students in sports field is better than those in other areas. Very few sportspersons claim that they are not influenced by their involvement in sports.

Achievement Motivation.

Mean SD and t-values of need for social achievement of high and low SES sportswomen

Variables	High SES	Low SES
social achievement	Mean 14.00	15.14
	SD 3.88	3.18
	t-value2.59*	

* Significant at 0.05 level

Table presents the Mean, SD and t values of need for social achievement of high and low SES sportswomen. In the above table the high and low SES sportswomen mean scores is 14.00 and 15.14 respectively. It shows that the low SES sportswomen have the high need for social achievement than the high SES sportswomen. The obtained t value 2.59 which is significant at 0.05 levels indicates the significant difference between high and low SES sportswomen on need for social achievement.

The findings of the table suggest that the low SES sportswomen have high need for social achievement might have been the result of their high confidence, aspirations, and as well as their exposure to the good education, better training and mass media. Hence, the above hypothesis that there is significant difference between high and low SES sportswomen on need for social achievement is proved and accepted.

Mean SD and t-values of need for sports skill achievement of high and low SES sportswomen:

Variables	High SES	Low SES
sports skill achievement	Mean 16.00	17.20
	SD 4.69	4.62
	t-value2.03*	

*Significant at 0.05 level

The above table demonstrates the Mean, SD and t values of need for sports skill achievement of high and low SES sportswomen. It is visible in the above table that the high and low SES sportswomen have the mean score of 16.00 and 17.20 respectively and it shows that the low SES sportswomen have the high need for skill achievement than their counterparts. The obtained t value is 2.03 which are significant at 0.05 level indicates the significant difference of need for skill achievement between high and low SES sportswomen. Therefore, the hypothesis that there is a significant difference of need for sports skill achievement between high and low deprived sportsmen is proved and accepted at 0.05 levels.

Because the family background of sportswomen and environment in which they are living largely influences their motivation to achievement their goal. SES is an index of " living standard" that capacitates the individuals to be exposed to various modernizing influences such as mass media, occupational mobility, more education etc., that enable them acquire modern dispositions. Since SES is a combination of education, occupation, caste and income individuals belonging to different levels of SES have differential exposure to the conditions of life and their by develop differential degrees of self competent, emotionally, mature, intellectually adequate, successful, satisfied, decisive, optimistic, independent, self-reliant, self-assured, forward moving, fairly. The achievement motivation suggests the independent influence of SES on the achievement motivation levels of high and low SES sportswomen.

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Comparative Study Of Print Media Coverage Of A Football Match In Different Newspapers

Dr. Asish Paul[1], Dr. Gopa Saha Roy[2], Antara Mukherjee[3], Dr Atindra Nath Dey [4]
[1] Asstt. Professor, Department of Physical Education, Jadavpur University, Kolkata, W. B., [2] Asstt. Professor, [3]Student, M.P.Ed.,
State Institute of Physical Education for Women, Hastings House, Alipur, Kolkata-27,
[4]The Director, School of Education, Netaji Subhas Open University, Kolkata, West Bengal, E-mail: asp_f2000@yahoo.com

Abstract
Football is the passion of the people of Bengal without having any success in international level. The electronic media have a very basic viewers base considering the different international football league but there is no such print media coverage. Only the Bengali newspaper provides lot of coverage considering the state and national league as there is a fan base of football. The exhibition match between Argentina and Venezuela at Yuba Bharati Krirangan created a tremendous hype in the mind of the football lovers of West Bengal due to the presence of Lionel Messy. In the present study, the researchers made an attempt to compare the print media coverage of four different newspapers considering a single international exhibition football match. The area of coverage of the specific match in the Anandabazar Patrika, Sonmarg, The Hindu and the Statesman during the period of 14 days, were measured by using a simple scale and these areas were then added. the calculated area of coverage regarding literature published in the Ananda bazar Patrica, revealed that the coverage (9843.00 Cm^2) was much more than the coverage of Sonmarg(2092.86 Cm^2), the Hindu(1722.35 Cm^2) and the Statesman(3190.00 Cm^2). In case of photo also the coverage of the Ananda bazar Patrica (4925.25 Cm^2) was much more than the coverage of Sonmarg(2266.89 Cm^2), the Hindu(1115.70 Cm^2) and the Statesman(1877.65 Cm^2). The total coverage of the Ananda Bazar Patrika(14768.25 Cm^2) also much greater than the other three newspapers. It has concluded that the coverage of Bengali newspaper was more than the other newspaper.

Key Words: Telecast, Media Mileage, Coverage, Sponsorship, Merchandising

Introduction
Media is an important information provider of present happenings. It creates public opinion and alertness by providing information through news and photos. Through both the Print and Electronic media this enhances the process of sharing the views and exchange the related ideas of different matter. At present the splendiferous advancement of science and technology with the help of satellite communication creates an worldwide service network where the service of the information provider became very easier and considering its business characteristics the world of media became more and more competitive. Sport always a factor of public interest having its own market to be in the news of different events and thus always have an relationship with media. The product of sport for which the peoples are willing to pay are the services rendered by the athlete which is mainly nothing but the performance of the sportsperson. Beyond this there are the winning of the favourite team, commonality and relative and absolute quality which are also considered as the factor of media interest . In modern Professional sport the source of funds are Sponsorship, Merchandizing of sport through Advertisement and Broadcasting.
In modern society media becomes an inseparable part of the social life in which one of the most stimulating factor is sport. It is a medium in creating public views by providing information, description and analysis of various social activities, including politics, business, economics, culture and sport. Media and sport are the part and parcel of our day to day existence. They create a synthesized bonding which gives us immense entertainment and learning. Thus, it is important to understand the relation between sports and media coverage.
The popularity of football spreaded all over the world irrespective of caste, culture, religion, socioeconomic condition etc. We the Indians are also not the exception. Although there is no performance at all in the international football scenario for last fourty years, the Indians are very much affectionate about football. Sometimes in Nehru cup and in the SAFF games the performance throw

some light in the mind of the football lovers. But simply only for Asian level it demands a lot more to be in the mind of the Indian supporters.Whenever people intended on discussing about football at present time, the names came on their mind are Messy, Neimar, Pirlo, Klose, Forelan, and so many other player who are the representatives of their countries such as Brazil, Argentina, England, Germany, Italy, Uruguay etc. Thatwas on 2nd September, 2011 the highest football sensations created in West Bengal due to an international exhibition match between Argentina and Venezuela at the Yuba Bharati Krirangan, Salt lake, Kolkata.

According to the India based TV ratings agency TAM Media Research today Cricket comes first with 122 million viewers but the football lovers are not far behind. There is a great no. of viewers of EPL, La-Liga, Serie-A, Bundesliga in India. But there was no such data considering the print media coverage. This study was relevant as no comprehensive data set is available at present in football to understand the practical relation between media and sports coverage in India. It provided some very specific information regarding the Print media coverage.

The problem of the present investigation was precisely stated as 'Comparative study of print media coverage of a football match in different newspapers'. This study have traced out that how much importance, the mass media has given to this high profile match.The purposes were:

1) To compare the print media coverage of a specific football match in four newspapers.
2) To get some specific information about the print media coverage of football.

Four newspapers the Hindu, the statesman, the Ananda bazar Patrika and the Sanmarg were considered for this study. The measurement has been taken in the three phases for 15 days.Considering the football match as the fulcrum, the 1st phase was prior to match, 2nd phase was during the match and the 3rd phase was immediately after conclusion of the football match. The phases were for 7 days, 3 days and 4 days respectively.A Scissor was used to cut the covered area in the newspaper and simple measuring tape was used to measure the area.

Results and discussions:

Table-1: Coverage on different days in three different newspapers

No. of days	Dates	SONMARG (Cm^2)		ANANDABAZAR PATRICA (Cm^2)		THE HINDU (Cm^2)		THE STATESMAN (Cm^2)	
		Literature	**Photo**	Literature	Photo	**Literature**	**Photo**	Literature	Photo
1	25.08.11	**--**	**--**	381.00	56.00	**--**	**--**	131.75	78.75
2	26.08.11	**--**	**--**	882.75	415.25	**--**	**--**	--	--
3	27.08.11	**--**	**--**	662.00	263.00	**132.00**	**--**	--	--
4	28.08.11	**--**	**--**	1212.5	327.75	**--**	**--**	--	--
5	29.08.11	**171.00**	**185.00**	250.00	446.00	**24.00**	**--**	--	--
6	30.08.11	**--**	**--**	411.00	106.50	**168.60**	**--**	280.00	126.00
7	31.08.11	**268.32**	**370.30**	948.00	396.50	**260.00**	**225.00**	234.00	162.50
8	01.09.11	**470.48**	**387.98**	1681.75	891.00	**833.50**	**379.70**	854.75	185.00
9	02.09.11	**549.20**	**536.65**	1583.00	656.50	**--**	**--**	653.50	371.50
10	03.09.11	**368.39**	**602.16**	744.00	1128.25	**208.25**	**511.00**	607.00	393.00
11	04.09.11	**111.75**	**84.00**	359.00	107.25	**96.00**	**--**	132.00	140.00
12	05.09.11	**--**	**--**	294.00	55.00	**--**	**--**	--	--
13	06.09.11	**153.72**	**100.80**	238.00	20.00	**--**	**--**	297.00	420.90
14	07.09.11	**--**	**--**	196.00	56.25	**--**	**--**	--	--
Total		**2092.86**	**2266.89**	9843.00	4925.25	**1722.35**	**1115.70**	3190.00	1877.65

From Table I, the calculated area of coverage regarding literature published in the Ananda bazar Patrika, revealed that the coverage (9843.00 Cm^2) was much more than the coverage of Sonmarg(2092.86 Cm^2), the Hindu(1722.35 Cm^2) and the Statesman(3190.00 Cm^2). In case of photo also the coverage of the Ananda bazar Patrika (4925.25 Cm^2) was much more than the coverage of Sonmarg(2266.89 Cm^2), the Hindu(1115.70 Cm^2) and the Statesman(1877.65 Cm^2).

Table-2: Total coverage of different newspapers

Name of the paper	Literature (Cm^2)	Photo (Cm^2)	Total (Cm^2)
Sanmarg	2092.86	2266.89	4359.75
Ananda Bazar	9843.00	4925.25	14768.25
The Hindu	1722.35	1115.70	2838.05
The Statesmen	3190.00	1877.65	5067.65

From the table No. 2 we revealed that the total coverage of the Ananda Bazar Patrika(14768.25 Cm^2) also much greater than the other three newspapers.

Table No- 3 Media coverage in news Papers among 3 Phases regarding literature and Photos.

Paper	1st phase(25/08-31/08) (Cm^2)			2nd phase(01/09-03/09) (Cm^2)			3rd phase(04/09-07/09) (Cm^2)		
Sanmarg	**L**	**439.32**	**994.25**	**L**	**1388.07**	**2914.86**	**L**	**265.47**	**450.27**
	P	**555.30**		**P**	**1526.79**		**P**	**184.80**	
Ananda Bazar Patrica	**L**	**4747.25**	**6758.25**	**L**	**4008.75**	**6684.50**	**L**	**1087.00**	**1325.50**
	P	**2011.00**		**P**	**2675.75**		**P**	**238.50**	
The Hindu	**L**	**584.60**	**809.60**	**L**	**1041.75**	**1932.45**	**L**	**96**	**96.00**
	P	**225.00**		**P**	**890.70**		**P**	**--**	
The Statesman	**L**	**645.75**	**1013.00**	**L**	**2115.25**	**3064.75**	**L**	**429.00**	**989.90**
	P	367.25		P	949.50		P	560.00	

From the table No-3 it was clear that in all respect considering the different phases of coverage the Anandabazar patrica has given maximum weightage to cover the specific football match.The two Hindi newspaper, the Hindu and Sanmarg has not given such weightage whereas the Statesman has given some more space.

Discussion

From the results, it has seen thatconsidering the total area of sports coverage of a newspaper the Anandabazar Patrica has given maximum weightage in comparison to the other papers. This was due to the fact that still football is the most popular game in West Bengal and the said newspaper is the most circulated Bengali newspaper in West Bengal and as well as in India also according to the Audit and Beauro of Circulation.Cricket becomes a cocktail of sports, glamour, business and entertainment which provides us national pride at the International level and produces icons constantly. In comparison to that there is no such performance in football and we are lacking far behind in International standard. But still there is a passion about football in west Bengal and considering its long back heritage the people of this area is very much focused about football. At the time of world cup football the enthusiasm touch the peak of madness and the supporters vertically divided in to Brazil and Argentina. So naturally a tremendous hype developed to see the team Argentina especially Lionel Messy, the world no.1. In comparison to that the Hindi newspapers Sonmarg and the Hindu have no such huge reader base in West Bengal. The Statesman in English never be a newspaper of the general people. For this these three authority have no such strategy to cover this specific football match and encash the affection. As the hype was maximum at the time of match review and preview then it was very clear about the reason of maximum coverage in the middle phase that were only for three days.

The relative team quality influenced a lot in case of newspaper coverage and thus Argentina got more mileage than Venezuela. In comparison to Argentina as the standard of Venezuela was very poor then the relative competition showed no impact on the coverage. Within the limited scope of study, the following conclusions were drawn on the basis of results and discussion.

Conclusions

i) In comparison to Hindi and English Newspapers the coverage of Bengali newspaper was more.
ii) The charisma of a performer influence a lot to the media coverage.
iii) The coverage depends upon the relative intensity of the competition.
iv) The commonality of the supporters, winning of competitive team etc. are the major factors to decide the area of mileage provided by a newspapers.
v) Media providers demand for Icon and provide media mileage for them.

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Ranking The Meso Level Critical Factors Of Electronic Medical Records Adoption Using Fuzzy Topsis Method

Hossein Ahmadi[1],Mohammad Osmani[2], Mehrbakhsh Nilashi[3,*], Othman Ibrahim[4], Komeil Raisian[5], Rozana Zakaria[6]
[1,2,3,4,5,6] Faculty of Computing, UniversitiTechnologi Malaysia, Johor, Malaysia
Corresponding author e-mail:nilashidotnet@yahoo.com

Abstract.
As Electronic Medical Records (EMRs) have a great possibility for rising physician's performance in their daily work whichimproves quality, safety and efficiencyin healthcare, they are implemented throughoutthe world (Boonstra and Broekhuis, 2010). In physician practices the rate of EMRs adoption has been slow and restricted (around 25%) according to Endsley, Baker, Kershner, and Curtin (2005) in spite of the cost savings through lower administrative costs and medical errors related with EMRs systems.The core objective of this research is to identify, categorize, and analysemeso-level factors introduced by Lau et al, 2012,perceived byphysicians to the adoption of EMRs in order to givemore knowledgein primary care setting.Finding was extracted through questionnaire which distributed to 350physicians in primary caresin Malaysia to assess their perception towards EMRs adoption. The findings showed that Physicians had positive perception towards some features related to technology adoption success and emphasized EMRs hadhelpful impact in their office. The fuzzyTOPSISphysician EMRs adoption model in meso-leveldeveloped and its factors and sub-factors discussed in this study which provide making sense of EMRs adoption. The related factors based on meso-level perspective prioritized and ranked by using the fuzzy TOPSIS. The purpose of ranking using these approaches is to inspect which factors are more imperative in EMRs adoption among primary care physicians. The result of performing fuzzy TOPSIS is as a novelty method to identify the critical factors which assist healthcare organizations to inspire their users in accepting of new technology.
KEYWORDS.EMRS, ADOPTION, FUZZY TOPSIS, MESO-LEVEL ADOPTION FACTORS, CA

Introduction

These days, there is a vast investment of InformationTechnology(IT) by healthcare providersthat looked atdevelopment and implementation of clinical information systems for instance Electronic Medical Records(EMRs) (Burt and Hing, 2005). ITis utilized by physicians' offices for billing purposes, but unfortunately the number incorporating IT into their practices for clinical purposes such as EMRs are low (Burt and Hing, 2005)."It is estimated that the healthcare industry is at least ten years behind other industries in terms of IT investment"(Skinner 2003). Despite ITs' increasing ubiquity, decreasing costs, and the potential for benefits in the clinicaldecision-making process, the low rate of adoption occurs.The reason is, due to the distinctive structure of the healthcare industry.Healthcare organizations are dissimilar from organizations operating within other businesscontexts, specially, about individual autonomyand operational independence (Hu et al.1999). EMRs adoption has been attracted by little interest in the management information systems (MIS)Literature (Amy and Brian, 2007). In this research, An EMR explainedas computerizedhealth information system where provider's record detailedencounter information such as patient demographics,encounter summaries, medical history, allergies, intolerances,and lab test histories. Some may support order entry,results management and decision support and some may also contain features or be integrated with software that can schedule appointments, perform billing tasks, and generate reports. Primary care is becoming a core part of healthcare community. "The term "general practice" was considered to refer to the same care setting as the term "primary care". Primary care is defined as the first point of contact a person has with the health system and usually refers to family practice. This is the point where people receive care for most of their everyday health needs"(Ludwick and Doucette, 2009).
In this research, themeso-level factors has been investigated that have more effecton EMRs adoption which has been developed by (Lau et al., 2012) in his study review of Clinical Adoption (CA) framework according to three dimensions.Thus, the purpose of this study is to develop and validate

the Meso-level physician EMRs adoption model in the context of primary care units.In addition, this study providescontextual analyses of the factors contributing to the EMRs adoption.
The remainder of this paper is structured as follows. The section 2 introduces the proposed research model. In Section 3, the research methodology has been described step by step. Section 4 and 5 allocated to the background mathematical of the data collection and fuzzy TOPSIS, respectively. Finally, we present the results of fuzzy TOPSIS and conclusions in sections 6 and 7, respectively.

Proposed Research Model

The adoption model of physician in primary care provides a conceptual model to identify the factors that have more influence on adoption of EMRs. It extends Clinical Adoption frameworkby Lau et al(2012) in his study review which was based on three dimensions. In his review, DeLone and McLean (1992) information system success model was followed.Lau's CA framework comprised of micro, meso and macro-level dimensions. Each dimension has its own factors and sub-factors which could influence physicians in EMRs adoption. In this research it has been concentrated on meso-level factors. At the meso-level, the adoption framework of primary care physician explains clinicalinformation system success include EMRs system.In this study, EMRsadoptionhas been examined in practice of physician in primary care setting through the lens of clinical adoption framework. EMRs adoption defined based on evaluation measures, related to the factors that rendered to this impact. Hence, this study concentrated onmeso-level factors that influence on EMR adoption. At the end the proposed model of fuzzy topsis physician adoption model in meso-level developed and shown in Figure 1.At meso-level, there arethree main factors including people, organization and implementation. The following has described each of the main factors in detail and its sub factors respectively. People are the integral part of the system success that may adopt or refuse the new technology based on their characteristics, expectations and responsibilities. People factors covers personal characteristics and expectations like prior EMRs experience of the users (Van et al. 2001), and their personal time investment in exchange for the benefits expected from the system (Ludwick and Doucette, 2009). Roles/responsibilities included the need for champions and staff participation [Bassa et al. 2005], and shift in tasks (documentation by staff vs. physicians) (Ludwick and Doucette, 2009). That could lead to role ambiguity and conflict (Crosson et al. 2005). Organization factors covered structure/processes and culture that emphasized EMRs adoption/use (Crosson et al. 2005), EMRs-practice fit (hybrid EMRs/paper systems), and EMRs-supported office and workflow design (Crosson et al. 2005) such as the placement of computer screens in consult rooms. Return-on value concentrated on verified value at the practice level such as replacement effect from guideline driven test orders and prescribing, and tangible cost-efficiency gain with larger practice size and patient volume (Mitchell et al. 2003). Implementation factors covered the area that the introduction of EMRs into the practice was designed and conducted as a priority project with devoted time and resources (Samoutis et al. 2008). The service support provided during implementation was essential (Randeree, 2007), since they influenced the disruptions that physicians and office staff had to defeat while learning to use the EMRs and redesign their work routines.

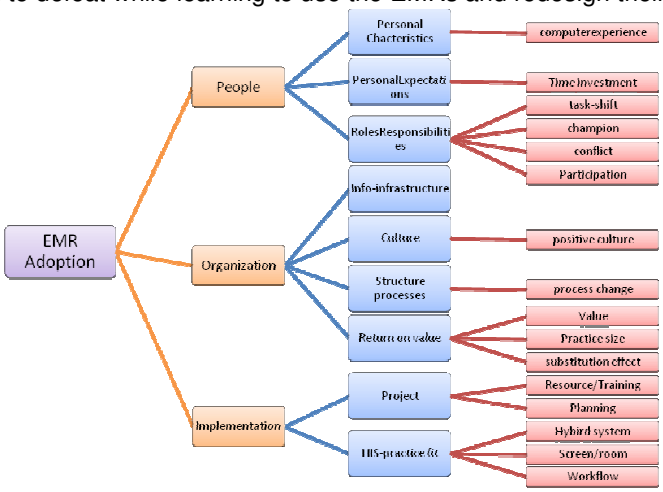

Figure 1. Fuzzy TOPSIS Physician EMRs Adoption Model in Meso-Level

Research Methodology EMRs in this study have been focusedas a new technology in primary care whichhas been tried to describe the factors which have the more priority in its adoption. A quantitative, survey-based research study was carried out and analyzed to describing the factors that have an impact on EMRs adoption. EightMalaysia primarycare clinicsin different specialtyhave been chosen to conduct this research. Survey was emailedin electronic website to 350physicians who work in offices in the context of primary care. 300 physicians fulfilled the questionnaire in this study and the rest did not complete. The survey contains number of questions that were design to capture information about the constructs in the research model. The questions that measured were people, organization and implementation besides their sub-factors. Fuzzy TOPSIS was used to obtain the ranks of parameters in meso-level EMRs adoption. Figure 2 contains a description of each step in this study.

Background of Fuzzy Topsis TOPSIS, one of the known classical MCDM methods, was first developed by Hwang and Yoon (Hwang, C.L., Yoon, K., 1981) that can be used with both normal numbers and fuzzy numbers.In addition, TOPSIS is attractive in that limited subjective input is needed from decision makers. The only subjective input needed is weights.

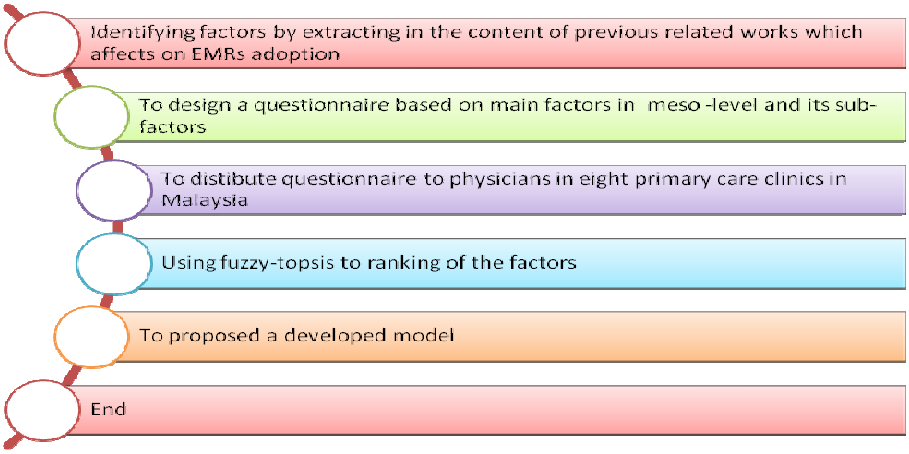

Figure 2. Research Methodology

Since the preferred ratings usually refer to the subjective uncertainty, it is natural to extend TOPSIS to consider the situation of fuzzy numbers. Fuzzy TOPSIS can be intuitively extended by using the fuzzy arithmetic operations as follows (Nilashi et al., 2012).

Given a set of alternatives, $A=\{A_i \mid i=1,\cdots,n\}$, and a set of criteria, $C=\{C_j \mid j=1,\cdots,m\}$, where $\tilde{X}=\{\tilde{x}_{ij} \mid i=1,\cdots,n; j=1,\cdots m\}$ denotes the set of fuzzy ratings and $\tilde{W}=\{\tilde{w}_j \mid j=1,\cdots,m\}$ is the set of fuzzy weights.

The first step of TOPSIS is to calculate normalized ratings by

$$\tilde{r}_{ij}(\boldsymbol{x})=\frac{\tilde{x}_{ij}}{\sqrt{\sum_{i=1}^{n}\tilde{x}_{ij}^2}}, \quad i=1,\cdots,n; \quad j=1,\cdots,m \tag{1}$$

and then to calculate the weighted normalized ratings by

$$\tilde{v}_{ij}(\boldsymbol{x})=\tilde{w}_j\tilde{r}_{ij}(\boldsymbol{x}), \quad i=1,\cdots,n; \quad j=1,\cdots,m. \tag{2}$$

Next the positive ideal point (PIS) and the negative ideal point (NIS) are derived as

$$PIS=\tilde{\boldsymbol{A}}^{+}=\{\tilde{v}_1^{+}(\boldsymbol{x}),\tilde{v}_2^{+}(\boldsymbol{x}),\cdots,\tilde{v}_j^{+}(\boldsymbol{x}),\cdots,\tilde{v}_m^{+}(\boldsymbol{x})\} \tag{3}$$

$$=\{(\max_i \tilde{v}_{ij}(\boldsymbol{x}) \mid j\in J_1), \quad (\min_i \tilde{v}_{ij}(\boldsymbol{x}) \mid j\in J_2) \mid i=1,\cdots,n\}$$

$$PIS=\tilde{\boldsymbol{A}}^{-}=\{\tilde{v}_1^{-}(\boldsymbol{x}),\tilde{v}_2^{-}(\boldsymbol{x}),\cdots,\tilde{v}_j^{-}(\boldsymbol{x}),\cdots,\tilde{v}_m^{-}(\boldsymbol{x})\} \tag{4}$$

$$=\{(\min_i \tilde{v}_{ij}(\boldsymbol{x}) \mid j\in J_1), \quad (\max_i \tilde{v}_{ij}(\boldsymbol{x}) \mid j\in J_2) \mid i=1,\cdots,n\}.$$

Similar to the crisp situation, the following step is to calculate the separation from the PIS and the NIS between the alternatives. The separation values can also be measured using the Euclidean distance given as:

$$\tilde{S}_i^+ = \sqrt{\sum_{j=1}^{m} [\tilde{v}_{ij}(\boldsymbol{x}) - \tilde{v}_j^+(\boldsymbol{x})]^2}, i = 1, \cdots, n \quad . \tag{5}$$

And

$$\tilde{S}_i^- = \sqrt{\sum_{j=1}^{m} [\tilde{v}_{ij}(\boldsymbol{x}) - \tilde{v}_j^-(\boldsymbol{x})]^2}, i = 1, \cdots, n \quad . \tag{6}$$

Where

$$\max\{\tilde{v}_{ij}(\boldsymbol{x})\} - \tilde{v}_j^+(\boldsymbol{x}) = \min\{\tilde{v}_{ij}(\boldsymbol{x})\} - \tilde{v}_j^-(\boldsymbol{x}) = 0. \tag{7}$$

.

Then, the defuzzified separation values should be derived using one of defuzzified methods, such as CoA to calculate the similarities to the PIS.

Next, the similarities to the PIS is given as

$$C_i^* = D(S_i^-) \Big/ [D(S_i^+) + D(S_i^-)] \quad , i = 1, \cdots, n \tag{8}$$

.

where $C_i^* \in [0,1] \quad \forall i = 1, \cdots, n$.

Finally, the preferred orders are ranked according to C_i^* in descending order to choose the best alternatives. Fuzzy-TOPSIS method is another type of fuzzification for the TOPSIS method in fuzzy environment that is defined and investigated by credibility measure. In this method, trapezoid -fuzzy numbers are used for ranking all sub-criteria of website quality. Therefore, using fuzzy trapezoid numbers enabled us to change normal TOPSIS into fuzzy TOPSIS which is more precisely as the result shows in the next paragraph.One of the characteristic of fuzzy numbers is fuzzy setswithspecialconsideration for easy calculations. Trapezoid Fuzzy Numbers Let $\tilde{A} = (a, b, c, d)$, a<b<c<d, be a fuzzy set on $R = (-\infty, \infty)$. It is called a trapezoid fuzzy number, if its membership function is

$$\mu_{\tilde{A}}(x) = \begin{cases} \dfrac{x-a}{b-a}, & if \quad a \le x \le b \\ 1, & if \quad b \le x \le c \\ \dfrac{d-x}{d-c}, & if \quad c \le x \le d \\ 0, & otherwise \end{cases} \tag{9}$$

.

In this study, using fuzzy TOPSIS, the meso-level factors introduced by Lau et al, 2012and shown in the Figure 1 are ranked as presented in Table1.

Table 1. Ranked parameters by fuzzy TOPSIS

Parameters ranking by Fuzzy TOPSIS	
Area	**Question No.**
0.2	**5**
0.34	**8**
0.4	**6**
0.45	**7**
1.09	**3**
1.24	**11**
1.28	**8**
1.3129	**4**
1.32	**10**
1.61	**9**
1.8	**16**
2.0192	**12**
2.0643	**13**
2.1869	**14**
2.3	**15**
2.39	**2**

Conclusion: The present study provides contextual analyses of the meso-level factorscontributing to the EMRs adoption. In additionto add knowledge concerning technology adoption within a physician practicesthrough primary care.In this study, meso-level factors have been focused which influenced on EMRs adoption based on Lau et al. (2011). The findings of the present study were used to address the adoption of EMRs technology within the physician community in primary care setting. The findings indicated that Physicians had positive perception towards some features related to technology adoption success and emphasized EMRs had positive impact in their office. The fuzzy TOPSIS physician EMRs adoption model in meso-level has been developed and its factors and sub-factors discussed in this study which provide making sense of EMRs adoption.

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Effect Of Aerobic Training On Selected Physical And Physiological variables On Normal And Overweight School Boys

Mr. Santosh Toppo (Ph.D), Research Scholar, Dept., of Physical Education and Sports, Pondicherry University, Pondicherry.
Dr. D Sultana, Professor, Dept., of Physical Education and Sports, Pondicherry University, Pondicherry.

Abstract
The purpose of the study was to examine the influence of aerobic training on physical physiological variables on school boys. For the study 90 student's age ranging from 11 to 13 were selected for a 12 weeks aerobic exercise training program. The selected subjects were divided into two equal group namely normal weight and overweight. The normal and overweight students further divided into three equal groups namely group A, group B and group C (N=15) in each group. Group A of normal and overweight were treated as experimental group I, group B of normal and overweight were treated as experimental group II and group C of normal and overweight were treated as control group. Floor aerobic exercise training was given to experimental group I, aerobic exercise training was given to experimental group II and control group did not participate in any training apart from their daily routine work. The pre and post test were conducted on the selected physical variable muscular strength and physiological variable respiratory rate. The data pertaining to selected physical and physiological variables were analyzed by ANCOVA at $P<0.05$ and it concluded that experimental group showed improvement than control group.
Keywords: Aerobic exercise, Muscular strength, Respiratory rate, School boys.

Introduction: Physical activity is done by the each and every individual. Every human being participates in some kind of sports activity or physical exercise during the course of his life. This exercise may assume different forms for different individuals. It may be walking, jogging, cycling, working in a factory, participation in games and sports etc. Regular participation in exercise programme markedly influences physical, physiological and mental fitness of an individual. Physical fitness is a dynamic construct in that it is continually growing and plays an important role to everyday life. 'Physical fitness is the ability to carry out daily tasks with vigour and alertness without undue fatigue and ample energy to enjoy leisure time pursuits and meet unforeseen emergencies. Through aerobic exercise one can maintain their physical fitness. It is widely acknowledged that physical activity is essential to children's growth and development. Regular physical activity can have a positive impact on students' physical, mental, and social well-being. In particular, physical activity is likely to have an impact on students' achievement, readiness to learn, behavior and self-esteem. Positive experiences with physical activity at a young age also help lay the foundation for healthy, productive lives. In sports participation or for better performance one requires physical fitness components that can be achieved through regular aerobic exercise as aerobic exercise keeps everyone super-fit and healthy.
Aerobic exercise includes physical activity that increases our heart rate and keeps it higher for a certain period of time. It boosts the amount of oxygen delivered to our heart and muscles so they use oxygen more efficiently, and stay healthier. Muscular strength refers to the capacity to do work against any resistance. All physical activities of daily life require muscular strength as walking, sitting, picking any object, running etc. It also helps in prevention from any injuries and keeps early aging away. Proper breathing is essential during exercise as good breathing pattern ensures that our working muscles will continue to receive the oxygen they need to keep contracting. A better breathing boosts an individual to perform longer duration of time and keeps fatigue away.

Methodology: The main objective of the study was to see the effect of aerobic exercise on selected physical and physiological variables of school boys. For the purpose of study 90 school boys age ranging from 11 to 13 were selected from Jagat gayan public school Ranchi Jharkhand. The selected students were equally divided into two equal groups namely normal and overweight. They were further divided into three equal groups A, B & C consisting of 15 students in each group. Group A of

both normal and overweight group were assigned as experimental group I, group B of both normal and overweight were assigned as experimental group II and group C of both were assigned as control groups. The experimental group I underwent 12 weeks floor aerobic exercise and experimental group II underwent aerobic exercise training and control group did not participate in any exercise program apart from their regular curricular activities. Floor aerobic exercises were done in a hall while aerobic exercises were done in the ground. Among the physical variable muscular strength was measured by administering pushups test, the correct pushups were recorded in number and physiological variable respiratory rate was measured by manual method, the rise and fall movement of the thorox-abdominal of subject was observed and number of respiration per minutes were recorded. The data were collected at prior and immediately after the exercise program for each criterion variables. Analysis of variance (ANCOVA) was applied for analyze the data at P<0.05 level.

Table – I Analysis of Co-Variance on Muscular Strength between Experimental group I, II and Control Group of Normal Weight School Boys

Muscular Strength	Floor aerobic exercise	Aerobic exercise	Control Group	Source of Variance	Sum of Square	df	Mean Square	F 'Ratio'	Sig.
Pre test	18.00	17.27	18.87	B W	19.24 1106.67	2 42	9.62 26.35	0.36	0.696
SD	6.15	4.53	4.55						
Post test	22.80	22.33	18.93	B W	133.64 854.67	2 42	66.82 20.35	3.28*	0.047
SD	5.70	4.19	3.32						
Adjusted post test	22.84	22.99	18.24	B W	215.57 67.18	2 41	107.79 1.64	65.78*	0.000

Table I showed that the pre test mean value of experimental group I, II and control group were 18.00, 17.27 and 18.87 respectively. The obtained 'F–ratio' value is 0.36 which is insignificant at P<0.05. The post test mean value of experimental group I, II and control group were 22.80, 22.33 and 18.93. The obtained 'F-ratio' value is 3.28 showing significant at P<0.05. The adjusted post test mean values were 22.84, 22.99 & 18.24. The obtained F-ratio for the adjusted post test was found to be significant and the value is 65.78. The scheffe's test was applied as post hoc test to find out the paired mean differences if any.

Table – II Scheffe's Post-Hoc Test for Paired Mean Difference among the Groups for Muscular Strength on Normal Weight School Boys

Floor aerobic exercise group	Aerobic Exercise group	Control group	Mean difference	CD
22.84	22.99	-	0.15	1.19
22.84	-	18.24	4.6*	
-	22.99	18.24	4.75*	

Table II showed that the mean difference value between floor aerobic exercise group and aerobic exercise group was 0.15 which was lesser than required critical difference value 1.19 for significance. The mean difference value between floor aerobic exercise and aerobic exercise group were found significant when compared to control group, the values were 4.6 and 4.75 respectively.

Table – III Analysis of Co-Variance on Muscular Strength between Experimental group I, II and Control Group of Overweight School Boys

Muscular Strength	Floor aerobic exercise	Aerobic exercise	Control Group	Source of Variance	Sum of Square	df	Mean Square	F 'Ratio'	Sig.
Pre test	19.53	19.87	18.40	B W	17.73 1045.07	2 42	8.87 24.88	0.36	0.702
SD	5.04	4.60	5.30						
Post test	21.67	23.53	18.20	B W	219.73 847.47	2 42	109.87 20.18	5.44*	0.008
SD	4.40	4.40	4.66						
Adjusted post test	21.44	23.02	18.94	B W	124.41 74.92	2 41	62.21 1.83	34.04*	0.000

Table III showed that the pre test mean value of experimental group I, II and control group were 19.53, 19.87 and 18.40 respectively. The obtained 'F–ratio' value is 0.36 which is insignificant at P<0.05. The post test mean value of experimental group I, II and control group were 21.67, 23.53 and 18.20. The obtained 'F-ratio' value is 5.44 showing significant at P<0.05. The adjusted post test mean values were 21.44, 23.02 & 18.94. The obtained F-ratio for the adjusted post test was found to be significant and the value is 34.04. The scheffe's test was applied as post hoc test to find out the paired mean differences if any.

Table – IV Scheffe's Post-Hoc Test for Paired Mean Difference among the Groups for Muscular Strength on Overweight School Boys

Floor aerobic exercise group	Aerobic Exercise group	Control group	Mean difference	CD
21.44	23.02	-	1.58*	1.24
21.44	-	18.94	2.5*	
-	23.02	18.94	4.08*	

Table IV showed that the mean difference value between floor aerobic exercise, aerobic exercise and control group were found significant when compared to each other. The required critical difference value for significance was 1.24. The mean difference value between floor aerobic, aerobic exercise and control group were 1.58, 2.5 and 4.08 respectively.

Table – V Analysis of Co-Variance on Respiratory rate between Experimental group I, II and Control Group of Normal Weight School Boys

Respiratory Rate	Floor aerobic	Aerobic exercise	Control Group	Source of Variance	Sum of Square	df	Mean Square	F 'Ratio'	Sig.
Pre test	25.47	27.40	25.33	B W	40.13 442.67	2 42	20.07 10.54	1.90	0.162
SD	3.56	3.81	2.09						
Post test	22.60	22.87	24.80	B W	43.24 263.73	2 42	21.62 6.28	3.44*	0.041
SD	2.69	2.69	2.08						
Adjusted post test	23.01	21.95	25.30	B W	83.35 56.88	2 41	41.68 1.39	30.04*	0.000

Table V showed that the pre test mean value of experimental group I, II and control group were 25.47, 27.40 and 25.33 respectively. The obtained 'F–ratio' value is 1.90 which is insignificant at P<0.05. The post test mean value of experimental group I, II and control group were 22.60, 22.87 and 24.80. The obtained 'F-ratio' value is 3.44 showing significant at P<0.05. The adjusted post test mean values were 23.01, 21.95 & 25.30. The obtained F-ratio for the adjusted post test was found to be significant and the value is 30.04. The scheffe's test was applied as post hoc test to find out the paired mean differences if any.

Table – VI Scheffe's Post-Hoc Test for Paired Mean Difference among the Groups for Respiratory rate on Normal Weight School Boys

Floor aerobic exercise group	Aerobic Exercise group	Control group	Mean difference	CD
23.01	21.95		1.06	1.09
23.01		25.30	2.29*	
	21.95	25.30	3.35*	

Table VI showed that the mean difference value between floor aerobic exercise group and aerobic exercise group was 1.06 which was lesser than required critical difference value 1.09 for significance. The mean difference value between floor aerobic exercise and aerobic exercise group were found significant when compared to control group, the values are 2.29 and 3.35 respectively.

Table – VII Analysis of Co-Variance on Respiratory rate between Experimental group I, II and Control Group of Overweight School Boys

Respiratory Rate	Floor aerobic exercise	Aerobic exercise	Control Group	Source of Variance	Sum of Square	df	Mean Square	F 'Ratio'	Sig.
Pre test	26.60	27.33	25.40	B W	28.58 392.53	2 42	14.29 9.35	1.53	0.229
SD	3.25	3.37	2.47						
Post test	22.80	23.67	25.33	B W	49.73 289.07	2 42	24.87 6.88	3.61*	0.036
SD	2.48	3.13	2.16						
Adjusted post test	22.68	22.97	26.15	B W	105.04 49.80	2 41	52.52 1.21	43.24*	0.000

Table VII showed that the pre test mean value of experimental group I, II and control group were 26.60, 27.33 and 25.40 respectively. The obtained 'F–ratio' value is 1.53 which is insignificant at P<0.05. The post test mean value of experimental group I, II and control group were 22.80, 23.67 and 25.33. The obtained 'F-ratio' value is 3.61 showing significant at P<0.05. The adjusted post test mean values were 22.68, 22.97 & 26.15. The obtained F-ratio for the adjusted post test was found to be significant and the value is 43.24. The scheffe's test was applied as post hoc test to find out the paired mean differences if any.

Table – VIII Scheffe's Post-Hoc Test for Paired Mean Difference among the Groups for Respiratory rate on Overweight School Boys

Floor aerobic group	Aerobic Exercise group	Control group	Mean difference	CD
22.68	22.97		0.29	1.02
22.68		26.15	3.47*	
	22.97	26.15	3.18*	

Table VIII showed that the mean difference value between floor aerobic exercise group and aerobic exercise group was 0.29 which was lesser than required critical difference value 1.02 for significance. The mean difference value between floor aerobic exercise and aerobic exercise group were found significant when compared to control group, the values are 3.47 and 3.18 respectively.

Discussion on Findings: The experimental groups of normal weight and overweight were undergone floor aerobic exercise and aerobic exercise training which were assigned to them. From the result analysis it is evident that there is significant changes was noticed after twelve weeks training on muscular strength and respiratory rate.

Conclusion: It is concluded that there is an improvement in the performance of the experimental group school boys on muscular strength and respiratory rate due to the effect of aerobic exercise. There was an increase in the number of pushups while number of respiration per minute's decreases among experimental group students in contrast to control group.

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Effect Of Different Intensities Of Plyometric Exercises On Explosive Power Of Collegiate Athletes

T. Asaithambi[1] Dr. S. Sundararajan [2] Dr. I. John Parthiban [3]
1.Research Scholar, Dravidian University, Kuppam, Andhra Pradesh.
2. Deputy Director of Physical Education, Madras Institute of Technology Campus, Chrompet,, Chennai, Tamilnadu.
3. Physical Training Instructor, Government College of Engineering, Salem, Tamil Nadu, India.

Abstract
The purpose of the study was to find out the effect of different intensities of plyometric exercises on explosive power of Collegiate athletes. To achieve the purpose 40 College athletes studying various colleges in Chennai, Tamilnadu, India were selected as subjects. Their age was ranged from 18 to 25 ears. The subjects were divided into two groups of twenty each (n=20). Group-I underwent low intensity plyometric training (LIPTG) and Group-II underwent High intensity plyometric training (HIPTG). The duration of the training period will be restricted to twelve weeks and the number of sessions per week was confined to three. Explosive Power was selected as criterion variable and it was assessed by vertical jump test. The data was collected from the experimental groups were statistically examined with using Analysis of covariance (ANCOVA). Explosive power showed significant difference between the groups.
Keywords: Vertical Jump, Low Intensity Plyometric Training, High Intensity Plyometric Training

Introduction

Sports in the present world have become extremely competitive. It is not the mere participation or practice that brings out victory to an individual. Therefore, sports life is affected by various factors, like Physiology, Biomechanics, Sports Training, Sports Medicine, Sociology and Psychology etcetera. All the coaches, trainers, physical education personnel and doctors are doing their best to improve the performance of the players of their country. Athlete/players of all the countries are also trying hard to bring laurels/medals for their countries in International competitions***(Ghuman and B.S. Dhillon, 2000).***

Training involves constructing an exercise programme to develop an athlete for a particular event. This increasing skill and energy capacities are equal consideration ***(Singh, 1984).***

Physical training refers to the processes used in order to develop the components of physical fitness as for example, how to improve aerobic endurance, to stretch and relax muscles, to increase arm and shoulder strength to related exercise and programmes to specific requirements or individual sports (Hazeldine, 1985).

The actual term plyometrics was first coined in 1975 by Fred Wilt, American Track and Field coach. The elements ply and metric come from Latin roots for “increase” and “measure” respectively, the combination thus means ‘measurable increase”.

Plyometrics became known to coaches and athletes as exercises or drills aimed at linking strength with Speed movement to produce power, presently may coached and athletes have successfully used the plyometric type exercises as a method of training to enhance performance in spite of its potential benefits in improving strength and overall conditioning of the athletes.

Explosive power exercises should be taught and supervised by fitness professionals to reduce the risk of injury. They should also be done in conjunction with a regular workout program to ensure that the athlete is balanced in all exercise areas.

Methodology

The study was conducted on forty (n=40) male college athletes who were participated in the anna university chennai athletic meet held during the year 2010-2011 were selected as subjects . Subjects were randomly divided equally into two groups of twenty each (n=20). Group-i underwent low intensity plyometric training (liptg) and group-ii underwent high intensity plyometric training (hiptg). The duration of the training period will be restricted to twelve weeks and the number of sessions per week

was confined to three. Based on the foot contact of the each plyometric exercises intensity was fixed. Explosive power was selected as criterion variable and it was assessed by vertical jump test. To analysis Explosive power between experimental groups one way analysis of variance (ANOVA) was computed. The level of confidence was fixed at .05 level for all the cases.

RESULTS

The analysis of variance on of Explosive Power of Low intensity plyometric training group and High intensity plyometric group have been analyzed and presented in Table – I.

Table – I

Analysis of Variance on selected variables between Low and High Intensity Plyometric Training Group

Test	Low Intensity Plyometric Training Group (LIPTG)	High Intensity Plyometric Training Group (HIPTG)	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre Test							
Mean	24.55	24.10	B	3.75	1	3.75	
S.D	1.94	1.32	W	361.90	38	9.52	0.39
Post Test							
Mean	26.25	28.65	B	268.81	1	268.81	
S.D	1.78	6.16	W	230.17	38	6.06	44.36*
Adjusted Post Test							
			B	231.74	1	231.74	
Mean	25.71	28.46	W	114.73	37	3.10	74.75*

**** Significant at.05 level of confidence***

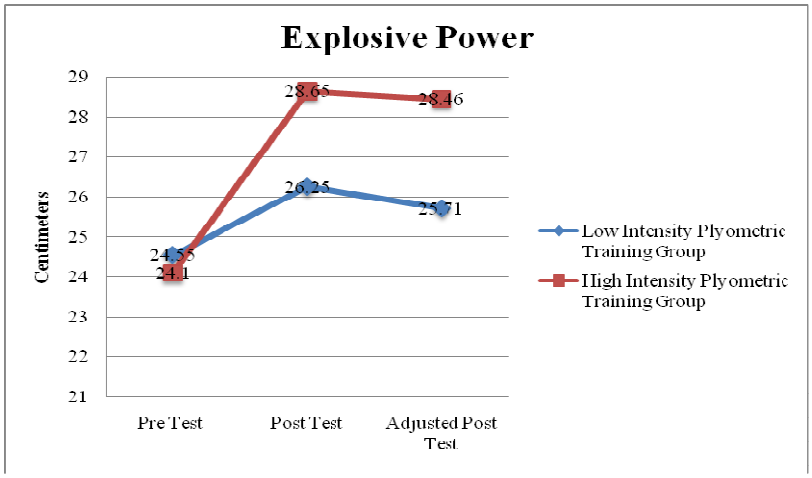
(The table value required for Significance at .05 level with df 1 and 38 is 4.10 & 1 and 37 is 4.09)

Table I shows that the pre test mean value of Explosive Power 24.55(± 1.94) Centimeters for Low Intensity Plyometric Training Group, 24.10(± 1.32) Centimeters for High Intensity Plyometric Training Group. The obtained F-ratio of 0.39 is not significant at 0.05 level of confidence. The differences between the post test means 26.25(± 1.78) Centimeters for Low Intensity Plyometric Training Group, 28.65(± 6.16) Centimeters for High Intensity Plyometric Training Group resulted in an F-ratio of 44.36 is significant at 0.05 level of confidence.The differences between the adjusted post test means 25.71 Centimeters for Low Intensity Plyometric Training Group, 28.46 Centimeters for High Intensity Plyometric Training Group resulted in an F-ratio of 74.75 is significant at 0.05 level of confidence.

The mean values of Explosive power of Low Intensity Plyometric Training Group and High Intensity Plyometric Training Group were graphically represented in the Figure-1.

Figure–1

The mean values of Low Intensity Plyometric Training Group and High Intensity Plyometric Training Group on Explosive power



Discussion On Findings

Berger (1963) pointed out performance of squat jumps at the lowest load of maximum resulted in greater increases in vertical height. **Gehri et.al,(1998)** established that Plyometric Training techniques were the best for improving vertical jumping ability, positive energy production and elastic energy utilization.According to **Adams(1995)** Plyometric Training improves hip and thigh power production as measured by vertical jumping ability. **Maffiuletti**, **(2002),** pointed out that combined Plyometric Training increases vertical jump performance.

From the results of the present study and literature, it is concluded that significant differences exist between Low Intensity Plyometric Training and High Intensity Plyometric Training in developing dependent variables such as Explosive Power.

Conclusions

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

1. It was concluded that there was a significant difference among the Low Intensity Plyometric Training Group and High Intensity Plyometric Training Group in Explosive Power.

2. Further it was concluded that among the selected group's High Intensity Plyometric Training Group shows the best performance in Explosive Power than Low Intensity Plyometric Training Group.

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Effects of Selected Yogasana Pranayama and Meditation on Physiological Variables of Females

Nita V Chaudhary, Research Scholar

Abstract

The purpose of study was to find out the effects of selected yogasana, pranayama and meditation on physiological variables of females, such as Breath Holding Time and Forded Vital Capacity. To achieve the purpose of this study (30) Thirty Females were selected from Surat Tennis Club-Athwalines-Surat, Gujarat at random and their age ranges from 30 to 40 years and all of them healthy and normal. They were divided into two groups and designed as experimental and control group fifteen females each. The experimental groups underwent a 12 weeks of yogasanas, pranayama and meditation training were given. The control groups were not allowed to participate in any of the training programme. The collected data were analyzed by using analysis of covariance. The results of the study showed that yoga training can be an effective training programme to increase the Breath Holding time and Forced Vital Capacity of females.

Introduction

Yoga is a systematic practice for the realization of higher perceptions. It is the science of life and an ideal way of living, providing rhythm to the body, melody to the mind, harmony to the soul and thereby symphony to life, in short yoga is way to achieve total health, peace, bliss and wisdom. Physical, mental and spiritual aspects of yoga help to make one's life purposeful, useful and noble. Thus yoga is an art, science and philosophy which influences effects of yoga must be felt in every movement of our day-to-day lives. Asana posture are improves general physiological fitness of adolescents. Yoga is a holistic system of teaching skills which many activities person seeks, such as control over the mind, control over the body, good breathing habits and relaxations under pressure, highly developed concentration skills and the ability to focus on the present study. The present study was to find out the effects of selected yogasanas, pranayama and meditation on physiological variables of females.

Methodology

Subjects for the present study was taken from 30 females were selected from Surat Tennis Club-Athwalines- surat, Gujarat at random and age ranges 30 to 40 years and all of them healthy and normal. The pilot study was conducted during the year 2012-2013; the selected subjects were divided into two groups and designed as experimental group and control group 15 females each. The experimental group underwent a 12 weeks of yogasanas, prayanama and meditaion training. The control group was not allowed to participate in any of the training programs. The duration of the training period was 12 weeks with five days per week on every day the training was practical approximately 45 min under the instruction and supervision of the investigator. The analysis of covariance was applied to find out significant difference if any between experimental and control group. In all cases 0.05 level of confidence was utilized to test the significance.

Result of study

The pre test and post test mean, standard deviation and the adjusted post test mean of the data on Breath Holding Times is presented in Table-1

	Control group	Experimental group	SOS	df	MS	'F'
Pre-T	34.27	49.70	221.32	1	221.32	89.93
SD	12.31	19.13	11413.49	28	327.28	
Post-T	43.70	93.23	19221.81	1	19221.81	31.46
SD	11.14	29.33	21383.29	28	514.57	
Adjusted Post-T	42.54	88.32	16443.19	1	16442.19	34.59
			14398.13	37	287.28	

***Significant at 0.05 level. Requires table value at 0.05 level of significance for 1& 27degrees of freedom= 4.21. 1& 28degees of freedom= 4.19.**

The statistical analysis from table-I shown that the pre-test means of experimental and Control group, are 34.27 and 49.70 respectively. The obtained 'F' ratio 89.93 for pre test is less than the table value of 4.19 for 1 and 28degrees of freedom at 0.05 level. The post test means of experimental and

Control group ate 43.70 and 93.23 respectively. The obtained 'F' ratio 31.46 for post test is more than the table value of 4.19 for 1 and 28degrees of freedom at 0.05 level. The adjusted post-test means of experimental and Control group ate 42.54 and 88.32 respectively. The 'F' ration obtained for adjusted post-test 44.49 is also more than the table value of 4.19 and 1 and 28degrees of freedom at 0.05 level. It reveals that there is significant change on Forced Breath Holding Time as result of experimental raining. Since the result has revealed that there is a significant difference.

The pre test and post test mean, standard deviation and adjusted post test mean of the data on Forced Vital Capacity is presented in Table-II

	Control group	Experimental group	SOS	Df	MS	'F'
Pre-T	2.17	2.21	0.09	1	0.09	0.19
SD	0.23	0.34	0.49	28	0.11	
Post-T	2.14	2.93	0.48	1	0.59	2.89
SD	0.28	0.39	6.32	28	0.10	
Adjusted Post-T	2.89	3.03	0.29	1	0.29	09.81
			1.03	37	0.02	

***Significant at 0.05 level. Requires table value at 0.05 level of significance for 1& 27degrees of freedom= 4.21. 1& 28degees of freedom= 4.19.**

The statistical analysis from table-II shown that the pre-test means of experimental and Control group, are 2.17 and 2.21, respectively. The obtained 'F' ratio 0.19 for pre test is less than the table value of4.19 for 1 and 28degrees of freedom at 0.05 level. The post test means of experimental and Control group are 2.14 and 2.93 respectively. The obtained 'F' ratio 2.89 for post test is also lesser than the table value of 4.19 for 1 and 28degrees of freedom at 0.05 level. The adjusted post-test means of experimental and Control group are 2.89 and 3.03 respectively. The 'F' ration obtained for adjusted post-test 09.81 is also more than the table value of 4.19 and 1 and 28degrees of freedom at 0.05 level. It reveals that there is significant change on Forced Vital Capacity Time as result of experimental raining. Since the result has revealed that there is a significant difference.

Discussions on findings: The above results indicated that the experimental groups had significant changes in Breath Holding Time and Forced Vital Capacity due to the twelve weeks of yogic practices when compared to Control group. The effects of yogic practices might be the improvement of Breath Holding Time and Forced Vital Capacity. Results are conformity with the studies of Birkel and Chandrabose also with the study.

Conclusions

From the results of the study the following conclusions were drawn: there was a significant difference between experimental group and control group on selected criterion variables.

The result of the study have shown that the Breath Holding Time could significantly increase in the post test experimental group when compared to the post test control group after the twelve weeks of yogasanas; pranayama and meditation practice.The physiological variables of Forced Vital Capacity there are no significant increase in the post test experimental group after the twelve weeks of yogasanas, pranayama and meditation practice. But there is a significant change in the adjusted post test mean.

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Personality And Achievements Of Former InternationalCricketer Brijesh Patel

Dr. Rajkumar G.Karve
UGC-Post Doctoral Fellow, Department of Physical Education, Gulbarga University, Gulbarga.

Introduction

There are many problems, but one complex and mysterious problem which is faced by the human being since long has been the mystery of his own and others nature and personality. Human beings appear in different shapes and sizes and behave in highly complex ways. Several crores of people are living on the earth. But of them no two people are exactly alike. It is difficult to conjecture what is the human nature of these people. To understand human nature and personality of persons psychologists are continuously striving. It is very important for any human enterprise, more so in case of sports and games, where there is not only kaleidoscopic play of emotions but also name, fame, money and much more at stake. A comprehensive understanding of human nature would contribute in great measure for the all round development of the person, sporting activity and also improving the quality of life. There are a large number of studies on groups and categories of people in relation to personality, socio economic status, emotional intelligence, value orientation, locus of control, level of aspiration, self confidence, achievement motivation and mental endurance etc. In psychology individuals are studied in a comprehensive in a clinical setting. But one feels that understanding an individual who has made a mark, who has been greatly successful, who has been a highly influential administrator and organizer of cricketing activity in Karnataka and has been a fine human being would help in the creation and promotion of such fully functioning and self actualizing individuals.

Sports Psychology (2010), sports activity has been acclaimed for stimulating the real soul out. A sportsman always is vital and stands out of the crowd, prominent and healthy, both mentally as well as physically. Sports always develop the leadership qualities in one's personality. Personality ; a term used to characterize the individual that emerges as a person grows, matures, and reacts to the thousands of environmental stimuli that surround him. The learning of social values, and particularly sportsmanship, must be a part of the purpose of the individual; its results must be recognized and be made satisfying if learning is to take place.

The 'we-feeling' group belongingness, peer-spectator, group unions in enthusiasm for their teams seem to be valuable in a surrounding atmosphere. Discipline in the sports learning situation brings guidance in behavior, most conducive to learning process and effective for successful performance. It is important that researches evaluate the drive to excel in leadership, to do better to surpass one's own previous performance, the records set by the others, the competition of the moment, all are a part of the human striving for maximum output and efficiency. This concludes that the best sportsmen lead very healthy, active, peaceful and disciplined life.

Objectives

- To find out the personality traits of cricketer.
- To find out the emotional intelligence of cricketer.
- To examine the value orientation and level of aspiration of cricketer.
- To find out the socio-economic status of the cricketer.
- To find out the levels of self confidence and locus of control of the cricketer.
- To find out the achievement motivation level of the cricketer.
- To find out the mental endurance (mental toughness) of the cricketer.
- To analyze interrelation within the variables.
- To assess the relation between the variables.
- To explore the inter-relationship and differences between the opinion of relatives and friends and also cricketers, umpires, administrators and spectators towards the cricketer.

Significance of study

- This study assumes great significance given its comprehensive study of a former international cricket player such as Brijesh Patel.
- This study will reveal the impact of socio economic status of the player in relation to personality, self confidence, achievement motivation, value orientation, aspiration, locus of control, emotional intelligence and mental endurance.
- This study helps to reveal the inter relationship within the sub factors of variables.
- This study will reveal the inter relationship within the sub factors of different variables.
- This study is significant in the sense that it will help to find out correlation and differences in the opinion of relatives, friends, cricketers, umpires, administrators and spectators towards the cricketer.

Materials And Methods

The investigator preferred interviews and questionnaires method to collect the necessary information for his study on former international cricketer Brijesh Patel's personality and achievements. The investigator visited Karnataka State Cricket Association, Chinnaswamy stadium, Bangalore several times and conducted separate interviews with Brijesh Patel. Also conducted separate interviews with his friends, relatives, co-players (cricketers), umpires, administrators and spectators to get the opinion towards Brijesh Patel.

Test Administration and Collection of Data

To collect necessary data pertaining to the present case study through questionnaires, psychological tests and interview method. The subject was administered to the Cattell's Sixteen Personality Factors Questionnaire (Form 'C'), Socio Economic Status Scale, Sanjay Vohara's Locus of Control Scale (LOC), Emotional Intelligence Scale, Achievement Motivation Test (ACMT), Level of Aspiration Measure, Value Orientation Scale, Self confidence Inventory, Mental Endurance Tests.

The Friends and Relatives opinion rating questionnaire and Cricketers, Umpires, Spectators and Administrators opinion rating questionnaire were also administered.

The data were in the form of answer given by the subject in response to the various questions of the questionnaire and also to the verbal questions which are present in the questionnaires asked through interview method. The subject completed answering the questionnaire within the stipulated time after which the questionnaires were collected back and the standard scoring key was used to get the score. The scores were analyzed with the help of the standardized norms [key] provided in the tabular supplement of tests manual all questionnaires.

Tools

Following standardized tests and questionnaires were used in the present study,

1. The Sixteen Personality Factor Questionnaire (16 P.F)
2. Bhargava's Achievement Motive Test
3. Sanjay Vohra's Levenson's Locus of Control Scale
4. Dr. Mahesh Bhargava and Late Prof. M.A. Shah's Level of Aspiration Measure.
5. Socio-economic status (SES)
6. Self-confidence Questionnaire (SCQ)
7. Value Orientation Scale
8. Emotional Intelligence Scale (EIS)
9. Mental Endurance tests

Conclusions

- Mr. Brijesh Patel is good natured, easy going, emotionally expressive, ready to co-operate, attentive to people, softhearted, kindly, adaptable, quick to grasp ideas, a fast learner, intelligent, emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale, assertive, self assured, independent minded, cheerful, active, talkative, frank, expressive, effervescent and carefree.
- He is exacting in character, dominated by sense of duty, preserving, responsible, planful, "fill the unforgiving minute, sociable, bold, ready to try new things, spontaneous and abundant in emotional response. His "thick skinned ness" enables them to face wear and tear in dealing with people and grueling emotional situations, without fatigue.

- He is tough, realistic, “down to earth”, independent, responsible but skeptical of subjective, cultural elaborations, free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about others, a good team worker, anxious to do the right things, attentive to practical matters, polished, experimental and shrewd, unruffled and to have unshakable nerve. He has a mature, unanxious confidence in themselves and their capacity to deal with things.
- He is experimenting, interested in intellectual matters, he has doubts on fundamental issues, prefers to work and make decisions with other people and like and depend on social approval and admiration
- He has undisciplined self-conflict and have significant control of his emotions and general behavior. Inclination to be socially aware, careful and he has lot of self respect and high regard for social reputation. He is sedate, relaxed, composed and satisfied person.
- He has high socio economic status, high emotional intelligence, high level of self confidence, higher value orientation, high level of achievement motivation and has greater strength of locus of control.
- He has positive goal discrepancy and attainment discrepancy and also he was under aspirant i.e. does more and expects less.
- He was exhibited highest and strongest level of mental endurance (mental flexibility). While confronting with most complex problems he takes a bit pause in his routine activities and comes out with adequate solutions to his problems. Because of such ability he emerged as a successful person.
- Positive and significant interrelationship between the sixteen primary personality factors, socio economic status factors, emotional intelligence factors and value orientation factors scores of Brijesh Patel.
- Positive and significant relationship between LOC factors like powerful by others and chance control scores of Brijesh Patel.
- Not significant relationship between LOC factors like chance control and individual control, powerful by others and individual control scores of Brijesh Patel.
- Level of aspiration factor like goal discrepancy score is having positive and significant relationship with NTRS (number of time goal reach score) and other factors scores are not correlated to each other.
- Positive and significant relationship between sixteen primary personality factors and socio economic status factors, emotional intelligence factors, value orientation factors, locus of control factors, level of aspiration factors and self confidence.
- Positive and significant relationship between sixteen primary personality factors like A-Outgoing, B-More Intelligent, C-Emotionally Stable, E-Dominant, F-Enthusiastic, G-Conscientious, H-Bold, N-Shrewd, Q1-Experimenting, Q3-Self Image and achievement motivation scores of Brijesh Patel.
- Not significant relationship between sixteen primary personality factors like I-Tough Minded, L-Trusting, M-Practical, O-Self-assured, Q2-Group oriented and Q4-Relaxed and achievement motivation scores of Brijesh Patel.
- Positive and significant relationship between socio economic status factors and emotional intelligence factors, value orientation factors, locus of control factors, level of aspiration factors and self confidence scores of Brijesh Patel.
- Positive and significant relationship between socio economic status factors like social status (ascribed), social status (whole), economic status (ascribed), economic status (achieved), economic status (whole), socio economic status (ascribed) and achievement motivation scores of Brijesh Patel.
- Not significant correlation between socio economic status factors like social status (achieved), socio economic status (achieved) and socio economic status (whole) and achievement motivation scores of Brijesh Patel.
- Positive and significant relationship between emotional intelligence factors and value orientation factors, locus of control factors, level of aspiration factors and self confidence scores of Brijesh Patel.
- Positive and significant relationship between emotional intelligence factors like self awareness, empathy, self motivation, emotional stability, managing relations and achievement motivation scores of Brijesh Patel.
- Not significant relationship between emotional intelligence factors like integrity, self development, value orientation, commitment, altruistic behavior and achievement motivation scores of Brijesh Patel.

- Positive and significant relationship between value orientation factors and locus of control factors, level of aspiration factors and achievement motivation scores of Brijesh Patel.
- Positive and significant relationship between value orientation factors like venturesomeness, democratism and self confidence scores of Brijesh Patel.
- Not significant relationship between value orientation factors like cosmopolitanism, scienticism, progressivism, empathy and self confidence scores of Brijesh Patel.
- Positive and significant relationship between locus of control factors and level of aspiration factors, achievement motivation and self confidence scores of Brijesh Patel.
- Not significant relationship between the level of aspiration factors and achievement motivation scores of Brijesh Patel.
- Positive and significant relationship between level of aspiration factors and self confidence scores of Brijesh Patel.
- Positive and significant relationship between achievement motivation and self confidence scores of Brijesh Patel.
- Positive and significant relationship between opinion of relatives and friends, cricketers, umpires, administrators and spectators, i.e. respondents shown similar and favorable opinion towards Brijesh Patel's behavior.
- No significant differences in the opinion of relatives and friends, cricketers, umpires, administrators and spectators about Mr. Brijesh Patel.

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Study Of Performance Of Skating Players In Interschool Competition Of Boys From Pune City

Dr. M.R. Gaikwad
Director of Physical Education M.M. College of Commerce, Pune.

Introduction

In human beings physical activity plays a very important role in life. From childhood a person can start physical activity. In childhood school plays important role in motivating a child towards physical activity. According to Hanson (1974) physical activity can be added to the school curriculum. Studies indicate that children in free play settings will not engage in physical activity vigorous enough to produce physical benefits or enhance health, thus supporting the need for physical education.

Skating started in Pune 1980. For the first time Raju Dabhade represented at the national level for Pune. In 1986 Raju Dhabhade, Rajan Juvekar and Nitln Dhoand started their own clubs in Pune. In 1993-94 for the first time Pune team represented in interschool national competition. For there has skating started really growing in Pune. Pushkar Kulkarni was the first player form the district who had represented India at the international level. Marshal Mundfan, Urrnila Nanaware who had got Chatrapati Award from the Government of Maharashtra in the skating event.

School Games of federation of India conduces the skating events at the national level. The selection of the players begins from city level to national level. In Pune many school students take part in interschool competitions. But after finishing the events the organizers do not keep the detailed record as like that.It's important to know about what is happening in skating and what the performance of the skaters in the game was. In order to get information, researcher decided to study skating performance of skrting players in interscholastic competition in last five year.

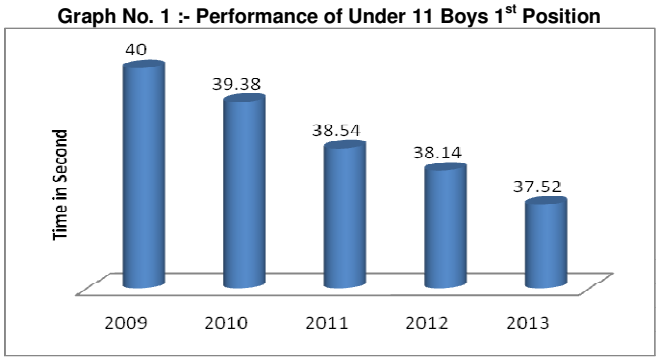
Discription

The data was analyed by using descriptive statistics. The data have been presented below. The data was arranged systematically in graphical reorientations. The result of the have been presented below in Table.Table is showing 1st & 2nd position performance time in seconds, of player in skating year wise. And below, figures are showing how the time is increase of decreases in all boys age group category**.**

Table
AGE AND YEAR WISE PERFORMANCE

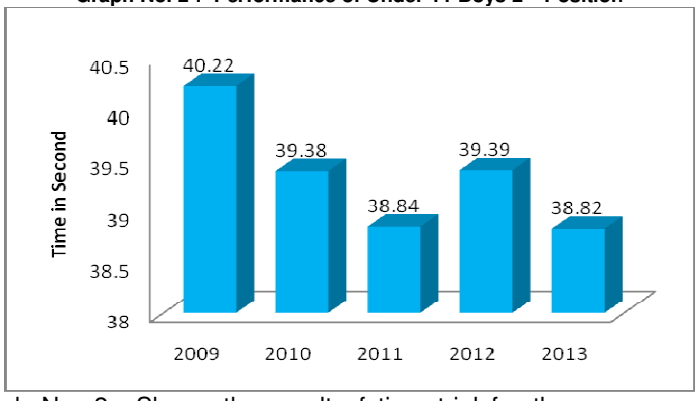
Positions	Age/Gender	2009	2010	2011	2012	2013
1	11 Boys	40.00	39.38	38.54	38.14	37.52
2	11 Boys	40.22	39.38	38.84	39.39	38.82
1	14 Boys	38.88	38.23	37.58	37.93	36.28
2	14 Boys	39.00	38.76	38.52	38.28	38.04
1	17 Boys	35.53	34.73	33.93	33.13	32.33
2	17 Boys	35.87	35.20	34.53	33.86	33.19

Graph No. 1 :- Performance of Under 11 Boys 1st Position



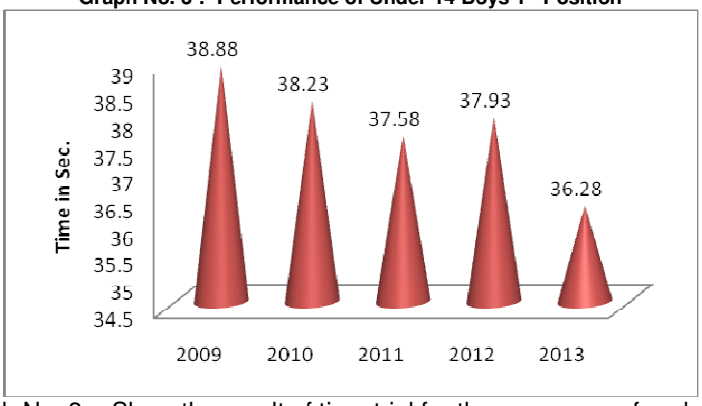
Observation :
Graph No. 1:- Shows the result of time trial for the age group of under 1 boys category. Looking to the chart you can easily make out that there is tremendous improvement in timings. First position skater's timing was 40.00 sec in 2009 in 2010 it became 39.38, In 2011 it was 38.54, In 2012 he clicked 38.14 and in 2013 the timing given was 37.52 sec.

Graph No. 2 :- Performance of Under 11 Boys 2nd Position



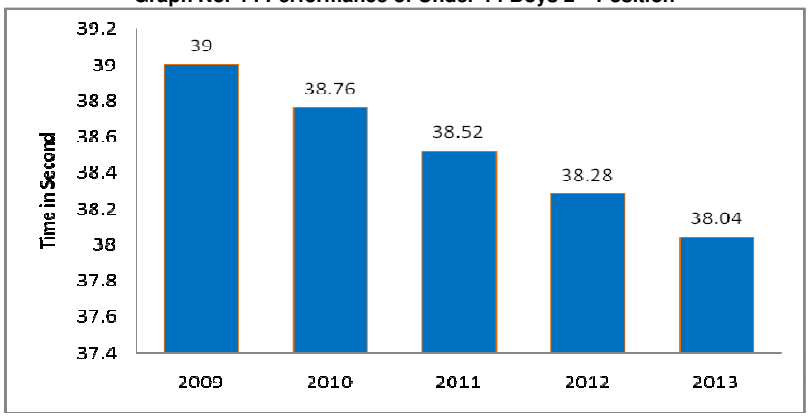
Observation :-Graph No -2:- Shows the result of time trial for the age group of under 11 boys category. Looking to the chart you can easily make out that there is tremendous improvement in timings. Second position skater's timing was 40.22 sec in 2009 in 2010 it became 39.98, In 2011 it was 38.84, In 2012 he clicked 38.39 and in 2013 the timing given was 38.52 sec.

Graph No. 3 :- Performance of Under 14 Boys 1st Position



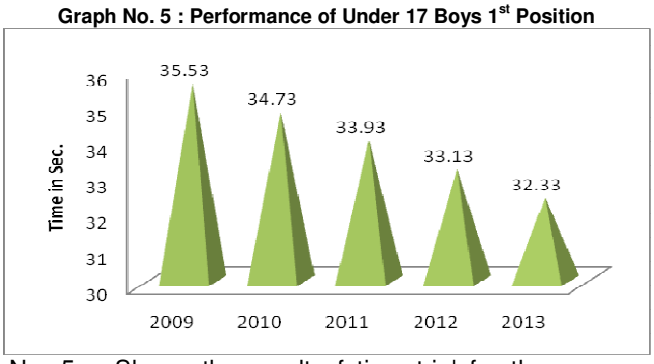
Observation : Graph No. 3 :- Show the result of time trial for the age group of under 14 boys category. Looking to the chart you can easily make out that there is tremendous improvement in timing. First position skater's was 38.88 sec in 2009, in 2010 it became 38.23, In 2011 it was 37.58, In 2012 he clicked 37.93 and in 2013 the timing given was 36.28 sec.

Graph No. 4 : Performance of Under 14 Boys 2nd Position



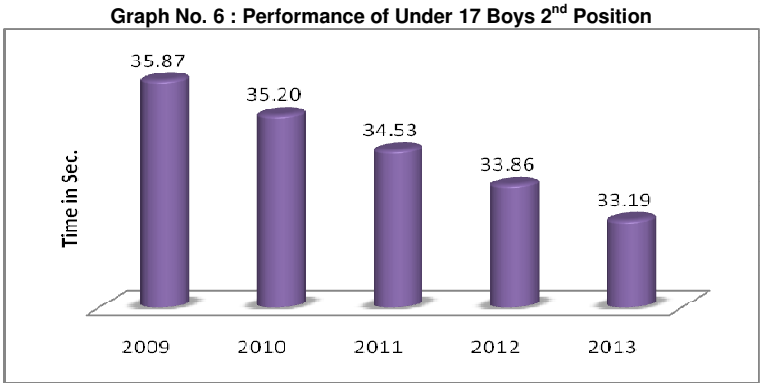
Observation : Graph No. 4 : Shows the result of time trial for the age group of under 14 boys category Looking to the chart you can easily make out that there is tremendous improvement in timing. Second position skater's timing was 39.00 sec in 2009, In 2010 it became 38.76, In 2011 it was 38.52. In 2012 he clicked 38.28 and in 2013 the timing given was 38.04 sec.

Graph No. 5 : Performance of Under 17 Boys 1st Position



Observation : Graph No. 5 :- Shows the result of time trial for the age group of under 17 boys category. Looking to the chart you can easily make out that there is tremendous improvement in timing. First position skater's timing was 35.53 sec in 2009, in 2010 it became 34.73, In 2011 it was 33.93, In 2012 he clicked 33.13 and in 2013 the timing given was 32.33 sec.

Graph No. 6 : Performance of Under 17 Boys 2nd Position



Observation : Graph No. 6 : Shows the result of time trial for the age group of under 17 boys category. Looking to the chart you can easily make out that there is tremendous improvement in timing. Second position skater's timing was 35.87 sec in 2009, in 2010 it became 35.20, In 2011 it was 34.53, In 2017 he clicked 33.86 and in 2013 the timing given was 33.19 sec.

Discussion :

In studying the performance of skating player in between 2009-2013. By studying figures participation in skating increasing year by year continuously, it may be because of new equipments, infrastructure, parental support, motivation of coach, media, and schools interest in interschool competition.

Conclusion :

1. In age group of under 11 boys category there is continuous growth in 1st position but for second position there is no growth in their performance after year 2011.
2. In age group of under 14 and 17 boys category there is continuous growth in 1st and 2nd position.

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Comparaison Of Health Of Height-Weight Matched Young-Adult Female Athletes And Non-Athletes Of Hilly Regions Through Selected Anthropometric Measurements

Dr. Sanjib Mridha[1], Laden Lepcha[2], Prasenjit Barman[3] and Pallob Kumar Mondal[4]
[1] Associate Professor, Department of Physical Education, University of Kalyani
[2] Assistant Professor, Salesian College, Siliguri Campus, Darjeeling
[3&4] Research Scholar, Department of Physical Education, University of Kalyani

Abstract:
Height and weight are the major two determinants for various anthropometric properties at any age in life. People of different racial origins and geographical locations have specific anthropometric features. Purpose of this study was to compare health status of height-weight matched young-adult female athletes of hill regions through selected anthropometric measurements. Sixty (N=60) 18–25 years female, thirty from athlete and thirty from non-athlete of the hill localities were the subjects. The height range was 157.5 – 162.5 cm and weight was 52.5 – 55.5 kg. Seven skin-folds, six body circumferences and three body compositions namely – body mass index (BMI), waist-to-hip ratio (WHR) and body fat percentage (%BF) were measured. In skin-folds, non-athlete subjects were significantly higher (P>0.05) at biceps and mid-thigh, but no difference existed at triceps, sub-scapular, abdomen, supra-iliac and medial calf sites. In body circumferences, both the groups were at par in chest, thigh, shoulder, abdomen and wrist circumferences; however, at forearm the hilly non-athlete subjects were superior. In body composition, only LBM was greater in athlete group; but biceps, BMI and WHR of the two groups did not differ. The athletes of hilly region were higher in LBM with less %BF than non-athletes.
Key words: Anthropometric profile, health, young-adult females, hilly region.

Introduction

Height and weight are the major two determinants for various anthropometric properties at any age in life. People of different racial origins and geographical locations have specific anthropometric features. Human beings can be classified in many ways. Each and every people have certain unique characteristics in their form, action and their thought. Researchers, who keen to focus their work in determining and understanding those characteristics to know the highest form of the living being in a better way. These differences are due to the life style pattern of the both groups.

Anthropometric and morphological parameters are the sensitive indicators for sport persons and people of all walks of their lives in terms of their physical growth and nutritional status (Chatterjee et al., 2006). These indicators depend largely on genetics, correlated with age, sex, socio-economic status, ethnicity, altitude, nutritional status, personal hygiene and exercise practice. Proper evaluation of these parameters projects the quantification of morphological characteristics of elite athletes which can be vital in relating to body structure and sports performance (McArdle et al., 1996). Anthropometry comprises techniques that readily contribute to a more in-depth understanding of body composition and nutritional status, allowing the quantification of observations and the changes with time. Championship performances no longer occur at random or as a result of chance alone. International sports performance in various disciplines is influenced by many factors, such as, level of physical, physiological and psychological abilities. Body measurements help to talk about nutritional status and highlight the changes due to physical activities (Heyward & Wagner, 2004). Purpose of this study was to compare the anthropometric profiles of height-weight matched young-adult females of hilly athlete and hilly non-athlete group.

Methodology:

A total of sixty (N=60) young-adult females 30 from each group of Hill area and the age between 18-25 years with similar height and weights were selected as the subjects of this study. Height range of

the subjects was 157.5 to 162.5 cm and weight of the subjects was between 52.5 to 55.5 kg. Anthropometric profile was the criterion for this study to predict the health status of two groups.

Seven skin-folds were – biceps, triceps, sub-scapular, supra-iliac, medial calf, mid-thigh and abdomen taken as the measuring parameters of this study. Six considered body circumferences were shoulder, chest, abdomen, thigh, fore-arm and wrist. Three body composition variables were – body mass index (BMI), waist-to-hip ratio (WHR) and body fat percentage (%BF).BMI was derived from height-weight ratio (weight in kg/height in m^2). WHR predicted from waist circumference divided by hip circumference. Body fat percentage predicted by skin-fold method (Jackson & Pollock, 1978).Tools used for this study was to measure different dimension of anthropometric measurements. For example, for height and circumferences - anthropometric tape; for weight - weighing machine and for skin-folds – skin-fold caliper were used. Measurements were taken following appropriate guidelines (Heyward & Wagner, 2004). Mean, standard deviation (SD) and independent t- test were the statistics used in this study for data interpretation. Level of significant difference between two groups was set at $p<0.05$.

Result and Discussion: Table-1 represents the means, SDs and t-values of height, weight and the four body composition variables on two groups of subject. As the subjects of this study were selected within the specific sample of height and weight, consequently, no difference was observed in height, weight and BMI of two groups.

Table-1: Mean, SD and t-value on height, weight and body composition variables

Variables	HAT Group Mean ± SD	HNAT Group Mean ± SD	t- value
Height (cm)	155.97± 3.31	155.42 ± 2.59	**1.198^{NS}**
Weight (kg)	51.20 ± 3.50	50.12 ± 3.09	**1.265^{NS}**
BMI(Kg/m^2)	21.09 ± 1.87	20.75 ± 1.24	**1.100^{NS}**
% BF	20.72 ± 3.44	21.63 ± 3.65	**0.804^{NS}**
LBM(Kg)	40.54 ± 2.62	39.22 ± 3.65	**1.926***
WHR	0.79 ± 0.04	0.77 ± 0.15	**0.853**

*Significant at the .05 level, $t_{0.05\,(58)}$ =1.645, NS = Not significant

%BF of these two groups did not differ. However, the LBM did differ between the two groups and with similar body weight hilly athlete females (40.54 kg) having greater LBM than the hilly non-athlete females (39.22 kg). WHR of the hilly athlete girls were higher (0.79) than the hilly non-athlete girls (0.77). Therefore, in body composition aspect the hilly athlete young adult females were in better health status than their non-athlete counterparts.

Table-2: Mean, SD and t-value of **seven skin-fold sites**

Variables	Group	N	Mean ± SD	t – value
Biceps	Hat	30	5.44 ± 1.53	**1.67***
	Hnat	30	6.25 ± 2.16	
Triceps	Hat	30	12.45 ± 3.61	**1.24^{NS}**
	Hnat	30	11.42 ± 2.75	
Sub-scapula	Hat	30	16.33 ± 4.31	**1.23^{NS}**
	Hnat	30	15.09 ± 3.47	
Suprailiac	Hat	30	19.37 ± 5.02	**0.33^{NS}**
	Hnat	30	19.80 ± 5.13	
Abdomen	Hat	30	19.65 ± 4.72	**0.59^{NS}**
	Hnat	30	18.95 ± 4.27	
Thigh	Hat	30	20.08 ± 4.38	**2.68***
	Hnat	30	23.40 ± 5.17	
Calf	Hat	30	12.30 ± 2.76	**0.95^{NS}**
	Hnat	30	11.62 ± 2.83	

*Significant at the .05 level, $t_{0.05\,(58)}$ =1.645

Table-2 represents means, SDs and t-values of the seven skin-fold sites. Significant differencebetween two groups' skin-fold sites were observed at biceps and thigh sites. However, at the remaining skin-fold sites i.e., triceps, sub-scapula, suprailliac, abdomen and calf, there was no difference between the two groups.

Table-3: Mean, SD and t-value of six girth sites

Variables	Group	N	Mean ± SD	t – value
Shoulder	HAT	30	93.11 ± 3.94	**0.433^{NS}**
	HNAT	30	92.71 ± 3.17	
Chest	HAT	30	81.32 ± 3.14	**0.869^{NS}**
	HNAT	30	80.65 ± 2.88	
Abdomen	HAT	30	74.41 ± 5.34	**0.835^{NS}**
	HNAT	30	73.29 ± 5.07	
Thigh	HAT	30	49.92 ± 2.84	**0.854^{NS}**
	HNAT	30	51.35 ± 8.70	
Forearm	HAT	30	21.96 ± 1.05	**4.448***
	HNAT	30	25.14 ± 1.43	
Wrist	HAT	30	14.10 ± 0.71	**0.804^{NS}**
	HNAT	30	13.98 ± 0.44	

*Significant at the .05 level, $t_{0.05\,(58)} = 1.645$

Table-3 represents the six girth measurements of the two groups in the form of mean, SD and t-value. It is observed that out of these six circumferences significant difference existed at forearm region. There was no significant difference observed between two groups at shoulder, chest, abdomen, thigh and wrist.

Conclusion:

Within the limited scope of the study the following conclusions were drawn on young-adult females with similarity in height and weight.

i) Lean body mass of the hilly female athletes was more than the hilly non-athlete females.
ii) Waist-to-hip ratio of the hilly female athletes was higher than the hilly female non-athletes.
iii) Hilly non-athlete females were superior at biceps and thigh skin-fold thickness.
iv) In girth measurements, hilly female non-athletes were superior at forearm circumference.

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A Comparative Study of Achievement Motivation among Athletes and Foot Ball Players of Osmania University

K.Kanna Reddy
Ph.D Scholar, Department of Physical Education, Osmania University, Hyderabad
Dr. Irgam Balaram Reddy
Head, Department of Physical Education, Osmania Univesity, Hyderabad

Abstract:
Achievement Motivation defined as the need to perform well or the striving the success as the need to perform well or the striving for success and evidenced by persistence and effort to achieve high performance in sports. Motivation is based on your emotions and achievement related goals.Achievement Motivation is the desire to excel at task.The purpose of the study is to find out the level of achievement motivation among Athletes and Foot Ball Players of Osmania University.The sample for the study consists of 50 Athletes and 50 Foot Ball Players those who have participated in the Inter College Tournaments of Osmania University during the year 2012-13.The Standardized Dr.B.N.Mukharji Achievement Motivation scale were used for the study.It was found the Athletes are having more Achievement Motivation than Foot Ball Players because the Athletes required compulsory Motivation to achieve excel in Performance.It is concluded that Individual Sports persons like Athletes set goals and aims to give level best performance to win the Competition, where as the Foot Ball Players depend upon their group to give the high level of performance.It is recommended that achievement motivation is compulsory for all sports persons to achieve high excellence in sports.The Coaches must prepare all the sports persons with high level of motivation to excel in sports and games.
Key words: Achievement motivation, athletes, foot ball players etc.

Introduction:
Achievement Motivation defined as the need to perform well or the striving the success as the need to perform well or the striving for success and evidenced by persistence and effort to achieve high performance in sports. Motivation is based on your emotions and achievement related goals.Achievement Motivation is the desire to excel at task.Sport Psychology is the scientific study of people and their behaviors in sport. The role of a sport psychologist is to recognize how participation in sport exercise and physical activity enhances a persons development. Beginning, in the 1970, Sport psychology became a part of the curriculum on university campuses. Today, sport and exercise psychologists have begun to research and provide information in the ways that psychological well being and vigorous physical activity are related. Modern day sports are very demanding . It requires for the sportsmen and athletes a like to perform to the very best of their abilities and beyond. Individual sport activities such as wrestling and gymnastics, have shown to elicit higher anxiety levels than competitive team sport activities such as soft ball and basket ball.

Athletics is an exclusive collection of sporting events that involve competitive running, jumping, throwing, and walking. The most common types of athletics competitions are track and field, road running, cross country running, and race walking. The simplicity of the competitions, and the lack of a need for expensive equipment, makes athletics one of the most commonly competed sports in the world. Athletics is mostly an individual sport, with the exception of relay races and competitions which combine athletes' performances for a team score, such as cross country.

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 American football,Australian rules football, Canadian football, Gaelic football, rugby league, rugby union and other related games.

Method:.

The purpose of the study is to find out the level of achievement motivation among Athletes and Foot Ball Players of Osmania University.The sample for the study consists of 50 Male Athletes and 50 Male Foot Ball Players those who have participated in the Inter College Tournaments of Osmania University during the year 2012-13.The Standardized Dr.B.N.Mukharji Achievement Motivation scale were used for the study.The Questionnaire were administered in small groups during the Osmania University Inter College Sports and Games for the year 2012-2013 during the Coaching Camps conducted for the Athletics and Foot Ball.

Result:

Table No.1

Sports Persons	Mean	S.D.	N	DF	't'
Athletes	32.12	5.92	50	0.98	8.14**
Foot Ball Players	39.28	7.90	50		

The results in Table No.1 Shows that Athletes are more Achievement than Foot Ball Players must have more achievement motivation to excel in sports. The Decision must be made by Athletes persons is final for his performance. Whereas in Team Game like foot ball there will be group effort among all players and their achievement motivation differs from each sports persons to sports personsIt was found the Athletes are having more Achievement Motivation than Foot Ball Players because the Athletes required compulsory Motivation to achieve excel in Performance.

Conclusion:

It is concluded that Individual Sports persons like Athletes set goals and aims to give level best performance to win the Competition, where as the Foot Ball Players depend upon their group to give the high level of performance.It is recommended that achievement motivation is compulsory for all sports persons to achieve high excellence in sports.The Coaches must prepare all the sports persons with high level of motivation to excel in sports and games.

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Role of Sports Psychologist for Athletes

Dr. Katroth Deepla
Secretary,Inter College Tournaments (Women), Osmania Univesity, Hyderabad

Abstract:
The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. This make the coaches to take an increasing interest in the field of sport psychology and in particular in the area of competitive anxiety. The importance of a sports psychologist as an integral member of the coaching and health care teams is widely recognized. Sports psychologists can teach skills to help athletes enhance their learning process and motor skills, cope with competitive pressures.
Method:. The purpose of the study to find out the role of sports psychologist in athletes performance.For the present study 100 athletes were selected from Osmania University. The effective sample consisted of 100 athletes 50 athletes given the sports counseling and 50 athletes not given the sports counseling and the age range between the 18-22 years. Singh personal stress source inventory were used for the study.
Result: The athletes not given the Sports Counseling have significantly high stress than the athletes given the sports counseling.
Conclusion: It is an essentially need of sports psychologist for athletes performance .. Now a days all the teams are using the services of sports psychologist to enhance the performance.
Key words: stress, sports counseling etc.

Introduction: The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. They may become tense, their heart rates race, they break into a cold sweat, they worry about the outcome of the competition, they find it hard to concentrate on the task in hand. This has led coaches to take an increasing interest in the field of sport psychology and in particular in the area of competitive anxiety. That interest has focused on techniques that athletes can use in the competitive situation to maintain control and optimize their performance. Once learned, these techniques allow the athlete to relax and to focus his/her attention in a positive manner on the task of preparing for and participating in competition. Psychology is another weapon in the athlete's armory in gaining the winning edge.The specialized field of sports psychology has developed rapidly in recent years. The importance of a sports psychologist as an integral member of the coaching and health care teams is widely recognized. Sports psychologists can teach skills to help athletes enhance their learning process and motor skills, cope with competitive pressures, fine-tune the levelof awareness needed for optimal performance, and stay focused amid the many distractions of team travel and in the competitive environment. Psychological training should be an integral part of an athlete's holistic training process, carried out in conjunction with other training elements. This is best accomplished by a collaborative effort among the coach, the sport psychologist, and the athlete; however, a knowledgeable and interested coach can learn *basic* psychological skills and impart them to the athlete, especially during actual practice.
Preparing for Competition: Simple psychological skills to help the athlete manage the competitive performance environment include: 1) learning relaxation skills (e.g. progressive relaxation; slow, controlled, deep abdominal breathing; or autogenic training; 2) mastering all of the attention styles (types of concentration); 3) imagery (both visualization and kinesthetic); 4) appropriate self-talk; and 5) developing a pre-competition mental routine to be employed immediately prior to competition on game day (these routines are short [1–2 minutes] and use all of the mental skills just presented).
Psychology Skills Training: Psychology for the athlete should aim to improve their mental skills, such as self-confidence, motivation, the ability to relax under great pressure, and the ability to concentrate and usually has three phases:
Purpose of the study: The purpose of the study to find out the role of sports psychologist in improving the athletes performance. This study will be significant regarding the role of sports psychologist in the improvement of performance in sports

Hypothesis: Not given the Sports Counseling players have significantly high stress than the given the sports counseling.

Methodology:

The purpose of the study to find out the role of sports psychologist in athletes performance.For the present study 100 athletes were selected from Osmania University. The effective sample consisted of 100 athletes 50 athletes given the sports counseling and 50 athletes not given the sports counseling and the age range between the 18-22 years. Singh personal stress source inventory were used for the study.

Procedures of data collection

The data was collected through questionnaire of two groups i.e. sports counseling group and non sports counseling group.

Results:

The athletes not given the Sports Counseling have significantly high stress than the athletes given the sports counseling.

Discussion:

It is an essentially need of sports psychologist in Athletes Performance.

Table:1.Showing the Test Scores of Stress among Athletes Counseling Group and Non Counseling Group.

Test	Group	Mean	SD	S.E	N	df	't'
Stress	Athletes with Counseling	24.69	7.19	1.01	50	98	6.90**
	Athletes without counseling	36.12	9.28	1.31	50		

The results related to the hypothesis have been recorded. Mean of stress score of the Athetes Sports Counseling is 24.69 and that of the Athletes non counseling group Mean is 36.12 The difference between the two mean is highly significant ('t'= 6.90, df =98, P < 0.01) It is clear that Athletes Sports Counseling Group have less stress compare to athletes non counseling group. It is an essentially need of sports psychologist in team sports performance Personality profiling, Assessing strengths and weaknesses in current mental approaches of individuals in the goal of refinement for optimal performance, Helping key stakeholders such as managers and coaches promote an optimal environment for maximum team enjoyment, Stress management, Weight and health management, Assisting with life management strategies, Teaching mental skills such as imagery and competition planning, Offering individual consultations, as well as facilitating interactive workshops, and General counseling.

Conclusion:

It is an essentially need of sports psychologist in team sports performance Personality profiling, Assessing strengths and weaknesses. Not given the Sports Counseling players have significantly high stress than the given the sports counseling.Not given the Sports Counseling players have significantly high anxiety than the given sports counseling. Sports performance is determined by a combination of physiological factors, technical skill, tactical insight and state of mind. the performance.

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A Comparative Study of Speed,Agility and Power among Boxers and Taekwondo Players of Osmania University

Prof. Rajesh Kumar
Chairman,Board of Studies in Physical Education, Osmania Univesity, Hyderabad
P.Supriya,Lect. In Phy.Edn. Nehru Memorial Govt. Deg. College, Jogipet
P.Ashwini Reddy, Lect. In Phy.Edn. Govt. Deg. College for Women, Srikakulam
G.Rama Devi,Lect. In Phy.Edn. Dr.Muscu M.R.College of Phy.Edn. Chottuppal, Nalgonda

Introduction:
A combat sport or fighting sport is a competitive contact sport where two combatants fight against each other to gain enough points. **Boxing** is a martial art and combat sport in which two people engage in a contest of strength, reflexes, and endurance by throwing punches at an opponent with gloved hands.**Taekwondo** is a martial art combines combat and self-defense techniques with sport and exercise. The purpose of the present study to find out the Speed ,Agility and Power among Boxers and Taekwondo Players of Osmania University.The sample for the present study consists of 20 Male Boxers and 20 Male Taekwondo Players of Osmania University. The 50 M Run is used to assess the speed, Shuttle Run is used to assess the agility and Shot Put Back Throw is used to assess the power.The results of the Study shows that Boxers are having good Speed and Power and Taekwondo Players are good in Agilty.It is concluded that Boxers are good in speed and power and Taekwondo Players are good agility. Coaches must include the conditioning programs for improvement of motor qualities.
Key words: Speed,agility, power etc

Introduction:
A combat sport or fighting sport is a competitive contact sport where two combatants fight against each other to gain enough points or a condition to declare a single winner by means of using certain rules of direct engagement. These engagements rules and conditions are significantly different from the rules in simulated contact or combat meant for technical based challenges, practice, or demonstration in martial arts, typically with the aim of simulating parts of real hand to hand combat through kata and self-defense training. Boxing, kickboxing, amateur wrestling, judo, mixed martial arts, Muay Thai and Swordsmanship are examples of combat sports.Boxing is a martial art and combat sport in which two people engage in a contest of strength, reflexes, and endurance by throwing punches at an opponent with gloved hands.Taekwondo is a martial art combines combat and self-defense techniques with sport and exercise. The purpose of the present study to find out the Speed ,Agility and Power among Boxers and Taekwondo Players of Osmania University.Physical fitness comprises two related concepts: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations).Physical fitness is generally achieved through correct nutrition, exercise and enough rest.In previous years fitness was commonly defined as the capacity to carry out the day's activities without undue fatigue. However, as automation increased leisure time, changes in lifestyles following the industrial revolution rendered this definition insufficient. In current contexts, Physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases and to meet emergency situations.The characteristics of physical fitness such as strength, endurance, agility, balance and flexibility are essential for physiological function and good health. Physically fit persons get the maximum satisfaction in every day life, better physical co-ordination, mental judgement and emotional control. Physically fit persons is able to withstand fatigue for longer periods and is better equipped to tolerate physical stress.

Boxing:

Boxing (**pugilism**, **prize fighting**, **the sweet science** or in Greek pygmachia) is a martial art and combat sport in which two people engage in a contest of strength, reflexes, and endurance by throwing punches at an opponent with gloved hands.

Amateur boxing is an Olympic and Commonwealth sport and is a common fixture in most of the major international games - it also has its own World Championships. Boxing is supervised by a referee over a series of one- to three-minute intervals called rounds. The result is decided when an opponent is deemed incapable to continue by a referee, is disqualified for breaking a rule, resigns by throwing in a towel, or is pronounced the winner or loser based on the judges' scorecards at the end of the contest.

Taekwondo

Taekwondo is a martial art that originates from Korea. It combines combat techniques, self-defense, sport, exercise, and in some cases meditation and philosophy. In 1989, taekwondo was the world's most popular martial art in terms of number of practitioners. *Gyeorugi* (pronounced a type of sparring, has been an Olympic event since 2000.Taekwondo is known for its emphasis on kicking techniques, which distinguishes it from martial arts such as karate or southern styles of kung fu. The rationale is that the leg is the longest and strongest weapon a martial artist has, and kicks thus have the greatest potential to execute powerful strikes without successful retaliation.Taekwondo as a martial art is popular with people of both genders and of many ages. Physically, taekwondo develops strength, speed, balance, flexibility, and stamina. An example of the union of mental and physical discipline is the breaking of wooden boards, bricks or tiles, which requires both physical mastery of the technique and the concentration to focus one's power.

Boxers in Action

Taekwondo Players in Action

Significance:

The Present study will bring the true facts for the importance of Physical fitness components speed, agility and power among Taekwondo Players and Boxers.

Method:.

The sample for the present study consists of 20 Male Boxers and 20 Male Taekwondo Players of Osmania University. The 50 M Run is used to assess the speed, Shuttle Run is used to assess the agility and Shot Put Back Throw is used to assess the power.

Result and Discussion:

The results of the Study shows that Boxers are having good Speed and Power and Taekwondo Players are good in Agilty.

Table – I

Test Items	GROUP	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
50 M Run	Boxers	20	7.01	0.23	0.07	-1.80	38.00	0.09
	Taekwondo	20	7.29	0.45	0.14			
Shuttle Run	Boxers	20	15.38	0.56	0.17	2.53	38.00	0.02
	Taekwondo	20	14.10	1.20	0.37			
ShotPutback Throw	Boxers	20	12.43	.351	0.111	2.33	38.00	0.31
	Taekwondo	20	12.31	.289	.916			

The Boxers Mean Speed in 50 M Run is 7.01 Compare to Taekwondo Players their Mean Speed is 7.29. Boxers are good in Speed. In Shuttle Run The Boxers mean is 15.38 and Taekwondo Mean is 14.10. That Means The Taekwondo Players are having good agility compare to Boxers. The Boxers Shot Back Throw is 12.43 and Taekwondo Players is 12.31 that means Boxers are having good power compare to Taekwondo Players.

Conclusion:

It is concluded that Boxers are good in speed and power and Taekwondo Players are good agility. Coaches must include the conditioning programs for improvement of motor qualities.

Suggestions:

It is suggested that Physical fitness training to improve the motor qualities must be given to Boxers and Taekwondo Players to increase the overall performance.

Acknowledgements:

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A Comparative Study of Speed and Endurance among Net Ball and Basket Ball Players of Osmania University

Prof.L.B.Laxmikanth Rathod
Secretary, Inter University Tournaments, Osmania Univesity, Hyderabad
S.Someshwar Rao
Ph.D Scholar, Department of Physical Education, Osmania University, Hyderabad
S.Surender Singh
Ph.D Scholar, Department of Physical Education, Osmania University, Hyderabad
S.Someshwar
Ph.D Scholar, Department of Physical Education, Osmania University, Hyderabad

Abstract:
Speed and Endurance are very important physical ability for performance in Net Ball and Basket Ball. Netball is very similar to basketball, except you do not dribble the ball and you can only take one step once you've received it. The purpose of the present study to compare the speed and endurance among Net ball and Basket Ball Players. The sample for the present study consists of 40 Male Net Ball and Basket Ball Players of Osmania University out of which 20 are Net ball players and 20 are Basket Ball players. The 30 Meters Run for Speed and 12 Minute Run Cooper Test for endurance is used to assess the results.This study shows that Basket Ball Players are having good speed and Net Ball Players are having the good aerobic endurance. Basket Ball Players performed very well in 30 Meters Run due to good speed requires in basket ball game and Net Ball Players are shown good in 12 min run because they are playing the netball game of four quarters of fifteen minutes each quarter.Net Ball is heavily intermittent meaning its involves physical events expressing maximal exertion short distance, speed, agility, explosive power and endurance. Basket Ball requires high speed, super agility and enormous endurance.
Key Words: Net Ball, basket ball, intermittent, speed,endurance etc.

Aerobic Endurance is the amount of oxygen intake during exercise. Aerobic Endurance is the time which you can exercise, without producing lactic acid in your muscles. During aerobic (with oxygen) work, the body is working at a level that the demands for oxygen and fuel can be meet by the body's intake. The only waste products formed are carbon-dioxide and water which are removed by sweating and breathing. Aerobic exercise is physical exercise of relatively low intensity and long duration, which depends primarily on the aerobic energy system. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy – generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time.
Speed is the quickness of movement of a limb, whether this is the legs of a runner or the arm of the shot putter. Speed is an integral part of every sport and can be expressed as any one of, or combination of, the following: maximum speed, elastic strength (power) and speed endurance.

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.Violations are called "fouls".

Netball is one of many sports that developed its unique form and structure from another, transplanted sport—in this case, from the United States to Great Britain—and then, as a result of that move, evolving into a significantly different sport. Netball was introduced to England in 1895 as the indoor game of basketball, which it greatly resembles, although a staccato game and a sport of stop, start, catch, and shoot compared to the all-action fluidity of basketball.Netball is an international sport, played by two teams of seven players and based on throwing and catching. Traditionally it is played by women but mixed and men's netball is becoming increasingly popular.The game consists of four quarters of 15 minutes each, with an interval of 3 minutes between the first/second and third/fourth quarters and an interval of 5 minutes at half time. Teams change end each quarter.

Purpose of the study:
The purpose of the present study to compare the speed and endurance among Net ball and Basket Ball Players.

Methodology:
To find out the Aerobic Endurance and Speed between Male Net Ball and Male Basket Ball Players. The sample for present study consists of 20 Male Net Ball Players and 20 Male Basket Ball Players of Osmania University who has taken part in the O.U. Inter College sports and games during the year 2012-13.

12 Min.Run Cooper Test.
The 12 Minute Cooper Test is used for collection of Data.
The Cooper test is a test of Aerobic Endurance.It was designed by Kenneth H. Cooper in 1968 for US military used in the original form; the point of the test is to run as far as possible within 12 minutes.

30 M Run:
The objective of this test is to monitor the development of the athlete's ability to effectively and efficiently build upacceleration, from a standing start or from starting blocks, to maximum speed.
This test requires the athlete to sprint as fast as possible over 30 metres.The athlete warms up for 10 minutes.The assistant marks out a 30 metre straight section with conesThe athlete starts in their own time and sprints as fast as possible over the 30 metresThe assistant starts the stopwatch on the athlete's 1st foot strike after starting and stopping the stopwatch as the athlete's torso crosses the finishing lineThe test is conducted 3 timesThe assistant uses the fastest recorded time to assess the athlete's performance.

Results:

This study shows that Basket Ball Players are having good speed and Net Ball Players are having the good aerobic endurance. Basket Ball Players performed very well in 30 Meters Run due to good speed requires in basket ball game and Net Ball Players are shown good in 12 min run because they are playing the netball game of four quarters of fifteen minutes each quarter.

Discussion:

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Net Ball Players and Basket Players in 30 M Run Test.

Table No.1

Results of 30 M Run Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Net Ball Players	20	4.50	0.292	0.653			
Basket Ball Players	20	3.36	0.259	0.580	-13.067	38.00	.000

The Mean Score of Basket ball Players is 3.36 compare to Net Ball Players Mean Score of 4.50. That Means Basket Ball Players are having good speed compare to Net Ball Players.

The Table No.2 showing the Mean, S.D, Standard Error, t-ratio of Net Ball Players and Basket Ball Players in Cooper Test.

Table No.2

Results of 12 min Cooper Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Net Ball Players	20	3086.500	140.190	25.595	10.197	38.00	0.000
Basket Ball Players	20	2645.833	190.729	34.822			

The Net ball Players mean performance in 12 Min cooper test is 3086.500 and Basket ball Players mean performance in 12 Min cooper test is 2645.833. The netball players are having the better endurance i.e.3086.500 than Basket Ball players is 2645.833

Conclusion:

It is concluded that Basket Ball Players are having good speed and Net ball players are having the good endurance. Both this motor qualities are compulsory for both players to excel in their performance. Hence all the condition programme for improvement of motor qualities are included in the coaching programme of both the players.

Recommendations:

Similar studies can be conducted on other sports and games. The coaches must include the Physical Condition Programmes to improve the motor qualities of sports persons.

Reference:

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A Study On The Relationship Between Skill Performance And Selected Physical Fitness Variables Of Basket Ball Players

K. Sridhar Reddy, Lecturer, Physical Education Department, St. Joseph's Degree & PGCollege,
Prof. V. Satyanarayana, Director, Dept of Physical Education, Osmania University.
B. Rajaiah Netha, Doctoral Research Scholar, Osmania University.

Abstract
Purpose: To examine the relationship between skill performance and selected physical fitness variables of basketball players of JNTUH, Hyderabad, India. **Method**: A sample size of 40 basketball players was randomly selected from the players undergoing rigorous training camp for the South Zone Inter University tournament. The age of the subjects taken between 18 to 22 years. Dribbling ability, passing ability and Defensive ability were taken as independent variables under the skill performance. For physical fitness variables, agility,, explosive power, speed, cardio-respiratory endurance, and flexibility were taken into consideration. Defensive ability, passing ability, and dribbling ability was assessed by defense movement test, passing test, and control dribbling test. The tests selected for the physical fitness variables are as under. For Speed 50m run, for explosive power sergeant jump, for agility 6 x 10m shuttle run, for cardio respiratory endurance 12 min run/walk test and for flexibility bend & reach test. The statistical tool used was Pearson product moment correlation. **Results**: The data indicated some interesting results. Defensive ability had positive correlation with speed and agility whereas explosive power, cardio-respiratory endurance, and flexibility had a negative correlation. The passing ability had a negative correlation with speed & agility and a positive correlation with explosive power, cardio respiratory endurance, and flexibility. The skill of dribbling had a positive correlation with speed and agility, a negative correlation with explosive power and was insignificantly correlated to cardio respiratory endurance and flexibility. **Conclusions**: The results showed that defensive ability performance can be improved by good speed & agility. A player can excel in passing if he has a better explosive power, cardio respiratory endurance, and flexibility. The skill of dribbling can be taken care if a player has speed and agility. **Key words**: Agility, Fitness, Dribbling, Explosive power, Flexibility.

Introduction:
Sports and games are very important for us. They keep us healthy and fit. They offer us a change from the monotony of daily life. Sports develop a sense of friendliness. They develop in us team spirit. They help in developing mental and physical toughness. They shape our body and make it strong and active. They give us energy and strength. Sports and games improve our capability. They improve our efficiency. A Sport is typically characterized by physical activity, competition, self-motivation and a scoring system. Sports differ in their dependence upon a set of individuals or team skills, as well as in the ways in which they have their participants compete.
Well, it is a state or condition in which both your body and your mind are healthy and physically sound (by taking in proper nutrition and maintaining a good workout schedule). The importance of physical fitness and exercise, customized to the specific requirements of both young and old, has led to the popularity and use of exercise equipment. Bill Tancred a former Olympian and a sorts scientist has enumerated the basic nine components that define a fit body. Those are Strength, Power, Agility, Balance, Flexibility, Local Muscle Endurance, Cardiovascular Endurance, Strength Endurance, Co-ordination. Basketball is a popular sport worldwide, played in professional leagues, schools teams, recreational leagues and on courts and driveways all over America. Early evidence of the game has been found in the archeological remains of the ancient civilizations of Central and South America, but the game as we know it was invented in 1891 by Dr. James Naismith of Pringles, Massachusetts. There are five players on each team and each team tries to get the basketball in each other's nets. Basketball is most common in the USA. The main thing is to get the ball into the opposing team's hoop by dribbling and shooting with your hands. Successful basketball players are also quick starting, sudden change in direction, sudden stopping, sudden acceleration, quick jumping and shuttling with and without the ball, powerful, have good balance, and have good endurance. The fundamental techniques which are highly skillful in basketball are passing, receiving, dribbling, shooting, faking,

and feinting. Here skills can never assure victory, as a player has to posses requisite fitness components. The fitness variables help to elevate the skills to higher levels of performance in the game. Physical fitness and technical skills are interrelated and based on the line of this statement the investigator was keen and became interested to study the 'Relationship between physical fitness and Skill Performance, which will highlight the importance of physical fitness on skills like dribbling, passing, and defensive movements considered as vital and widely needed by a basketball player.

Method: Forty basketball players of JNTUH Hyderabad who were undergoing the coaching camp for participation in the South Zone tournament were selected as subjects for this study. They were in the age group of 18 to 22 years. The following skill performance such as defensive ability, passing ability, and dribbling ability were taken as independent variables. With regard to physical fitness variables speed, explosive power, agility, cardio-respiratory endurance and flexibility were taken into consideration under the dependent variable. Defensive ability, passing ability, and dribbling ability were assessed by defense movement test, passing test, and control dribbling test respectively. Speed was assessed by 50m run, explosive power were assessed by sergeant jump, agility was assessed by 6 x 10m shuttle run, cardio-respiratory endurance was assessed by 12 min run/walk and flexibility was assessed by bend and reach test. The entire test was administered during the morning session of the coaching camp. The statically tool used to find out the relationship between the skill performance and selected physical fitness variables was person product moment correlation. The level significance of was fixed at 0.05 level.

Results And Discussion: It is a known fact that every game needs the specific skills which are essential for success in the competitions. The execution of the skill can be aesthetic and graceful if the individual possesses the requisite fitness components. The fitness components required differ as per the demands of the skills and the game. Basketball is an exciting and fast modern game involving varied fitness components. The results of the study showed that there was a significant correlation between the physical fitness components and the selected basketball skills. Some of the studies in this area have confirmed the above results. Nagaroki (1998) in his study concluded that training develops physical fitness and skills in the game. Subramanian (1991) found out that training resulted in significant improvement in general physical fitness and basketball skills.

Table:1

Mean, Standard Deviation and Correlation value between defensive ability and speed, explosive power, agility, cardio respiratory endurance, flexibility.

Defensive ability vs Fitness variables	Mean	SD	'r'
Defensive ability	21.77	2.89	
Speed	10.15	1.11	0.96
Defensive ability	21.77	2.89	
Explosive power	81.09	8.76	-0.76
Defensive ability	21.77	2.89	
Agility	18.36	3.59	0.81
Defensive ability	21.77	2.89	
Cardio respiratory endurance	3666.66	253.71	-0.44
Defensive ability	21.77	2.89	
Flexibility	18.31	5.16	-0.25

Significant at 0.05 level of confidence

In the table.1 the analysis of the defensive ability with the physical fitness variables is indicated. From the above table it is clearly observed that there exits a positive correlation between defensive ability and speed and agility. Besides it also showed that the defensive ability is negatively correlated with explosive power, cardio respiratory endurance, and flexibility

Table.2

Mean, standard deviation and correlation value between passing ability and speed, explosive power, agility, cardio respiratory endurance, flexibility.

Passing ability vs Fitness variables	Mean	SD	'r'
Passing Ability	84.66	6.67	
Speed	10.15	1.11	-0.21
Passing Ability	84.66	6.67	
Explosive power	81.09	8.76	0.51
Passing Ability	84.66	6.67	
Agility	18.36	3.59	-0.28
Passing Ability	84.66	6.67	
Cardio repiratory endurance	3666.66	253.71	1.05
Passing Ability	84.66	6.67	
Flexibility	18.31	5.16	0.92

Significant at 0.05 level of confidence

Passing ability of subjects was correlated with selected physical fitness variables and the data is presented in table.2. The table clearly reveals that there is a positive correlation with explosive power, cardio respiratory endurance, and flexibility. The results also clearly indicate that passing ability has negative correlation with agility. This apart there is an insignificant correlation between passing ability & speed.

Table.3
Mean, standard deviation and correlation value between dribbling ability and speed, explosive power, agility, cardio respiratory endurance, flexibility.

Dribbling ability vs Fitness variables	Mean	SD	'r'
Dribbling Ability	17.33	3.32	
Speed	10.16	1.11	1.16
Dribbling Ability	17.33	3.32	
Explosive power	81.09	8.76	-1.09
Dribbling Ability	17.33	3.32	
Agility	18.36	3.59	1.26
Dribbling Ability	17.33	3.32	
Cardio Respiratory Endurance	3666.66	253.71	-0.29
Dribbling Ability	17.33	3.32	
Flexibility	18.36	5.16	-0.52

Significant at 0.05 level of confidence

Table.3 clearly reveals that dribbling ability has positive correlation with speed and agility. There is a negative correlation between passing ability and explosive power. Besides the results also reveal that there is an insignificant correlation between dribbling ability and cardio respiratory endurance and flexibility.

The result of the study showed that there was a significant correlationship between speed with defensive ability and dribbling ability. Further speed has an significant relationship with passing ability. With regard to the fitness components of agility and explosive power the study had showed significant relationship with all the skill abilities.

Conclusions:

It is concluded that

a) Speed and Agility determines the defensive ability.
b) Defensive ability performance has no effect by explosive power, cardio respiratory endurance, and flexibility as they are negatively influenced.
c) Enhances the passing ability in the athlete cardio-respiratory endurance, explosive power, and flexibility.
d) Agility has negative influence on passing ability.
e) Passing ability may not be influenced by speed.
f) Dribbling ability may be positively influenced by speed and agility.
g) Explosive power has a negative influence on dribbling ability.

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A Comparative study of Aerobic Endurance and Speed among Foot Ball Players and Sepak Takraw Players of Hyderabad

Dr. Bidla Sunil Kumar
Secretary, Inter College Tournaments for Men, Osmania Univesity, Hyderabad

Abstract
"Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, therefore 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 the sport. Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal.Football is also called as soccer.The sample for the present study consists of 40 Male Foot Ball and Sepak takraw players of Hyderabad out of which 20 are foot ball players and 20 are sepak takraw players. To assess the aerobic endurance the 12 Min cooper test and for speed 50 Meters run is conducted on both the players separately by the qualified officials.The Results of the study shows that foot ball players are having good aerobic endurance and sepak takraw players are having the good speed.Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton due to which they are good in speed and foot ball players play the game for longer period are good in aerobic endurance.
Key words: Aerobic endurance, speed etc.

Introduction:
Aerobic endurance is the ability of an individual's body to supply enough oxygen to the muscular tissues to withstand long periods of repetitive exercises. Aerobic endurance is required in our everyday lives whether consciously or unconsciously during our normal duties like walking, cleaning among other duties.Speed is the quickness of movement of a limb, whether this is the legs of a runner or the arm of the shot putter. Speed is an integral part of every sport and can be expressed as any one of, or combination of, the following: maximum speed, elastic strength (power) and speed endurance.
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".
"Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, therefore 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 the sport. 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" 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.

Foot ball Players in action

Sepak Takraw Players in action

Purpose of the study:
The purpose of the present study to compare the speed and endurance among Foot Ball and Sepak Takraw Players.

Methodology:
To find out the Aerobic Endurance and Speed between Male Foot Ball and Male Sepak Takraw Players. The sample for the present study consists of 40 Male Foot Ball and Sepak takraw players of Hyderabad out of which 20 are foot ball players and 20 are sepak takraw players. To assess the aerobic endurance the 12 Min cooper test and for speed 50 M Run is conducted.

12 Min Run Cooper Test.
The Cooper test is a test of Aerobic Endurance.It was designed by Kenneth H. Cooper in 1968 for US military used in the original form; the point of the test is to run as far as possible within 12 minutes. To undertake this test you will require:
400 meter track ,Stop Watch ,Whistle and Technical Official
This test requires the Foot Ball and Sepak Takraw player to run as far as possible in 12 minutes.
The subjects given 10 minutes for warm up.
The assistant gives the command “GO”, starts the stopwatch and athlete commences the test
The Technical Official keeps the athlete informed of the remaining time at the end of each lap
The Technical Official blows the whistle when the 12 minutes has elapsed and records the distance the athlete covered to the nearest 10 meters

50 M Run:
The objective of this test is to monitor the development of the athlete's ability to effectively and efficiently build up acceleration, from a standing start to maximum speed.
To undertake this test you will require:
Flat non-slip surface, Stopwatch, Official
This test requires the athlete to sprint as fast as possible over 50 metres.The athlete warms up for 10 minutes.
The assistant marks out a 50 metre straight section with conesThe athlete starts in their own time and sprints as fast as possible over the 50 metresThe Official starts the stopwatch on

the athlete's 1st foot strike after starting and stopping the stopwatch as the athlete's torso crosses the finishing lineThe test is conducted 3 timesThe Official uses the fastest recorded time to assess the athlete's performance

The Football Players and Sepak Takraw Players are make to run separately in 12 Min cooper test and 50 M run. The Tests were conducted at Osmania University Grounds by the qualified Technical Officials.

Results:

The results of the study shows that Sepak Takraw Players are having good speed and Foot Ball Players are having the good aerobic endurance. Sepak Takraw Players performed very well in 50 Meters Run due to good speed requires in sepak takraw and Foot Ball Players are shown good in cooper test 12 min run because they are playing the foot ball game for 90 Min.

Discussion:

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Foot Ball Players and Sepak Takraw Players in 50 M Run Test.

Table No.1

30 M Run Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Foot Ball Players	20	6.87	0.48	0.12			
Sepak Takraw _Players	20	6.55	0.23	0.06	2.25	38.00	0.03

The Foot Ball Players mean performance in 50 M Run is 6.87 and Standard Deviation is 0.48 and Sepak Takraw Players mean performance in 50 M Run is 6.55 and Standard Deviation is 0.23. The Sepak Takraw Players are having the better speed i.e. 6.55 compare the net ball players is 6.87 there is a difference 0.32. The t-value is 2.25.

The Table No.2 showing the Mean, S.D, Standard Error, t-ratio of Foot Ball Players and Sepak Takraw Players in Cooper Test.

Table No.2

12 min Cooper Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Foot Ball Players	20	3050.00	219.71	49.13	1.69453	38.00	0.10
Sepak Takraw Players	20	2950.00	137.71	30.79			

The Foot ball Players mean performance in 12 Min cooper test is 3050.00 and Standard Deviation is 219.71 and Sepak Takraw Players mean performance in 12 Min cooper test is 2950.00 and Standard Deviation is 137.71.The Football players are having the better endurance i.e.3050.00 than sepak takraw Players is 2950.00 there is a difference of 0.100 between them.

Conclusion:

It is concluded that Sepak takraw Players are having good speed and Foot Ball ball players are having the good endurance. Both this motor qualities are compulsory for both players to excel in their performance. Hence all the condition programme for improvement of motor qualities are included in the coaching programme of both the players. Similar studies can be conducted on other sports and games.

Reference:

Brianmac Sports Coach
Wikipaedia Sepak takraw and Foot Ball

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Effect of Strength Exercises for development of Speed among Free Style Event in Swimming – A Study

Prof.J.Prabhakar Rao
Principal, University College of Physical Education,OU
Prof.P.Venkat Reddy, Dean,Faculty of Education,OU
K.Suresh Reddy, Lecturer in Physical Education, Vivekavardhini College, Hyderabad

Abstract:
Swimming is a sport that requires both muscular strength and endurance, and for this reason when training with weights you need to concentrate on developing strong muscles with high endurance capabilities.The purpose of the present study to find out the effect of strength exercises for the development of speed in Free style swimming.. The sample for the present study consists of 20 Male Swimmers of Osmania University out of which 10 are experimental group and 10 are controlled group. Strength exercises such as biceps curls,bench press, front press, back press etc. were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for eight weeks. Pre Test and Post Test were conducted 50 M Free Style Swimming to assess the speed.This study shows that due to the strength training there is a improvement of experimental group in the 50 M free style Swimming compare to the controlled group.Strength training is essential for elite swimming performance. To optimise the benefit of land-based training, you must select exercises with mechanical relevance to the swimming action, particularly those movements which propel the swimmer through the water, such as the arm pull and leg kick
Key words: Strength Training, free style swimming etc

Introduction:
Swimming is a sport that requires both muscular strength and endurance, and for this reason when training with weights you need to concentrate on developing strong muscles with high endurance capabilities.The sport of **swimming** has been recorded since prehistoric times; the earliest recording of swimming dates back to Stone Age paintings from around 14,000 years ago. Written references date from 2000 BC. Some of the earliest references to swimming include the Gilgamesh, the Iliad, the Odyssey, the Bible, Beowulf, Quran and other sagas. In 1538, Nikolaus Wynmann, a German professor of languages, wrote the first swimming book, The Swimmer or A Dialogue on the Art of Swimming Der Schwimmer oder ein Zweigespräch über die Schwimmkunst. Competitive swimming as we know it today started in the United States around 1800.Competitive swimming became popular in the nineteenth century. The goal of competitive swimming is to constantly improve upon one's time(s), or to beat the competitors in any given event. Swimming in competition should create the least resistance in order to obtain maximum speed. However, some professional swimmers who do not hold a national or world ranking are considered the best in regard to their technical skills. In competitive swimming, four major styles have been established. These have been relatively stable over the last 30–40 years with minor improvements. The four main strokes in swimming are:

- Freestyle (free)
- Breaststroke (breast)
- Backstroke (back)
- Butterfly (fly)

Method:
The purpose of the present study to find out the effect of strength exercises for the development of speed in Free style swimming.. The sample for the present study consists of 20 Male Swimmers of Osmania University out of which 10 are experimental group and 10 are controlled group. Strength exercises such as biceps curls,bench press, front press, back

press etc. were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for eight weeks

The following strength exercises are used for training the Experimental group:

1. Arm Row 2. Biceps Curl 3. Bench Press
4. Lateral Raise 5. Close arm Press ups 6. Normal Fly
7. Shoulder Press 8. Half Squat 9. Front Raise lunge
10. Heel Raise 11. Squat Jumps 12. Dumbell Sideward bend

Freestyle is a category of swimming competition, defined by the rules of the International Swimming Federation (FINA), in which competitors are subject to only limited restrictions on their swimming stroke. The stroke used almost universally in freestyle races is the front crawl, as this style is generally the fastest.

Pre Test and Post Test were conducted 50 M Free Style Swimming to assess the speed.

Result:

This study shows that due to the strength training there is a improvement of experimental group in the 50 M free style Swimming compare to the controlled group.

Table Showing the Performance of Swimming Experimental Group and Swimming Controlled Group in 50 Meters Free Style Swimming.

50 M Free Style Swimming	N	Pre Test	Post Test	t	Sig.
Experimental	10	40.22	37.20	-3.35	0.004
Control	10	40.22	41.70		

The Mean Performance of Experimental Group in 50 M Free Style Swimming in Pre Test is 40.22 there is improvement in performance to 37.20. That Means Experimental group has improved 3.02 due the strength exercises training in the mean timing.

The Mean Performance of Control Group in 50 M Free Style Swimming in Pre Test is 40.22 there is decreased in performance to 41.70. That Means Experimental group has decreased by 1.48 due to the general training.

Conclusion:

Strength training is essential for elite swimming performance. To optimize the benefit of land-based training, you must select exercises with mechanical relevance to the swimming action, particularly those movements which propel the swimmer through the water, such as the arm pull and leg kick. It is concluded that due to the strength training there is improvement in the 50 M free style swimming.

Reccomendations:

It is recommended that strength training program must be included in the coaching program for swimmers. Similar Studies can be conducted in other events in swimming.

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Wikipaedia, Swimming and 50 M Free style.

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Effect Of Two Different Intensities Of Core Strength Training Package On Selected Physical And Physiological Variables Among Club Cricket Players

Dr.R.Venkatesan, Head Of The Department, Department of Exercise Physiology and biomechanics, Tamil Nadu Physical Education and Sports University, Tamil Nadu, Chennai – 600 006.

Importance of Exercise Physiology:
Exercise Physiology is an important aspect of sports medicine. It studies about the functional changes that occur in the human body when exposed to physical activity. Thus, Exercise Physiology could be defined in a nutshell as a science that elucidates how the human body functions, reacts, adjusts and adapts when exposed to varied degrees of physical activity or training.

Importance Of Core Strength: Core strength is an essential part of any athlete's total fitness, including cricket players. Cricket players cannot ignore this facet in their physical training because cricket is not a one dimensional game; players are constantly shifting their body from side to side or rotating their bodies toward the ball. Core strengthening and stabilization training helps to increase levels of functional strength and dynamic balance leading to better control of balance and enhanced tennis performance.

Statement Of The Problem: The purpose of the study was to find out the effect of different intensities of core training selected physical and physiological variables among club cricket players.

Selection Of Subjects: To achieve the purpose of these study forty five subjects were randomly selected from Asiatic Cricket Academy, Pallavaram, Chennai . During the academic year 2011-2012.The subject's age ranged from was between 17-21 years male cricket players only.. They were randomly divided into three groups and were considered as Group I as experimental Group I (High Intensity core Training Group) Group II as experimental Group II (Low Intensity core Training Group) and Group III as control group (No training) the control group was not given any training. The experimental groups practiced High Intensity core Training and Low Intensity core Training for a period of six weeks. The practice was given six days in a week.

Physical Variables: Core Strength, Explosive Power **PHYSIOLOGICAL VARIABLES:** Serum Creatinine, Serum Inorganic Phosphate.
Independent Variables: High Intensity core Training, Low Intensity core Training
Statistical Techniques: In this study there are have two dependent variables namely physical and physiological variables. And two independent variables High Intensity core Training and Low Intensity core training for club cricket players in Chennai district. The data obtained collected from the subjects were analyzed by Analysis of covariance (ANACOVA) to assess the adjusted mean difference the groups, between the pre test and post test, for each of the variables. When the 'F' ratio was found to be significant, Scheffe's post hoc test was to find out the paired mean significant difference. **(Thirumalaisamy, 1998)**
Computation Of Analysis Of Covariance And "Scheffe's Post Hoc" Test: The objective of the present study was to compare the effect of high intensity and low intensity core training on selected physical variables and physiological variables among club cricket players.

1. Results On Core Strength: The statistical analysis comparing the initial and final means of core strength due to high intensity and low intensity core training on selected physical variables and physiological variables among the club cricket players is presenting in Table I.

TABLE-I - COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE OF CORE STRENGTH OF EXPERIMENTAL AND CONTROL GROUP

Test	HIG	LIG	CG	S.V	S.S	D.f	M.S	F
Pre test mean	47.13333	48.20	44.20	BG	128.71	2	64.356	0.40
				WG	6788.53	42	161.63	
Post test mean	62	58.73	48.33	BG	1528.04	2	764.02	4.98*
				WG	6438.27	42	153.29	
Adjusted mean	61.43	57.19	50.44	BG	910.52	2	455.26	23.94*
				WG	779.795	41	19.02	

To find out the paired mean differences Scheffe's post hoc test was computed and The results are presents in Table IA.

TABLE – IA- SCHEFFE'S CONFIDENCE INTERVAL TEST SCORES ON CORE STRENGTH

HIG	LIG	CG	M.D	CI Value
50.44	61.43	----------	10.99*	3.97
50.44	----------	57.19	6.75*	
----------	61.43	57.19	4.24*	

Discussion On Findings Of Core Strength: The results presented in Table I proved that the obtained F value on pre test scores was less than the required F value and the difference were not significant.

The obtained F value on adjusted mean value was 23.94, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity core training and low intensity core training significantly altered core strength of the club cricket players.

2. Results On Explosive Power: The statistical analysis comparing the initial and final means of core strength due to high intensity and low intensity core training on selected physical variables and physiological variables among the club cricket players is presenting in Table II.

Table-Ii-Computation Of Mean And Analysis Of Covariance Of Explosive Power Of Experimental And Control Group

	Hig	Lig	Cg	S.V	S.S	D.F	M.S	F
Pre Test Mean	9.03	9.01	8.75	Bg	0.77	2	0.384	0.14
				Wg	116.45	42	2.77	
Post Test Mean	10.52	9.73	8.84	Bg	21.36	2	10.68	3.36*
				Wg	133.46	42	3.18	
Adjusted Mean	10.42	9.65	9.02	Bg	14.67	2	7.34	17.99*
				Wg	16.722	41	0.41	

To Find Out The Paired Mean Differences Scheffe'S Post Hoc Test Was Computed And The Results Are Presents In Table Iia.

Table – Ii-Scheffe's Confidence Interval Test Scores On Explosive Power

Hig	Lig	Cg	M.D	Ci Value
9.02	10.42	----------	1.40	0.58
9.02	----------	9.65	0.63	
----------	10.42	9.65	0.77	

Discussion On Findings Of Explosive Power: The results presented in Table VII proved that the obtained F value on pre test scores was less then the required F value and the difference were not significant. The obtained F value on adjusted mean value was 17.99, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity and low intensity core training significantly altered the explosive power of the club cricket players.

3. Results On Serum Creatinine: The statistical analysis comparing the initial and final means of core strength due to high intensity and low intensity core training on selected

physical variables and physiological variables among the club cricket players is presenting in Table III.

Table-Iii-Computation Of Mean And Analysis Of Covarianceof Serum Creatinine Of Experimental And Control Group

	Hig	Lig	Cg	S.V	S.S	D.F	M.S	F
Pre Test Mean	0.89	0.91	0.86	Bg	0.02	2	0.009	0.65
				Wg	0.56	42	0.01	
Post Test Mean	1.03	0.95	0.83	Bg	0.29	2	0.15	15.30*
				Wg	0.40	42	0.01	
Adjusted Mean	1.03	0.94	0.85	Bg	0.23	2	0.12	23.05*
				Wg	0.205	41	0.01	

To Find Out The Paired Mean Differences Scheffe'S Post Hoc Test Was Computed And The Results Are Presents In Table Iiia.

Table – Iii-Scheffe's Confidence Interval Test Scores On Serum Creatinine

Hig	Lig	Cg	M.D	Ci Value
0.85	1.03	----------	0.18*	0.06
0.85	----------	0.94	0.09*	
----------	1.03	0.94	0.09*	

Discussion On Findings Of Serum Creatinine: The results presented in Table IX proved that the obtained F value on pre test scores was less then the required F value and the difference were not significant. The obtained F value on adjusted mean value was 23.05, which was greater than the required F value to be significant at 0.05 levels. Hence, it was proved that six weeks treatment through high intensity and low intensity core training significantly altered serum creatinine levels of club cricket players.

4. Results On Serum Inorganic Phosphate: The statistical analysis comparing the initial and final means of serum inorganic phosphate levels due to high intensity and low intensity core training on selected physical variables and physiological variables among the club cricket players is presenting in TableIV.

Table-Iv-Computation Of Mean And Analysis Of Covariance Of Serum Inorganic Phosphate Of Experimental And Control Group

	Hig	Lig	Cg	S.V	S.S	D.F	M.S	F
Pre Test Mean	3.484	3.47	3.46	Bg	0.01	2	0.003	0.01
				Wg	13.84	42	0.33	
Post Test Mean	4.09	3.82	3.55	Bg	2.19	2	1.09	6.89*
				Wg	6.67	42	0.16	
Adjusted Mean	4.08	3.82	3.56	Bg	2.08	2	1.04	14.81*
				Wg	2.879	41	0.07	

To Find Out The Paired Mean Differences Scheffe'S Post Hoc Test Was Computed And The Results Are Presents In Table

Table – Iv-Scheffe's Confidence Interval Test Scores On Serum Inorganic Phosphate

Hig	Lig	Cg	M.D	Ci Value
3.56	4.08	----------	-0.53	0.24
3.56	----------	3.82	-0.26	
----------	4.08	3.82	0.26	

Discussion On Findings Of Serum Inorganic Phosphate: The obtained F value on adjusted mean value was 14.81, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity core training and low intensity core training significantly altered serum inorganic phosphate levels of club cricket players.

Conclusions:

Within the limitations and delimitations set for the present study and considering the results obtained, the following conclusions were drawn.

1. It was concluded that the core strength, explosive power, serum Creatinine, serum inorganic phosphate levels was significantly increased due to the influence of six weeks practices of high intensity core training and low intensity core training to comparing the control group. But particularly the high intensity core training group has significantly increases in core strength when compared to the low intensity core training group.
2. It was concluded that comparing the high intensity core training and low intensity core training, high intensity core training has significant improvement on core strength, explosive power, and serum Creatinine and serum inorganic phosphate. So research hypothesis was accepted and null hypothesis was rejected.

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A Comparative Study On Selected Fitness Components Between Kabaddi And Khokho Players

Dr. Saugata Sarkar, Assistant Teacher, Raniganj KC High School, Kamaldanga, Malda, West Bengal, India. Cell- 09434367657/09635377179, Email-sougata.babul@gmail.com

Abstract:
Without having good fitness better sports performance is not possible. Aerobic and anaerobic fitness is the basic to all games. So it was intended to determine the aerobic and anaerobic fitness of kabaddi and khokho players. The attempt was also made to compare both the components between the groups. For the purpose of the study 30 kabadi and 30khokho female players of 18 to 22 years of age were selected. Standard statistical tools were used to generalize the fact. The result of the study shows that there were not statistical significant between the kabiddi and khokho players in relation to aerobic and anaerobic capacity.
Key words: Aerobic fitness, anaerobic fitness, kabaddi players and khokho players.

Introduction:
"Clothes make the man. Naked people have little or no influence in society." (Mark Twin, More Maxims of Mark, 1927). Similarly fit player makes sportsman. Unfit player has no importance in competitive sports. Coaches try to keep their players hundred percent fit during the competition. Fitness is highly required for each and every sport. At present the concept of fitness as 'the ability to carry out every day task with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies' is not being considered as an appropriate definition because of change of life style as the result of influence of technology (Hockey,1993). The most commonly was to refer to fitness currently is to use the phrases 'Health related fitness' and 'Motor performance fitness'. But in case of competitive sports aerobic and anaerobic capacity is the fundamental component of fitness. Aerobic capacity describes the functional capacity of the cardio respiratory system, (the heart, lungs and blood vessels). Aerobic capacity is defined as the maximum amount of oxygen the body can use during a specified period, usually during intense exercise. It is a function both of cardio respiratory performance and the maximum ability to remove and utilize oxygen from circulating blood. Anaerobic capacity is the ability to mobilize energy during activities of intense nature i.e. executing intensive work with explosive action in short duration of time, such as, bursting speed in football, basketball, kabaddi, khokho, hockey, take off in jumps etc. But the requirement of fitness varies from game to game. As a result players are to be trained accordingly. The playing ability of kabaddi needs speed, endurance, agility, strength which is similarly the requirement of the khokho players. So the researcher thought to measure and compares only two components (speed and endurance) of district level kabaddi and khokho players.

Methodology:
For the present study thirty district level kabadi players and thirty district level khokho players of 18 to 22 years were randomly selected as the subjects. The study was conducted only on the female players. The variables selected for the study were aerobic fitness and anaerobic fitness. Aerobic fitness was measured by 600 Yard Run/Walk Test and performance was recorded in minutes. Anaerobic fitness was measured by 50 meter Dash Test and performance was recorded in seconds. In the present study for the sake of analysis of data mean and standard deviation of the variables were calculated. To test the difference between mean t-test were calculated. The level of significance was set at $p<0.05$ level of confidence.

Results:
The analysis of data on selected variables those were aerobic fitness and anaerobic fitness collected on thirty (30) female kabaddi players and (30) khokho players of district level team.

Table-1: Mean and SD of the groups

GROUPS	AEROBIC FITNESS		ANAEROBIC FITNESS	
	MEAN	SD	MEAN	SD
KABADDI PLAYERS	2.67	±.20	8.53	.64

KHOKHO PLAYERS	2.74	±.17	8.35	.60

It appears in table- 1 that the mean and SD of kabaddi players is 2.67±.20 and Khokho players is 2.74±.17 in relation to aerobic fitness. In case of anaerobic fitness of the groups the mean and SD is 8.53±.64 and 8.35±.60 respectively. It is evident that Kabaddi players are slightly superior to Khokho players in relation to aerobic fitness but in case of anaerobic fitness Khokho players were found for superior to Kabaddi players as lower the score better was the performance.

Table-2: Mean difference between the groups in relation to aerobic fitness

GROUPS	MEAN	Mean Diff.	SE	't'ratio
Kabaddi players	2.67	0.07	.048	1.45
Khokho players	2.74			

*Significant at 0.05 level of confidence. T (0.05)58=2.00

To observe the statistical significant between the groups t-test was employed. The above table shows that the mean difference of aerobic fitness of kabaddi players and khokho players is 0.07 and SE is 0.048. The calculated 't' value was found 1.45 which is below the table value. So it can safely be said that the mean difference of aerobic fitness between the kabaddi players and khokho players is statistically not significant.

Table-3: Mean difference between the groups in relation to anaerobic fitness

GROUPS	MEAN	Mean Diff.	SE	't'ratio
KABADDI PLAYERS	8.53	0.18	0.16	1.125
KHOKHO PLAYERS	8.35			

*Significant at 0.05 level of confidence. T (0.05)58=2.00

Table-3 shows that the mean difference of anaerobic fitness of the groups is 0.18 and SE is 0.16. The calculated 't' value is 1.125 which was not greater than the table value. Therefore it may be stated that the mean difference of anaerobic fitness of kabaddi players and khokho players is statistically not significant.

Discussion: The result findings show that kabaddi players and khokho players are more or less similarly able in relation to aerobic fitness and anaerobic fitness. Though the games are different in skill execution yet there are some similarities. In both the cases bursting speed, agility, basic endurance, balance, strength, and strength endurance are highly required. As a result the players of both the teams practice to improve those qualities in good amount. This might be the cause of no significant difference found between the female players of kabaddi and khokho in relation to aerobic and anaerobic fitness.

Conclusions:

It may conclude that in relation to aerobic fitness there was no significant difference between kabaddi and khokho players. Similarly in case of anaerobic fitness no significant difference was found between female kabaddi and khokho players.

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Analysis of Differences In Positions of Basketball In Morphological Characteristics

Mr.sc. Artan R. Kryeziu, Prof.Young Research,
Center for Research, Studies in Physical Education, Sport and Health, Pristina - R. Kosovo. Contact no. 00368 (0) 49 118 998
E-mail: artankryeziu@hotmail.com

Abstract:
The paper has the purpose to analysis the differences in the positions of basketball in morphological characteristics. In our tracking is important morphological variables defined on the basis of position players in basketball. The study sample consists of 60 players, at an average age of 15.12 years. They are divided into five groups according to their position in the field of play: organizers of the game (16), shooting guard (13), small forward (14), power forward (9) and centers (7). External position players did not show high values in longitudinal dimensions, while players under the basket (power forward and centers) have shown meaningful values in all morphological space. Variable length ankle plantar meaningful value is worth 0.001, while variables body weight, body height
length of hand, length ankle and the length of the palm 0.000 probability level, however, the width parameter of smacking palm has demonstrated a statistically significant value of 0.016. Such results show that the longitudinal variables show the importance of positional play basketball league cadets.

Keywords: Differences, morphological, basketball, positions.

Introduction: Basketball is one of the games complex technical team and the performance differences between various regional players and different levels of ability are left tw nature. The game of basketball requires the application of different variety of skills (Angyan, et al, 2003;. Jelicic, et al, 2002). Morphological characteristics are the main determinants for orientation and direction of young players in the game positions, morphological characteristics are an important factor in training effectiveness in the game of basketball. Basketball requires an extremely significant height body and several other longitudinal measures, they mainly affect the performance of certain specific movements of players come (Dežman 1988; Erčulj, 1996). Previous studies have confirmed that players in different positions in basketball are significantly different, as follows: players at the center position are characterized by distinct dimensions of longitudinal and transversal frame and with lower severity of large, compared with players who play or wing-back position, while organizers have significantly lower values in all dimensions (Jeličić, M., Sekulić, D. Marinović, M. 2002).

The purpose of the research and hypotheses: The aim of the experiment is to allow disparities to basketball players in positions in some morphological characteristics. The data show the structure of the morphological characteristics of basketball players that are available for professional and scientific aspects of the game of parquet. Experiment-study mainly concerns the analysis and the level of development of morphological variables of players in each position separately for each player.The hypothesis of the study are based on the purpose of this experiment, which are submitted: There are significant differences in the best position players that play in positions one, two and three. Will be verified significant differences in favor of the position players under the trapez. It is anticipated that it would appear important differences in the positions of basketball in morphological characteristics.

Research methodology
Samples(model) of entities: Young basketball players are the incorporation in this experiment, at each position separately. This experiment consists of 60 youth basketball players Basketball School " Drita" from Gjilan, and facilities as are age 15 + / - 6 months who are

training sessions incorporation of 3 times per week, with 1 hour 15 minute workout. The sample for this study sample is selected as a criterion has been to basketball all valued separately at their respective positions, which follow a similar training programs. Data collection was conducted in May 2012, of all the test are assessed at the sports palace "Bashkim Selishta-Petriti" in Gjilan.

The sample of variables:

For this paper are applied seven (7) morphological characteristics:

Body weight (BOWE), Body height (BOHE), Length of hand (LEHA), Length ankle (LEAN), The length of the foot plantar (TLPA), The length of the palm (LEPA) and The width of the palm (WIPA). (Dežman, B. 1996). Data were analysis with the statistical program SPSS version 11 for Windows package where through fundamental analysis (descriptive) statistical distribution of results is made for each variable separately statistical method: arithmetic average (X) and standard deviation (Std. Dev.). As for the differences between the positions of the players listed is applied univariant analysis of variance methods (ANOVA).

Results:

Just as we have seen in table. 1 can conclude the arithmetic average values(X) and standard deviation (Std. Dev) Wingers long to dominate the center and indicator body weight (BOWE = 82.55 kg ± 8.21), length ankle (LEAN = 100.44 cm ± .50), the length of the foot plantar (TLPA = 28.44 cm ± .98) and the width of the palm (WIPA = 8.55 cm ± .46), center respectively players have shown high value indicator body height (BOHE = 180.28 cm ± 6.52), length of hand (LEHA = 79.71 cm ± 3.68) and the length of the palm (LEPA = 18.07 cm ± 1.76) who have shown the maximum value in all parameters presented, while in other positions presented lower values in this space that we take for treatment. But if we compare the arithmetical mean value and standard deviation values of other research, will see the values are the same as in our study (H. S. Sodhi, 1980; Erčulj, F., Dežman, B., Vučkovič, G. & Milič, M. 2002; Starc, G., Strel, J., & Kovač, M. 2010; Viswanathan, J., Chandrasekaran, K. 2011).

Table no. 1 Basic statistical indicators in morphological space

	Organizers of the game (N = 16)	Shooting guard (N = 13)	Small forward (N = 15)	Power forward (N = 9)	Centers (N = 7)
	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD
BOWE	58.06 ± 0.40	63.61 ± 14.30	71.50 ± 8.61	**82.55 ± 8.51**	75.42 ± 12.90
BOHE	158.68± 2.79	164.23 ± 1.58	169.64 ± 1.90	175.00 ± 2.39	**180.28 ± 6.52**
LEHA	70.62± 2.84	72.23 ± 3.56	72.78 ± 3.82	76.88 ± 1.69	**79.71 ± 3.68**
LEAN	91.50± 3.05	91.23 ± .76	95.64 ± 5.96	**100.44 ± .50**	99.85 ± 8.66
TLPA	26.12 ± 1.36	26.53 ± 1.56	27.14 ± 1.21	**28.44 ± .98**	27.78 ± 1.57
LEPA	16.96± .76	17.26 ± .69	17.71 ± .75	18.77 ± .66	**18.07 ± 1.76**
WIPA	7.50± .54	7.63 ± .50	8.10 ± .73	**8.55 ±. 46**	8.21 ± .95

Based on the results shown in table. 2, of which have to do with differences univariante analysis of variance (ANOVA) in morphological space to test out the new group of players. All morphological variables have significant contribution to the differences between the players present study, the distribution of results is achieved in all system variables .05 level of probability taking the basic method of analysis of variance univariant (ANOVA). If we look at the meanings of each variable separately, we will provide more detail in the following. Variable length ankle plantar meaningful value is worth 0.001, while variables body weight, body height, length of hand, length ankle and the length of the palm 0.000 probability level, however, the width parameter of smacking palm has demonstrated a statistically significant value of 0.016. However differences in morphological parameters gained positions basketball league cadets are as a result of good good determination by the basketball coach for players in their positions on the basis of longitudinal parameters. However, these results clearly show that there is a statistically significant difference between the positions tested in game.

Table no. 2 Indicators ANOVA-es morphological space between positions cadets league players

		SS	df	Mean	F	p
BOWE	Between: Within: Total	4,299.667 6,691.950 10,991.617	5 56 60	1,074.917121.62	8.835	**0.000**
BOHE	Between: Within: Total	3,101.437 498.017 3,599.455	5 56 60	775.359 9.055	85.629	**0.000**
LEHA	Between: Within: Total	534.218 581.464 1,115.682	5 56 60	133.555 10.572	12.633	**0.000**
LEAN	Between: Within: Total	815.307 1,376.705 2,192.012	5 56 60	203.827 25.031	8.143	**0.000**
TLPA	Between: Within: Total	38.475 99.917 138.393	5 56 60	9.619 1.817	5.295	**0.001**
LEPA	Between: Within: Total	22.093 44.323 66.416	5 56 60	5.523 0.806	6.854	**0.000**
WIPA	Between: Within: Total	8.562 35.113 43.675	4 55 59	2.141 0.638	3.353	**0.016**

Discussion and conclusion: In this paper are carried forth hypotheses, where the first hypothesis is partially confirmed because the players playing in positions one, two and three have lower values. While, the second hypothesis is fully confirmed by the results for all values of morphological indicators have shown the value of players in good position in the trapez. A third hypothesis, this hypothesis is fully certified for indicators of body weight, body height, length of hand, length ankle, the width of the palm, the length of the palm and the length of the foot plantar have meaningful systematic differences between players in positions separately. In the game of basketball players differ in different playing positions in flooring, the players also altered morphological characteristics.

Discussion: The condition of this experiment confirms the importance of longitudinal dimensions of prospective players, one also needs to know from practice that the main criterion for the classification of players on the field is body height, body height indicator however should not be all the time as the sole criterion in determining the position of the players. An adequate development of basic motor and indicators specific to them, as well as good knowledge of technical-tactical elements is important in determining the positions of the player in the sport of parquet (Erčulj, F., Bračič, M. 2009; Erčulj, F., Dežman, B., Vučkovič, G. & Milič, M. 2002. Organizers of the game in body weight showed a value of 58.06 kg, while if we compare with other players appears that 0.06 kg have high value to our players (H. S. SODHI, 1980), to longitudinal indicators have similar values with other studies. Players shooting guard in body height has high value of 164.23 cm, while the players that we have change take comparison of 4.27 cm (Viswanathan, J., Chandrasekaran, K, 2011). While body weight has shown great value with 2.83 kg for players who have take comparison. While other longitudinal values have similar values with other studies (Erčulj, F., Dežman, B., Vučkovič, G. & Milič, M. 2002). Small forward or otherwise known as the player in third position in the flooring, the size of the body weight of 71.50 kg value for the players that we have handled, but if we compare with other players out that our players have value with 0.64 kg of low (Erčulj, F., Dežman, B., Vučkovič, G. & Milič, M. 2002). Longitudinal indicators have the same value as in other publications. Trapeze players have received as it is pronounced in the value of the longitudinal parameters, as is the case over to the side of body height variables have a value of 175.00 cm, while for players who have take for treatment are higher by 1.92 cm in favor of another group that we take comparison. Similar results were presented by Tomazo-Ravnik, 1994; Dežman, B., Erčulj, F., & Vučković, G. 2002; Erčulj, F., Bračič, M. 2009; Ivanović, M. 2009. Body weight and center of the players is also highlighted in this case study we marree, if we compare it with other works out that our players have greater body weight of 0.76 kg (Starc, G., Strel, J., & Kovač, M. 2010; Viswanathan, J., Chandrasekaran, K. 2011), indicator of body height is presented to our basketball players have low values of 4.32 cm in favor of the group who have take comparison.

But if we see them lodged other values in our tables shows that the values are similar to other studies (Bale, 1991; Matković, B., & Blašković, M. 1993; Erčulj, F.(1996); LaMonte, M.J., McKinney, J.T., Quinn, S.M., et al. 1999; Starc, G., Strel, J., & Kovač, M. 2010).

Conclusion: However the data presented in this experiment show how important are the parameters of stature in the game of basketball. Known when talking about the morphological characteristics of the cadets basketball league, it is important to know that about 98% of the longitudinal dimensions are inherited. During this phase of development of basketball, it is confirmed that external factors during the intensive phase of growth have very great impact to the players of these ages, especially vertical jumps while playing basketball. However longitudinal parameters of particular importance to the players, because they know very well that these indicators are important in the field of basketball dominance, and thus this factor is important for players trapeze.

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Uses Of Herbal, Intellect Promotors In Learning Physical Activity

Emily Rose, Lecturer In Physical Education
Government Degree College For Women, Begumpet, Hderabad-500075.
Prof.K.Surender Reddy, Head, Dept. of Physical Education, Nizam College, Hyd.

Introduction

Today life is very with resultant health problems and every one is subjected to continuous physical, mental and emotional stress. This stress often imbalances the biochemical process and other neurological factors of stress hormones such as cortisol can damage neurons in the brain, which disturb one's mental health which is predecessor to physical health.

As total health is a harmony between body, mind and soul, mental health is possible only by regulating our living in every facet of life and it is must to maintain perfect internal environment.

It is essential be aware that even the slightest sing of illness needs corrective action. We should search for the methods to prevent recurrences.

The only possible way to achieve complete health is to follow the guidelines that the ancient texts provide for us. It is logical protect an individual's mind from every day pressures to improve mental alertness, concentration, attention and memory following the basic percept of Ayurveda recognized thousands of years ago.

Our ancient sages have given us guidelines for mental well being through 'Ayurveda'. This is the oldest existing health care, a heritage of ancient India. The meaning of Ayurveda is 'Science of Life' which includes photo-therapy a kind of treatment with plants and herbs which indigenous medicinal plants exhibit varying degrees of therapeutic values. So plant kingdom in nature is a valuable gift of God for the entire living organism.

The following herbs are some of the brain activators.

1. **BRAHMI**
   Botanical Name : Centella ascatica
   English Name : Indian Penny
   Sanskrit Name : Manduka parnic, Mahoushoodhi
   Hindi Name : Brambi, Varambi

Description: - Small herb with heart shape leaves.
Distribution: - it grows in wet places of all over India
Parts Used: - Whole plant
Medicinal Uses: - Help in improving attentiveness, improves learning ability.

Uses in Physical Education Activities

It helps in retraining many techniques and the tactical plans learnt for execution in game situation.

This best memory herb has been described as brain tonic and give to the sishyas, who had to remember to the teaching of Guru's since the written language was yet evolve. This is the secrete of super intelligence of our ancient Rishis and Munis.

2. **ASWA GANDHA**
   Botanical Name : Withania Somnifera.
   English Name : Winter Cherry
   Sanskrit Name : Aswagandha

Description: - Found through out India, cultivated.
Parts Used: - Roots and Leaves.
Medicinal Uses: - An anti–stress agent imparts sense of well being beneficial in controlling stress disorders and general debility.

Releases fatigue, decreases anxiety levels. Stimulates immense responses. More over it is very sound and well known rejuvenator. It increases vitality and vigour. It improves both physical and mental performance. Tonic for middle age crisis-anti ageing anti oxidant.

Uses in Physical Education Activities

It helps the sports persons to remain calm and reduce anxiety levels before a competition and also to recover faster after a strenuous training session.

3. **VACHA**
   Botanical Name : Adhatoda Vasica
   English Name : Malabar Nut
   Sanskrit Name : Vasaka, Vaidyamatha

Description: - A fencing plant with white flowers.
Parts Used: - Leaves Flowers and Roots.
Medicinal Uses: - Supports Lung function beneficial in respiratory problems. Provides respiratory comforts retraining capacity of brain corrects the speech defects.

Uses in Physical Education Activities

In sports the Aerobic capacity of a person is given more importance since it help in performing the activity without getting fatigued, especially for long distance runs.

4. **AMLA**
   Botanical Name : Emblica officinalis
   English Name : Myrabolam Tree
   Sanskrit Name : Amalaki, Dhatri

Description: - A tree with small round fruits and small bifinnate leaves.
Parts Used: - Leaves, Bark, Fruits and Roots.
Medicinal Uses: - Controls Tridoshas unequilibrium (Vete, Kapha, Pitta), blockage of nutrient channels. Prevent poor digestive capacity (Agnimandhya) which prevents normal functions of the brain protects cells from radical damage. Acts as natural Deodorant- removes body odour and brings freshness.

Hence the above noted herbs are the beat channel powerfires (Srotashodak) which helps to remove stagnated waste material (Ama) and acts as memory enhancers (Smritivardhak). In this way these herbs can improve memory and learning ability of sports persons.

Traditional herbal remedies have always been valued since time immemorial. They cure diseases without any post-medication blues because most of the medicinal plants are already being used in Indian Nutrition.

Public awareness of health is increasing by the day. Health guides and articles are in great demand as people are eager to learn about diseases, their prevention and ways of staying fit. As evident from the present scenario, herbal cure is getting world wide acceptance. There is also a formation of medical council whose role is to create authentic herbal formulae based on the Ayurvedic text. It has also been recognized by the W.H.O as an effective complementary health system.

Even the SAARC countries are mooted to make an exhaustive inventaroy of all medical plants in the region. About 30% extracts of all allopathic medicines and 100% Ayurvadic, Unani and Homeopathy medicines come from plants.

That is why herb Rawoolfia (Sarpagandha) has been appropriated by allopathy to treat high blood pressure (supacil tablet) and depression, cinchona for malaria, neem extracts for diabetics.

Research Of Herbal Brain Activators

Many multinational Pharmaceutical companies in the west are already conducting their research in Indian herbs and have catalogued the constituents of most of the important herbs described in Ayurveda.

There are many centers in our country which are systematically exploring the medicinal properties of Indian herbs scientific perceptive. These centers include:

1. The Central Drug Research Institute, Lucknow.
2. The Department of Pharmacology at G.S.Seth Medical College, Mumbai.
3. The Department of Pharmaceutical Sciences at Punjab University, Chandigarh.
4. The Department of Psychopharocology at the National Institute of Mental Health and Neurosciences (NIMHANS) Bangalore, and many others.

Study Of Herbal Research

1) Herbal Research for the treatment of Anxiety

The anxiolytic herb, studied at the department of Psychopharmacology NIMHANS was Aswagandha (withania somenifera) and its extract was examined and shown an inhibitory neurotransmitter in the brain that is related to anxiolysis.

The commercial preparation named Aswal which is the extract of Aswagandha is given to person with anxiety disorders. Statistical trends favoured. Aswal which was well tolerated and conclusions were drawn that Aswagandha has useful axiolytic potential.

Another memory promoter herb is Brahmi (Centella asiatica). When this plant extract memorin was experimented on humans it is found to improve many of the memory tasks.

Conclusions

As a result of this research Indian herbal medicine receives a much merited boost through which we will be able to keep the psychometric disorders away from sports persons and save the unnecessary expenditure on medicines and medical services.

As Marshi Chanka has rightly said that there is no limit at all to the science of life. We should apply ourselves to it with diligence.

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The Effect of Psycho-Physiologic Self-Regulation on Running Economy

C. Kiran Chakravarthi, Reasearch Scholar, Department Of Physical Education And Sports, Sri Krishnadevaraya University, Anantapuramu-A.P
Dr. M.V. Srinivasan, Incharge, M.P.Ed., Course, Department Of Physical Education And Sports, Sri Krishnadevaraya University, Anantapuramu-A.P

Abstract:
The purpose of this study was to determine the physiological effects of eliciting the relaxation response during exercise. Nine adult females volunteered to participate in this study. The subjects received 30 minutes of progressive muscle relaxation (PMR) instructions per session for eight sessions. During the week following PMR, the subjects exercised for 30 minutes of continuous activity on the treadmill. The first and third 10 minutes of exercise were control periods. During the second 10 minutes (treatment period), the subjects elicited the relaxation response. Oxygen consumption and related measures were determined using the Beckman Metabolic Measurement Cart. A repeated measures ANOVA was used to analyze the data. During the treatment period, there were significant ($p<0.05$) decreases in F_b, V_e, SBP, and RPP when compared to the two control periods. There were no significant ($p>0.05$) differences in V_t, VO_2, VCO_2, RER, and HR. This study showed that the elicitation of the relaxation response during exercise did not decrease submaximal VO_2 and, therefore, did not alter running economy. Statistically significant changes in ventilation and blood pressure were associated with the elicitation of the relaxation response during exercise. Regarding the latter findings, there is ample evidence that a reduction in RPP has a positive and unequivocal beneficial influence on the work of the heart during exercise.

KeyWords: self regulation, oxygen consumption, ventilation, blood pressure, running economy.

Introduction:

The purpose of psychophysiologic self-regulation is to learn conscious control of the autonomic nervous system in order to bring involuntary body responses (i.e., respiration, oxygen uptake, heart rate, and blood pressure) under voluntary control.The result may be the learned control to reverse the negative effects of cardiovascular disease, evoke positive body-mind-spirit responses to stressors, or to enhance well-being through increased inner peace and calmness. On the other hand, Smith, Gill, Crews, Hopewell, and Morgan reported no significant physiological changes in VO_2 and heart rate (HR) when using relaxation during distance running. In agreement, Ashley, Rajab, Timmons, Smith, and Mutrie found that 2 weeks of self-instruction in progressive muscular relaxation (PMR) had no significant effects on VO_2, HR, and expired ventilation (V_e) during submaximal running. These findings are also consistent with earlier reports by Cadarette et al. and Cortes, Boyd, and Boone .
The purpose of this study was to determine the physiological effects of eliciting the relaxation response during exercise. Our null hypothesis was that in healthy female subjects the learned self- regulation of the autonomic nervous system at rest would not be under voluntary control during exercise.

Methodology:

Nine sedentary adult females (Mean age = 23±2 years; Mean mass = 59±2.9 kg; Men height = 164.2±0.8 cm) volunteered to participate in this study. None of the subjects was engaged in a regular exercise program or relaxation training prior to the experiment. The subjects gave their informed consent, and were informed of the test procedures and purpose of the study.

Experimental Procedure:

During the orientation day, the subjects were given verbal instructions and familiarization with a progressive muscle relaxation (PMR) strategy designed to elicit parasympathetic

dominance. This strategy required the subjects (under the direction of the instructor) to consciously tense and relax major muscle groups throughout the body to become more aware of subtle degrees of tension. The subjects received 30 minutes of PMR instructions per session for eight sessions (using a Monday, Wednesday, and Friday schedule). Heart rate, systolic blood pressure (SBP), and rate pressure product (RPP) were recorded at scheduled intervals to validate the PMR strategy. The PMR sessions resulted in significant ($p<.05$) decreases in HR (74±9 to 63±8 beats/min), SBP (122±10 to 110±12 mm Hg), and RPP (90±6 to 69±8), respectively from the first PMR session to the eighth PMR session.

Physiological Measures: Frequency of breaths (F_b), tidal volume (V_t), expired ventilation (V_e), VO_2, carbon dioxide production (VCO_2), and respiratory exchange ratio (RER) were determined by the Beckman Metabolic Measurement Cart (MMC), which was calibrated prior to and checked after each test session with standardized reference gases. Heart rate was determined by 10-second electrocardiographic strips using a modified CM5 lead. Only the values during the second 5 minutes of each 10-minute period were averaged and statistically compared. Systolic blood pressure was determined indirectly during minutes 10, 20, and 30 by auscultation of the left brachial artery using a standard sphygmomanometer.

Statistical Analysis

To verify that the subjects were able to elicit the relaxation response following the eight PMR sessions, physiological data from the first and eighth sessions were statistically compared using a two-tailed paired t-test. An analysis of variance with repeated measures was used to assess the mean difference for each variable across the three 10-minute exercise periods. Where indicated, a Newman Kuels post hoc analysis was used to determine the significant differences among the means. An alpha of 0.05 probability level was used for all tests of statistical significance.

Results

Means and standard deviations were computed for all physiological data (Table 1). Statistical analysis indicated significant differences ($p<0.05$) in the Treatment values for F_b, V_e, SBP, and RPP versus Control I and/or II. There were no significant differences ($p>0.05$) in V_t, VO_2, VCO_2, RER, and HR.

Table 1. Cardiorespiratory and hemodynamic responses at a fixed work intensity before (Control I), during (Treatment), and after (Control II) the subjects were told to try and elicit the relaxation response (M±SD).

Variable	Control I (A)	Treatment (B)	Control II (C)	F-ratio & Prob
F_b breaths/min	31 ± 8 A-B**	28 ± 7	30 ± 8	5.68 & .01*
V_t ml/breath	784 ± 95	814 ± 115	797 ± 104	1.63 & .22
V_e l/min	24 ± 3 A-B** A-C**	23 ± 3	23 ± 3	6.06 & .01*
VO_2 l/min	.79 ± .06	.78 ± .05	.77 ± .05	2.15 & .14
VCO_2 l/min	.67 ± .07	.66 ± .07	.65 ± .06	1.91 & .18
RER	.85 ± .04	.85 ± .04	.84 ± .05	.25 & .78
HR beats/min	125 ± 13	122 ± 9	122 ±15	3.00 & .07
SBP mmHg	132 ± 13 A-B**	124 ± 9 B-C**	132 ± 12	4.08 & .03*

**Newman Kuels post hoc analysis ($p<0.05$)

Discussion

The major finding of this study was that the elicitation of the relaxation response during submaximal treadmill exercise did not result in a significant decrease in VO_2. The null hypothesis was supported. The subjects were not able to improve their running economy (i.e., decrease VO_2) during the exercise period in which psychophysiologic self-regulation was practiced Although the mechanisms involved in producing a decrease or no change in VO_2 remain unclear and invite further investigation, several reasons might explain this finding. First, there is much still unknown regarding the proposed integrated hypothalamic response that is hypothesized to be the relaxation response. In particular, the suggestion that relaxation training and meditative practices (including most other biobehavioral interventions such as imagery, biofeedback, and music) result in a decrease in VO_2 at rest and during exercise is simply not correct. This is evident with the preceding discussion that illustrates the equivocal results in the literature. Also, the case reports study by Benson, Malhorta, Goldman, Jacobs, and Hopkins in which VO_2 increased during advanced meditation illustrate this point. Second, there is the unanswered question regarding the subjects' difficulty in eliciting the relaxation response during exercise.

The decrease in SBP suggests an improved efficiency of the central circulatory system as evident by the significant decrease in RPP, which is an established correlate of cardiac work and myocardial oxygen demand. This finding is particularly important given that exercise HR did not decrease during the elicitation of the relaxation response, and that it appears to contradict the notion that PMR training results in a parasympathetic response. Clearly, in the present study, the SBP response was the primary parasympathetic measure and, as a component of the RPP calculation, the primary method by which thework of the heart was reduced at the fixed work load which illuminates an important point.

Conclusions

Given the fact that no change in VO_2 occurred during the exercise period in which the relaxation response was elicited indicates the imperturbability of the subjects' exercise metabolism and thus unchanged running economy as presently defined. It is very tempting to, therefore, question VO_2 as the criterion variable for demonstrating changes in running economy. The results of this study reinforce rather the importance of psychophysiologic self-regulation during exercise on respiratory and myocardial variables (particularly F_b, V_e, and RPP). Regarding the latter variable, there is ample evidence that a reduction in RPP has a positive and unequivocal beneficial influence on the work of the heart. This consideration alone may be of more practical significance than the measured VO_2 and, theoretically, may enable the performer to better tolerate the central demand associated with exercise. Based on this interpretation, not unexpectedly then, the net result is a better performance.

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Estimation Of Vo_2 Max By Different Exercise Testing Methods

Mr. Arup Gayen
Research Scholar; Department of Physical Education; Visva-Bharati University; Santiniketan-731235 (WB), India; E-mail: gayen_arup@rediffmail.com

Dr. Sagarika Bandyopadhyay
Associate Professor; Department of Physical Education; Visva-Bharati University; Santiniketan-731235 (WB), India; E-mail: sagarikasaga10@gmail.com

Dr. Sentu Mitra
Assistant Professor; AKPC Mahavidyalaya; Bengai, Hooghly (WB), India; E-mail: sentu.mitra81@gmail.com

Abstract
The objective of the study was to establish the relationship among three different methods of measuring VO2max of college going males. In the present study 14 male students of Physical Education, age ranging between 23-26 years, were randomly selected from Visva-Bharati University, India as the subjects of the study. Three selected methods of measuring VO_2 max were Queens College Step Test, Beep Test and 12 Minute Run-Walk Test. The data were analyzed by applying Pearson's Product Moment Correlation method for obtaining the coefficient of correlation. The level of significance was set at 0.05. The correlation between Queens College Test & Beep Test; Beep Test & 12 Minutes Run-Walk Test and Queens College Test & 12 Minute Run-Walk Test were 0.273 (<0.05); 0.622 (>0.05) and 0.250 (<0.05) respectively.
Key Words: Aerobic capacity, Queens College Step test; Beep test; 12 minute Run-Walk test.

Introduction:

Fitness is the essential requirement to live a lively life not only for a sports man but also for a sedentary people. Fitness assessment may be viewed in different ways, including the determination of energy system utilization, the evaluation of the perceptual motor domain and vision requirements, or the use of traditional component tests for sport fitness assessment and profiling. Aerobic capacity is one of the most important fitness components that helps one to complete his/her work without loss of speed and balance.This aerobic capacity can be measured in the form of measuring VO2max that is the maximal rate at which oxygen can be consumed per minute, the power or capacity of the aerobic or oxygen system. A person with a high VO_2 max necessarily has good function in each determinants. Conversely, a sedentary person has relatively poor function for each determinant, which results in a low VO_2 max. If a person has pathology associated with any determinant, then VO_2 max will be very low. Hence one of the important reasons for measuring VO_2 max during graded exercise testing (GTX) is to establish whether the VO_2 max is normal (William D. McArdle, Frank Katch and Victor L. Katch, 1991). Astrand (1954) has given a nomogram for prediction of VO_2 max from heart rate of sub maximal workload. Exercise physiologist use maximum oxygen consumption (VO_2 max) as a predictor of a person's capacity to do aerobic exercise. An individual's VO_2 max represents the amount of oxygen taken up by the lungs, transported to the tissues, and used to do work. VO_2 max is determined largely by hereditary factors, but aerobic (endurance) training increase it by as much as 35%. Many endurance athletes are now using VO_2 max measurements to help them determine and then maintain their peak condition (Gary A. Thibodean and Devin T. Tatton, 1992).

The benchmark of aerobic capacity is accepted as maximal oxygen uptake which is used as a measure of aerobic power. Although laboratory testing using direct calorimeter is the most accurate method to determine maximal aerobic capacity, the procedure is expensive, time consuming and requires a highly motivated subjects exercising to voluntary exhaustion. Not all the individuals have the motivation to perform a maximal test, and certain contraindications may prohibit maximal testing of some individuals. Consequently, tests to estimate aerobic capacity was devised based on the heart rate response at a sub maximal workload. These methods, which commonly use bench stepping, cycle ergometry, and walking /running protocols, can be used to quickly test large groups of individuals. If sophisticated instruments are not available ,then indirect methods of estimation of VO_2 max like Harvad step test, the 12 minute run-walk, Queen College test Beep test etc may be used. Many indirect methods are used to measure Vo2max, but whether these tests has relationship or not.

Thus, it was thought reasonable to investigate whether the selected indirect method – Queen College Step Test, 12 Minute Run-Walk Test and Beep Test to measure the VO2max has relationship or not.

Objectives of the Study:

The objectives of the study were as follows:

To assess the relationship among the three indirect methods of estimating VO_2 max.

To observe the better method of estimating VO_2 max.

Methodology:

To achieve the objectives of the study, fourteen (14) male M.P.Ed students were taken at random as the subjects for this study. They were selected as the subjects from the Dept. of Physical Education, Visva-Bharati University, Santiniketan of West Bengal. The age range of the subjects was 23-26 years.

Three different methods of measuring VO_2 max were Queens College Test, Beeps Test and 12 minutes Run-Walk Test (Johnson & Nelson, 1982).

Queens College Test was measured by a half of the class may be tested at one time with the other half serving as partners to count pulse. The test consists of stepping up and down on the bleacher step for 3 minutes. At the end of the time period, the subjects remain standing while the partners count pulse rate for a 15 second interval beginning 5 seconds after the cessation of exercise. The counters and steppers then exchange places and the other half of the class is tested.

12 minutes Run-Walk Test was measured by the runners start behind a line and upon the starting signal run and /or walk as many laps as possible around the course within the 12 minutes. The spotters maintain a count of each lap, and when the signal to stop is given, the immediately run to the spots at which their runners where at the instant the whistle or command to stop was given.

Subjects started running back and forth a 20-metre course and touched the 20 meter line at an initial speed of 8.5 kilometer/hour. The speed of the shuttle runs got progressively faster (0.5 km/hr every minute), in accordance with a pace dictated by a sound signal on an V.C.D player. Several shuttle runs made up each stage, and subjects were instructed to keep pace with the signal for as long as possible. When the subjects could no longer follow the pace, the last stage was recorded to predict VO2max. The score was measured in level and shuttle and calculated by beep test calculator and was recorded in ml/kg/min.

Statistical Techniques:

To assess the level of VO_2 max of the subjects, Descriptive Statistics (Mean and Standard Deviation) was used.

To compute the relationship of measuring VO_2 max between different methods of the subjects, Pearson's Product moment Correlation was used (Verma, 2009).

The level of significance was set at 0.05 levels.

To compute the relationship between the different methods, mean, standard deviation (SD) and Pearson's Product moment Correlation were computed by means of IBM SPSS Software version 17 (Statistical Package for the Social Sciences, version 17.0, SPSS Inc, Chicago, IL, USA).

Results and Findings:

The findings pertaining to descriptive statistics, correlation between the different methods of the subjects on the selected parameters had been presented in table-1 and table-2.

Table 1: Mean and Standard Deviation of three different exercise testing methods of measuring VO_2 max.

Different exercise method of measuring VO_2 max	Mean	Standard Deviation
Queens College Test (ml/kg/min)	44.92	9.55
Beeps Test (ml/kg/min)	49.45	4.79
12 min Run-Walk Test (ml/kg/min)	40.40	6.70

It was evident from table 1 that mean and standard deviation scores of Queens College Test, Beep Test and 12 minute Run-Walk Test of the subjects were 44.92±9.55, 49.45±4.79 and 40.40±6.70 ml/kg/min respectively.

Table 2: Pearson's Product moment Correlation of three different exercises testing methods of measuring VO_2 max.

Different exercise method of measuring VO_2 max	Queens College Test	Beeps Test	12 minutes Run-Walk Test
Queens College Test	1	0.273	0.250
Beep Test		1	0.622*
12 min Run-Walk Test			1
*Correlation is significant at the 0.05 level; Table value of r (df = 12) at 0.05 level is 0.532			

Table 2 reveals that Pearson correlation value between Queens College Test and Beep Test was 0.273 whereas between Queens College Test and 12 minutes Run-Walk Test was 0.250. It also evident from table 2 that the Pearson's correlation value between Beep Test and 12 minutes Run-Walk Test was 0.622.

The graphical representation of means for three different methods of measuring VO_2 max of the subjects had been presented in figure 1.

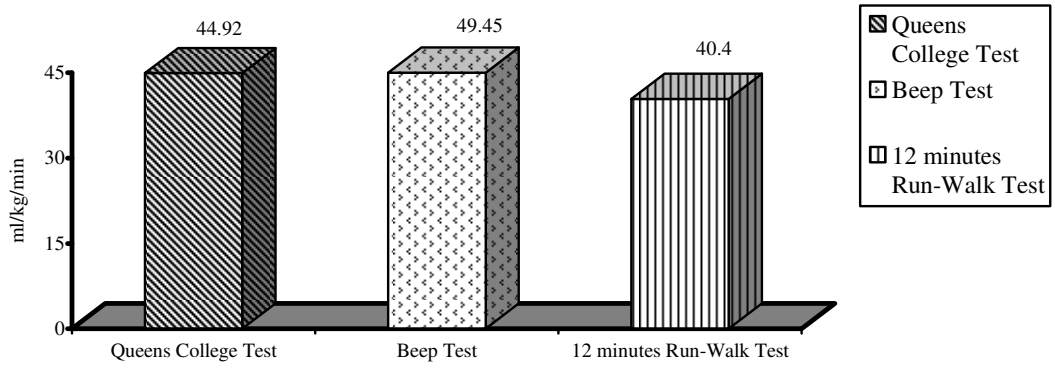

Figure 1: Three different exercise methods of measuring VO_2 max.

The findings of the study reveal that there exists significant relationship between Beep test and 12 min. Run-Walk test method of measuring VO_2 max. Whereas no significant relationship were identified between VO2 max measured by the Beep test & Queens College test. Further, the Queens College test & 12 min. Run-Walk test scores of VO_2 max were also found insignificant.

It is well-versed that selected three tests, namely, the Queens College test, the Beep test and 12-minute Run-Walk test are highly established Cardio-respiratory tests to measure VO_2 max. The reason for insignificant relationships between two established tests like Beep vs Queens College tests or Queens College test vs 12 min Run-Walk test might be due to subjects' in acquaintance and inadequate response to non-traditional endurance tests like beep or Queens college test

Conclusions:

The following conclusions have been drawn in the light of the findings of the study:
There is positive relationship between VO_2 max of subjects in beep test & 12 minute run-walk test.
No relationship exists between VO_2 max measured by Queens College Step test & Beep test.
Further, no relationship is observed in maximal aerobic power of subjects measured by Queens College Step test & 12 minute run-walk test.

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