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A Comparative Study Of Self Esteem Beteen Male And Female Inter Collegiate Athletes In West Bengal State University

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Abstract

Self –esteem is the experience of being competent to cope with the basic challenges of life and being worthy of happiness. The purpose of the present study was to compare the level of self-esteem between male and female B.Ed intercollegiate athletes of West Bengal State University. Fifty athletes (Male N=30, Female N=30) who have represented B.Ed intercollegiate competition were taken as the subjects. The age of the subjects ranged from 22 to 32 years. To find out their level of self-esteem, Rosenberg self – esteem scale developed by Rosenberg (1965) was administered on the subjects. The data was analyzed & compared with the help of standard statistical procedures in which mean, standard deviation, mean difference, and 't' test was used. Result of the study revealed no significant difference between male & female B.Ed intercollegiate athletes of West Bengal State University in regard to self – esteem.

Key words: Self-esteem, Athlete, Rosenberg self – esteem scale

Introduction

Self-esteem is a positive or negative orientation toward oneself, an overall evaluation of one's worth or value. People are motivated to have high self-esteem and having it indicates positive self-regard, not egotism. Self-esteem is only one component of the self-concept, which Rosenberg defines as "Totality of the individual's thoughts and feelings with reference to himself as an object". Besides self-esteem, self-efficacy or mastery and self-identities are important parts of the self-concept. People high in self-esteem claim to be more likable and attractive, to have better relationships, and to make better impressions on others than people with low self-esteem but objective measures disconfirm most of these beliefs. Narcissists are charming at first but tend to alienate others eventually. Self-esteem has not been shown to predict the quality or duration of relationships. High self-esteem makes people more willing to speak up in groups and to criticize the groups approach. Leadership does not stem directly from self-esteem but self-esteem may have indirect effects. Relative to people with low self-esteem, those with high self-esteem, show stronger in group favoritism, which may increase prejudice and discrimination. Friesenhahn (1999) study also confirm that there is significant difference in the self esteem of adolescents after life skill training, along with improved ability to interact with others, strengthened communication skills, gain in creative thinking skills, enhanced ability to make their own decisions and manage their resources, and greatly improved their ability to effectively work. Performance of the outcome of athlete's biological, psychological, sociological and physical construct. In the games and sports, psychological and physiological factors play a significant role in determining the performance level. However, in recent times great importance has been laid to psychological parameters in competitive sports (Tracy & Erkut, 2002; Koivula, Hasmeen & Fallby, 2002; Pedersen & Seidam, 2004; Coatsworth & Conroy, 2006; Hein & Hagger, 2007).

Objectivity Of The Study

Objective of the study was to compare the self-esteem of male & female B.Ed intercollegiate athletes and to find out which of these two categories is more development of self-esteem.

Methodology

Subjects:

For the purpose of this study sixty athletes (male N=30, female N=30) who represented West Bengal State University B.Ed intercollegiate athletic meet, were considered as subjects. Their age ranged from 22 to 32 years.

Tools:

The self-esteem test developed by Rosenberg (1965) has been applied in the present study. The test comprised 10 items to measure the levels of self-esteem. All items are answered using a 4- point Likert scale format ranging from strongly agree to strongly disagree. It is a popular tool being used by the psychologists for measuring the level of self-esteem.

Statistical Technique

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

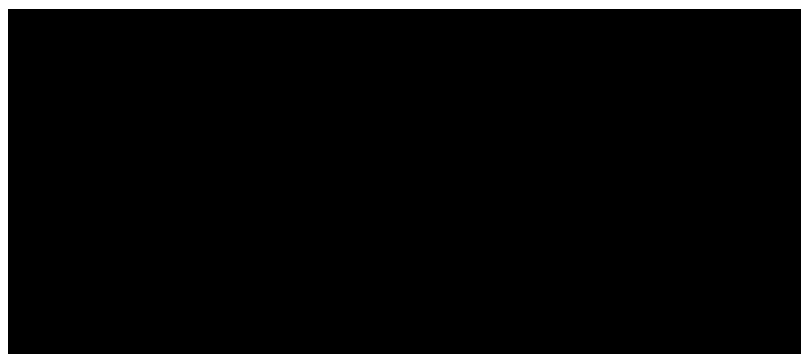
Results

Table 1: Mean, Standard Deviation, Mean Difference & 't' value of Male & Female B.Ed intercollegiate athletes.

Group	No of subject	Mean	S.D.	M.D.	t-value
MALE ATHLETES	30	32.00	2.529	0.84	0.956*
FEMALE ATHLETES	30	31.16	2.646		

t 0.05(58)=2.00 * Not Significant at 0.05 level

Figure 1: The graph showing self-esteem of male & female B.Ed intercollegiate athletes.



The analysis of table 1 & figure 1 shows that the mean, S.D, & 't'-value of the male & female B.Ed intercollegiate athletes were recorded as 32.00, 31.16 & 2.529, 2.646 respectively & calculate 't' value is 0.956 (df 58, p<0.05) it reveal that there was no significant difference between male & female B.Ed intercollegiate athletes on their level of self-esteem.

Discussion

As per the scoring norms the obtained mean scores male 32.00 & female 31.16 have shown that both the groups of athletes have high level of self-esteem. But by comparing the mean scores, it was evident that no significant difference was observed between male & female athletes of West Bengal State University on their level of self-esteem.

Self-esteem has a strong relation to happiness. We are persuaded that high self-esteem does lead to greater happiness. Low self-esteem is more likely than high to lead to depression under some circumstances. High self-esteem does not prevent children from smoking, drinking, taking, or engaging in early sex. If anything, high self-esteem fosters experimentation, which may increase early sexual activity or drinking, but in general effects of self-esteem are negligible. One important exception is that high self-esteem reduces the chances of bulimia in females.

The result of study may be corroborated with the finding of Frost & McKelvie (2005) who measured global self-esteem, body satisfaction and body build in relation to exercise activity and reported a positive and robust relationship between activity and self-esteem across sex and age. In a similar study Bridges & Madlem (2007) analysed yoga, physical education & self-esteem off the court and onto the mat for assessing mental health of the subjects and observed no significant difference in self-esteem between the subjects of regular physical education activities and yoga.

Conclusion

On the basis of the obtained results from the present study it may be concluded that B.Ed intercollegiate level male and female athletes of West Bengal State University did not significantly differ on their level of self-esteem. The finding also suggest that the level of self-esteem of both the groups of athletes fall in the high range which seemed to be necessary for being assertive to excel at highest level in any of the competitive sporting including track & field events.

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Mechanical Jumping Power in Male Basketball Players

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Abstract

The present study was conducted on seventeen male basketball players (age: 16.35 ± 0.79 years) comprising of players training under the guidance of Punjab State coaches in Patiala (India). The main objective of the study was to find the status of mechanical jumping power variables of leg extensor muscles in male basketball players and to find the relationship between them. The experimental protocol developed by Bosco et al., 1983 and McGuigan et al., 2006 were used to measure the mechanical power variables of leg extensor muscles in male basketball players. Karl Pearson's coefficient of correlation was calculated with the help of SPSS version 9.0 software. The results of this study indicated that there was a highly significant correlation amongst all biomechanical parameters like the squat jump flight time, squat jump height, countermovement jump height, countermovement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI), Peak Power (0-15sec), Peak Power (45-60sec) and Mean Power (0-60sec).

Key words: Mechanical Power, Vertical jump test, Leg Extensor Muscles, Muscular Power.

Introduction

Basketball is one of the most popular team sport extensively played and viewed all over the world. Through time, basketball has developed to involve common techniques of shooting, passing, dribbling, including player's positioning as well as offensive and defensive structures. In sports that require jumping and quick movements, there is a need for muscular strength and power (Semler, C., 2011). Strength is the ability to produce maximal force, which is considered a basic motor ability and contributes to high performance in most physical activities and sports for prevention of injury (Coyle et al., 1981, Pangrazi 1999). There is no doubt that in high-level Basketball practice the explosive strength is very important for the attack or defence actions. Coaches and trainers are greatly interested in developing training techniques designed to improve the explosive strength, power performance of the legs and vertical jump ability (Blattner, Stuart 1978). The vertical jump is an essential skill that is utilized in most highly competitive sports. Many training regimens strive to maximize vertical jump ability to improve an athlete's performance in their respective sports; the skill used to reach a point high above the ground from a jump can often determine the difference between success and failure, wins and losses (Reiser et al., 2006). In order to increase vertical jumping, we should pay special attention to the factor of power which is one of the factors of physical fitness. Power is the product of muscular force and velocity or as an instantaneous value during a given movement. The latter, often referred to as peak power (PP), is typically associated with explosive movements such as sprinting, jumping, throwing and may be an important variable associated with success in a given discipline. The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process. Changes in peak power throughout the annual plan may be indicative of training status or adaptation to the workload and could be used to plan or adjust the training program based on the athlete's performance. The knowledge of mechanical power components of lower extremities of athletes of selected game disciplines can be of great interest for coaches and sport scientists to optimize talent selection in many sports disciplines. Therefore, the aim of the present study was to find the status of mechanical jumping power of leg extensor muscles in male basketball players.

Material And Method

Seventeen male basketball players with mean age of 16.35 ± 0.79 years; height of 180.82 ± 6.59 cm; body mass of 63.94 ± 8.27 kg) briefed for the purpose of the study and the experimental protocol (Bosco et al., 1983, Mcguigan et al., 2006) comprising of players training under the guidance of Punjab State coaches in Patiala (India). All the risks involved were also explained to each players and voluntary consent was taken from them. Each volunteer was first subjected to physical examination that include measurements of corporal data like date of birth, age, training age, height, body mass and sports discipline. The participants performed an adaptation process previous to the vertical jump test so that error could be minimized.

The vertical jump test measurement system consisted of a portable hand-held computer unit connected to a contact mat (Swift Performance, New South Wales, Australia). It has been previously reported that the system is reliable compared with a force platform (Cronin et al., 2001).

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

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

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

Statistical Analysis: Mean and standard deviation for all the attributes age, height, body mass and biomechanical transients related to vertical jump tests were calculated. Karl Pearson's coefficient of correlation was calculated with the help of SPSS version 9.0 software to find the relationship between the biomechanical transients. The level of significance was $p < 0.05$.

Results & Discussion

Table 1. Mean \pm SD of Age, height & body mass of male Basketball players

No. of Players	Age (years)	Height (cm)	Mass (kg)
17	16.35 ± 0.79	180.82 ± 6.59	63.94 ± 8.27

Table 2. Mean±SD of Mechanical power variables of the three vertical jump tests of male Basketball players

Squat Jump (SJ)		Counter Movement Jump (CMJ)		Continuous Vertical Jump test 60 seconds(CVJT) Mechanical Power (w/kg)					
JH (cm)	Flight Time (Sec)	JH (cm)	Flight Time (Sec)	EUR	EI	PP (0-15)	PP (45-60)	MP (0-60)	FI
32.59 ±4.09	0.517 ±0.031	35.12 ±4.08	0.534 ±0.030	1.06 ±0.04	7.95 ±4.81	20.66 ±4.11	14.95 ±3.85	17.40 ±3.40	27.42 ±13.10

JH - Jump Height; FT-Flight Time; EUR-Eccentric Utilization Ratio; EI-Elasticity Index; PP- Peak Power; MP- Mean Power; FI - Fatigue Index

Table 1 shows mean of age, height and mass. Table 2 shows mean of mechanical power variables of the three vertical jump tests.

Table 3. Correlation Matrix for various mechanical power variables of the three vertical jump tests of male Basketball players

	Age	Height	Weight	Sj Height	Sjft	Cmjfh	Cmjft	Eur	Ei	Pp (0-15)	Pp (45-60)	Mp (0-60)
Height	.459	-										
Weight	.263	.812**	-									
Sjheight	-.030	-.061	-.023	-								
Sjft	.006	-.046	-.048	.987**	-							
Cmjfh	.103	-.067	-.183	.932**	.945**	-						
Cmjft	.064	-.050	-.151	.933**	.943**	.987**	-					
Eur	.321	-.118	-.533*	-.239	-.176	.125	.089	-				
Ei	.392	-.005	-.404	-.333	-.271	.029	-.004	.984**	-			
Pp(0-15)	-.160	-.336	-.216	.409	.354	.433	.397	.090	.004	-		
Pp(45-60)	-.469	-.737**	-.614**	.490*	.468	.469	.466	.008	-.143	.710**	-	
Mp(0-60)	-.360	-.559*	-.476	.408	.368	.428	.426	.120	-.012	.865**	.922**	-
Fi	.504*	.640**	.607**	-.266	-.297	-.210	-.248	.095	.216	.092	-.633**	-.359

*significant at the 0.05 level; ** significant at the 0.01 level

JH - Jump Height; FT-Flight Time; EUR-Eccentric Utilization Ratio; EI-Elasticity Index; PP- Peak Power; MP- Mean Power; FI - Fatigue Index

The results of present study demonstrate a close relationship between the various mechanical power variables of the three vertical jump tests (Squat jump, Counter movement jump and Continuous vertical jump test for 60 seconds) of male basketball players (Table 3).

The Francisco et al., (2010) observed that the average squat jump height 15.8±4.2cm, flight time 357±44.4msec, countermovement jump height 16.9±4.8cm, flight time 369.0±49.9msec and elasticity index 7.1±3.2 for male table tennis players (age 11.32±1.82 years). Whereas in the present study the average value of squat jump height 32.59±4.09cm, flight time 517±31msec, countermovement jump height 35.12±4.08cm, flight time 534±30msec and elasticity index 7.95±4.81 was observed. The Eccentric Utilization Ration (EUR) has been suggested as a useful indicator of power performance in athletes. McGuigan et al., (2006) observed the average value of Eccentric Utilization Ration (EUR) 1.03±0.20 for male soccer players, 1.00 ±0.17 for softball male players, 1.03±0.20 for football male players & 1.01±0.20 for rugby male players.

Whereas in the present study the average value of EUR 1.06±0.04 was observed. In the present study the average Mean Power (0-60sec) recorded during the vertical jump test for basketball players was 17.40±3.40w/kg whereas Bosco et al. 1983 found that average Mean Power (0-60sec) for school going Boys (age 17.3±0.8 years) was 22.2±1.8 w/kg. Jefferson et al., (2007) found the average Peak Power (0-15sec) 27.76±3.78w/kg, Mean Power (0-60sec) 19.56±2.59w/kg & fatigue index (%) (FI) 48.60±7.01 for male volleyball players (age 19.01±1.36 years). In an another study by Jefferson et al., (2006) of the Intermittent vertical jump tests (IVJT) observed the average Peak Power (0-15sec) 24.68±2.70w/kg, Mean Power (0-60sec) 18.79±2.23w/kg & fatigue index (%) 57.50±9.51 for the male handball and basketball players (age of handball players 25.74±4.71years & basketball players 18.60±0.77years). Whereas the in the present study the average value of Peak Power (0-15sec) 20.66±4.11w/kg, Peak Power (45-60sec) 14.95±3.85w/kg, Mean Power (0-60sec) 17.40±3.40w/kg & fatigue index (%) 27.42±13.10 was observed.

Conclusion

The results of present study indicate that highly significant correlation exists between the squat jump flight time, squat jump height, countermovement jump height, countermovement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI) and peak power (0-15sec), peak power (45-60sec) and Mean Power (0-60sec). The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process. Changes in Peak Power throughout the annual plan may be indicative of training status or adaptation to the workload and could be used to plan or adjust the training program based on the athlete's performance.

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Comparative Analysis Of Speed And Agility Among University Players Of Different Disciplines

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Abstract

The purpose of this study was to compare the speed and agility of university players of different disciplines (football, handball and volleyball games). The study was conducted on 300 subjects with age ranging 18-25 for the comparison of selected physical fitness variables. The variables selected for the study were speed (50 Meter Dash) and agility (Semo Agility Test). One-way analysis of variance (ANOVA) was used to find out the significant difference among different disciplines. The Scheffe's post hoc test was used to find the significant difference in paired mean scores. It was concluded that there was significant difference between football, handball and volleyball players in speed and agility variables. The handball players have better speed and agility than football and volleyball players. The football and volleyball players must be given good physical conditioning training to enable them to improve the performance in their respective games.

Keywords : speed, agility, disciplines

Introduction :

Sports and games in modern times have taken a definite shape in comparison with the immature and unscientific plays of ancient times. Sports are essentially that aspect of human activity, which strengthens the integration of the body and the mind. Speed is highly essential in all the ball games, football and handball offensive and defensive player are to possess good speed so that though interchanges of positions are rare. It may be required of them if time demands. Agility is the physical ability that enables a person to rapidly change body position and direction in a precise manner. Agility is the ability to change direction quickly and effectively, while moving as early as possible at full speed (Bosco and Williams, 1983). Semo Agility is another physical fitness component, often presented by the terms 'Maneuverability', 'mobility', etcetera. It is the ability to change the direction of the body and its parts rapidly. Semo Agility is a combination of several athletic traits such as strength, reaction time, speed of movement, power and co-ordination. The football is a sport requiring high levels of physical fitness. It is one of those games which demands not only speed but agility, strength, power and endurance. Football players need a combination of technical, tactical and physical skills in order to succeed. Improving aerobic capacity and overall fitness boosts performance on the football field. Handball necessarily need it since often interchange of positions occur irrespective of the progress of the game and the whole team is to be able to use this component equally in volleyball. Speed of action is more accounted than speed of movement of a player. Volleyball players move with great speed over a limited space. It is one of the most vigorous games and requires a great variety of athletic traits. In the game of Volley Ball all the movements are involved like passing, smashing, changing the direction quickly, and sudden stop, jumping for rebound, feinting, maneuvering the opponent while going for offensive move and guarding the opponents in the defensive. In this article the researcher compares the speed and agility of university players among different disciplines.

Purpose Of The Study: The purpose of this study was to compare the speed and agility of university players of different disciplines.

Hypothesis: There is no significant difference in the speed and agility among university players of different disciplines (Football, Handball and Volleyball players).

Methods:

Selection of Subjects : To achieve the purpose of the study, one hundred male players were selected at random from each category (football, handball and volleyball games), total of 300 players in Andhra Pradesh state, India, who had their credit in participating interuniversity tournaments during the academic year 2009-10 & 2010-11. The subjects were selected from the 1. Sri. Venkateshwara University, Tirupathi, 2. Srikrishna Devaraya University, Ananthapur, 3. Osmania University, Hydrabad, 4. Acharya Nagarjuna University, Guntur 5. Andhra University, Visakhapatnam of Andhra Pradesh

Selection of the Variables and criterion measures:

Following variables are selected for the purpose of the study :

1. Speed - 50 meters dash (In Seconds) 2. Agility (Semo Agility) (In Seconds)

Statistical Technique : One-way Analysis of Variance (ANOVA) was used to find the significant difference among the three groups. The Scheffe's Post Hoc test was used to find the significant difference in the paired means.

Results

Table-1 presents the mean scores, standard deviation and F Ratios of each continuous variable by the three game players.

Table-I
Analysis Of Variance For The Data On Speed (Scores In Secs.) Component Of Physical Fitness Among Football, Handball And Volleyball Players

Test		Players of Different Disciplines			Source of Variance	Sum of Squares	df	Mean Squares	F Ratio
		Football	Handball	Volleyball					
Speed	Mean Scores	7.375	7.130	7.202	Between Groups	3.188	2	1.594	481.68*
	Standard Deviation	0.066	0.040	0.063	Within Groups	0.983	297	0.003	
Agility	Mean Scores	11.146	11.100	11.161	Between Groups	0.198	2	0.099	61.38*
	Standard Deviation	0.057	0.024	0.032	Within Groups	0.478	297	0.002	

* Significant at 0.05 level of confidence, Table 'F Ratio' =3.03

The table also shows that the obtained 'F' ratio of 481.68 and 61.38 for Speed and Agility are greater than the table value of 3.03 for df '2 and 297' required for significance at 0.05 level of confidence. The results of the study indicated that "there is significant difference in the Speed and Agility variables among university players of different disciplines (football, handball and volleyball games). To determine the significant difference in the Speed and Agility among the three paired means, the 'Scheffe's test was applied as Post hoc analysis and the results are presented in Table-II.

Table-II
Scheffe's Post Hoc Test For Significant Difference In The Speed Mean Scores (In Secs.) Among Football, Handball And Volleyball Players

	Players of Different Disciplines			Mean Difference	C.I
	Football	Handball	Volleyball		
Speed	7.375	7.130	x	0.245*	0.019
	x	7.130	7.202	0.072*	
	7.375	x	7.202	0.173*	
Agility	11.146	11.100	x	0.046*	0.016
	x	11.100	11.161	0.061*	
	11.146	x	11.161	0.015*	

*Significant at 0.05 level of confidence.

Table-II shows significant paired mean differences on Speed between football & handball players; handball & volleyball players and football & volleyball players and the values are 0.245, 0.072 and 0.173 respectively which are greater than the critical difference value 0.019 at 0.05 level of confidence. It concludes that "there is a significant difference exists in speed between football & handball players; handball & volleyball players and football & volleyball players. It may be concluded from the results that significant difference exists on speed between football & handball players; handball & volleyball players and football & volleyball players. The handball players have better speed than volleyball and football players.

The table also shows significant paired mean differences on Agility between football & handball players; handball & volleyball players and football & volleyball players and the values are 0.046, 0.061 and 0.015 respectively which are greater than the critical difference value 0.016 at 0.05 level of confidence. It concludes that "there is a significant difference exists in Agility between football & handball players; handball & volleyball players and football & volleyball players. It may be concluded from the results that significant difference exists on Agility between football & handball players; handball & volleyball players and football & volleyball players. The handball players have greater agility than football and volleyball players.

Discussion Of Results :

The 50 meter dash was used to determine the speed, the handball players completed the 50 meter dash with the mean time of 7.130 seconds while the volleyball players completed their mean time of 7.202 seconds and football players completed their mean time of 7.375 seconds. This shows a significant difference in their speed test; the handball players are more speed than the volleyball and football players. Speed and agility is basically the result of applying force to mass and both running speed and speed of movement are dependent on muscular strength. Hence, if a person possesses good running speed he is likely to have higher speed of movement and vice versa. The game demands that the player should be able to change places quickly so as to contribute their best.

The semo agility test was used to measure the agility, the handball players completed the semo agility run with the mean time of 11.100 seconds, while the football players completed their semo agility run in the mean time of 11.146 seconds and volleyball players completed their semo agility run in the mean time of 11.161 seconds. This shows a significant difference in their agility test, handball players are more agile than the football and volleyball players, this is supported by Brouha (2003) that agility is a crucial factor of an athlete in taking a fast, precise and accurate decision. Agility is defined as the ability of an individual to rapidly change the body position and direction in a smooth, quick and precise manner. Agility is advantageous as it improves serving, passing, attacking, and blocking.

Conclusion

There was significant difference in the Speed component of Physical Fitness variable among university players of different disciplines (football, handball and volleyball) ($F'=481.68$; $P<0.05$). Further significant paired mean differences exists on speed between football & handball players ($MD=0.245$); handball & volleyball players ($MD=0.072$) and football & volleyball players ($MD=0.173$). The handball players have better speed than volleyball and football players. There was significant difference in the Agility component of Physical Fitness variable among university players of different disciplines (football, handball and volleyball) ($F'=61.38$; $P<0.05$). Further significant paired mean differences exists on Agility between football & handball players ($MD=0.245$); handball & volleyball players ($MD=0.072$) and football & volleyball players ($MD=0.173$). The Handball players have more agile than football and volleyball players. It is concluded that the three ball game sports have different physical fitness compositions, the distinguished functions that can be adopted to classify the best game players in to their sports may be those correlate with agility and speed and the identified physical fitness tests which can be best discriminate the successful players in the three game sports are 30 meter dash and semi agility. The volleyball and football players must be given good physical conditioning training to enable them to improve the performance in their respective games.

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

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Abstract

The study was confined to the school level male football players those who were participating in the Inter School Zonal Football Tournament held around Vellore district during the year 2011 – 2012. One hundred and twenty school male football players from ten schools (n = 12), with age group between 16 and 18 years, were selected. The selected criterion variables, such as, dribbling ability, agility and coordinative ability were selected for the present study. The dribbling ability was assessed by Mor-Christian General soccer ability skill test battery, agility was assessed by shuttle run and coordinative ability was assessed by Hexagonal Obstacle test. The Pearson Product Moment correlation and multiple regression equation were used to find out the relationship between the selected football playing ability such as, dribbling ability and motor fitness components such as, agility and coordination. The result of the study shows that there was a significant relationship between the dribbling ability and selected motor fitness components such as, agility and coordination.

Key Words: Football playing ability, motor fitness components, dribbling, agility, coordinative abilities and Pearson Product Moment Correlation.

Introduction

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

Dribbling is nothing more than moving with the ball across the field. It is a skill used to relocate a player into desirable positions where he can shoot or pass the ball. What transforms dribbling into an art is the defenders whose sole purpose in Dribbling is the slowest and least energy efficient mode of ball manipulation in soccer? A simple pass to a teammate results in faster, more efficient, and often safer advancement of the ball towards the opposing team's goal to limit the options of the player with the ball. Agility is generally defined as the ability to change the direction quickly and effectively while moving as nearly as possible at full speed. It is depended primarily on strength, reaction time, speed of movement and specific muscle co-ordination.

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

Methodology

To achieve this purpose of the study, various football teams participated in the Inter School Football Tournament (Zonal Level) for boys were selected. One hundred and twenty school male football players from ten schools (n = 12), were selected.

The selected schools were, Sri Venkateswara Higher secondary School, Vellore, Voorhees Higher Secondary School, Vellore, Don Bosco Higher Secondary School, Vellore, Don Bosco Higher Secondary School Katpadi, Muslim Higher Secondary School, Vellore, Krishnasamy Mudaliar Higher Secondary School, Vellore, K.A.K.M. Higher Secondary School, Saidapet, Vellore, Government Boys

Higher Secondary School, K.V. Kuppam, Government Boys Higher Secondary School, Katapadi and Government Boys Higher Secondary School, Sathuvachari were selected as subjects and the age of the subjects were ranged between 16 and 18 years. The selected criterion variables, such as, dribbling ability, agility and coordinative ability were selected for the present study. The dribbling ability was assessed by Mor-Christian General soccer ability skill test battery, agility was assessed by shuttle run and coordinative ability was assessed by Hexagonal Obstacle test. The Pearson Product Moment, correlation and multiple regression equation were used to find out the relationship between the selected football playing ability such as, dribbling ability and motor fitness components such as, agility and coordination.

Analysis of Data

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

Table – I
Descriptive Statistics for all Selected Variables

Variables	Mean	S.D.
Dribbling	66.0569	1.64629
Agility	12.3028	0.22591
Coordination	14.70	2.069

Table – II
Correlation Between Selected Criterion Variables of Male School Football Players

	Dribbling	Agility	Coordination
Dribbling	1.00	0.238*	- 0.793*
Agility	--	1.00	- 0.262*
Coordination	--	--	1.00

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

1. The correlation between dribbling and agility was positive and $r = 0.238$ and it was as much as higher than the 0.238 ($p > 0.01$) and found to be statistically significant.
2. The correlation between dribbling and coordination was positive and $r = - 0.793$ ($p > 0.01$) and it was higher than the 0.000001 and found to be statistically significant.
3. The correlation between agility and coordination was positive and $r = - 0.262$ ($p > 0.01$) and it was higher than the 0.004 and found to be statistically significant.

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

Table – III
Multiple Correlation Co-efficient for the Predictors of Dribbling Ability of Male School Football Players

S. No	Variables (Backward Selection)	R	R Square	Adjusted R Square	R Square Change
1.	Agility and Coordination	0.793	0.630	0.623	0.630
2.	Coordination	0.793	0.629	0.625	- 0.001

From the table – III, it is found that the multiple correlation co-efficient for predictors, such as, agility and coordination is 0.79 , which produces the highest multiple correlations with dribbling ability of the male school football players. R square values show that the percentage of contribution of predictors to the dribbling ability (dependent variable) is in the following order.

1. About 63% of the variation in dribbling ability was explained by the regression model with two predictors, such as agility and coordination.
2. About 63% of the variation in the dribbling ability was explained by the regression model, with one predictor, coordination.

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

Table – IV
Regression Co-efficient for the Predicted Variables with Dribbling Ability of Male School Football Players

Sl. No.	Variables	B	Std. Error	Beta Weightage
1.	Constant	72.305	5.446	
	Agility	0.238	0.425	0.033
	Coordination	- 0.624	0.046	- 0.784
2.	Constant	75.333	0.663	
	Coordination	- 0.631	0.045	- 0.793

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

1. Regression Equation in obtained scores form = X_c

$$X_c = (0.238)X_1 + (-0.624)X_2 + 72.305$$

$$Z_c = (-0.793) Z_1$$

Where, X_c = Dribbling ability, X_1 = Agility, X_2 = Coordination.

2. Regression Equation in standard scores form = Z_c

Where, Z_c = Dribbling ability and Z_1 = Coordination.

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

Conclusions

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

1. The correlation between dribbling and agility was high.
2. There was a high correlation between dribbling and coordination.
3. The correlation between agility and coordination was also high.

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Physiotherapy And Fitness Exercise For Post Natal And Post Hysterectomy In Women

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Introduction:

Hysterectomy. An older women over 40, not desirous of child-bearing or associated with uterine disease such as DUB or fibroids, is best treated by hysterectomy. Vaginal route is preferred to abdominal if possible. The ovaries should be conserved, and there is no need to remove a vaginal cuff if colposcopy reveals no CIN vaginal involvement. Hysterectomy is also advised in women who cannot come for follow up after conservative therapy and when dysplasia recurs (1-4%) following conservative therapy.

Altering Foot Size: Pregnancy may permanently alter a woman's foot size, according to a study published in the American Journal of Physical Medicine & Rehabilitation.

Researchers measured the foot length and arch height of 49 pregnant women and repeated the measurement about five months after childbirth.

About 60 to 70 per cent of the women had longer feet and shorter arch height after delivery. Their feet grew in length by 2-10mm.

Changes in foot size were more prominent in the first pregnancy and could be attributed to the extra weight women carry, and increased looseness of the joints and ligaments associated with pregnancy. These foot changes during pregnancy may explain why women are more prone to pain or arthritis in their feet, knees, hips, and spines compared to men, the researchers said.

Most of the Gynecologist around the world confirm that doing Aqua fitness like Aqua Aerobics, Aqua Yoga and Aqua Physical Fitness w which contains flexibility, endurance and rhythmic movements.

They always prefer as water is one of the best exercises of giving Aqua therapy and hydro therapy and lots of flexibility, agility and indurance capacity which enhances the fitness level of an individual keeps changes the life style of a person.

Finally, energizing postnatal exercises close up your pelvis, tone your body and strengthen you abdominal muscles.

All the exercises are presented in sequences that are short, simple, effective and safe. Aqua physical fitness exercises in water particularly experiences harmonizing exercises in water for pregnancy birth and beyond.

Most of the Gynecologist refers the pregnancy ladies to do the fitness always in the safest manner, life most of the pregnancy ladies when they do on land are up and down where they slip and fall so, the best way to keep themselves to choose is water fitness.

Both in pregnancy and after birth it is extremely important to strengthen and elongate the muscles of the back, buttocks, thighs and abdomen. In aqua fitness, as in classical fattiness, this is achieved through a combination of breathing and stretching, but greater elongation of muscle is possible in water.

Your deep spinal muscles, together with you leg muscles adjust your posture trough pregnancy and after birth by holding you pelvis in the right position at all times, supporting you baby comfortably.

To enjoy a gravity-free environment

To open the pelvis

To stretch and strengthen the spinal and abdominal muscles.

To gain control of the pelvis floor muscles so that you can relax them while giving birth.

To expand you breathing capacity

To relax more deeply and release worries and fears.

To tune in with your growing baby.

Postnatal Aqua Fitness:

The aims are:

To realign the spine and strengthen the spinal muscles.

To tone and strengthen the abdominal muscles

To regain full tone of the pelvic floor muscles

To energize without strain in a short movement, relaxing at the same time

To tone and remodel your figure safely

To get ready to swim with your baby.

Water stretches with your baby

Postnatal stretches in water can be practiced with your baby. You can hold your baby safely with both hands under the arms at first and then with one arm only. It is relatively easy to hold your baby against your body, facing out, with one of your arms across her chest extending to hold her arm between your thumb and index finger. Make sure you hold your baby in the most relaxed way you can and, whenever possible, allow her to find her own buoyancy in the water as well as relying on the support you give her.



Most young babies enjoy lying on their and you may experience sensation of rest similar to those felt during your pregnancy relaxation in water, except now your baby is outside rather inside. The freer you are in water enjoyable the relaxation is for both.

At first even if you can float the idea of your baby falling off may cause you to tense up. It may therefore be best to start with a long woggle or even two that woggles under your arms, which allow than you to have your two hands free to the more support your baby gently on the sides of you her body.

Effect Of Isolated And Combined Plyometric And Weight Training On Erythrocytes Among Sedentary College Men

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Abstract

The aim of this study was to finding out the effect of isolated and combined plyometric and weight training on erythrocytes among sedentary college men. To achieve the purpose of the study 60 sedentary college men were selected as subject at random from SCNR government degree college College, proddatur, District Kadapa, Andhra Pradesh and their age ranged of the subject is between 18 to 23years. The subject was divided into four group namely experimental group A, experimental group B, experimental group C and Control group D. Experimental group A underwent to plyometric training, experimental group B underwent to weight training, experimental group C underwent to combined plyometric and weight training and group D act as a control group they did not participate in any of the training programme other than their regular activates. The data was collected by using Neubauers counting chamber method from four groups' pre and post of the experimental period. The raw data on erythrocytes was statistically analyzed by using Analysis of Covariance (ANCOVA). Scheffe's post hoc test was applied to determine the significant differences between the paired adjusted means. In all the cases 0.05 level of significance was fixed. The result of the study showed that there was as significantly increase was found in erythrocytes count among the experimental group when compared with control group.

Key words: Plyometric training, weight training, erythrocytes

Introduction

Anaerobic means without oxygen thus in anaerobic exercise a large at the required energy is obtained from the anaerobic energy sources. Anaerobic energy is required in high intensity short term exercise involving power or speed (*Reid and Thomson 1984*). According to *Dorald 2000*. Plyometric refers to exercise that enables muscles to reach maximum forces in the shortest possible time. With a concentric muscle movement, the muscles shorten while it contracts. With and eccentric muscle contraction, the muscle lengthens while it is exerting force. The muscle is loaded with an eccentric action, followed immediately by a concentric action. Weight training is a systematic programme or exercise against some resistance for the development of muscular system (*Arheim and Prentice 2000*).

Erythrocytes are also known as red blood cell. The hemoglobin, red respiratory pigment is packed in red blood corpuscles as a concentrated solution. The number of red blood cells is directly proportional to the quantity of hemoglobin and thus to transport of respiratory gases *Sucker et al 1992*. Red blood cells carry oxygen to the cells through the network of arteries and capillaries in the circulatory system. They will also remove waste products such as carbon dioxide. During exercise, the need for oxygen and the increase of carbon dioxide increase the demands for more red blood cells. The body responds not only by increasing the number of red blood cells, but by also responding in other ways to increase the oxygen-carrying capacity of the blood.

Statement of the problem

The purpose of the study under investigation was intended to find the effect of isolated and combined plyometric and weight training on erythrocytes count on sedentary college men.

Hypothesis

It was hypothesized that there would be significant increase in erythrocytes count due to the impact of plyometric training, weight training and combined pylometric and weight training when compared with control group.

Methodology

To achieve the purpose of the presented study, sixty sedentary college men were selected at random from SCNR government Degree College, proddatur, District Kadapa, Andhra Pradesh and their age ranged between 18 to 23 years. The subject selected did not have any disease. They were not smokers. The selected subject was divided into four group namely experimental group A, experimental group B, experimental group C and Control group D. Experimental group A underwent to plyometric training, experimental group B underwent to weight training, experimental group C underwent to combined plyometric and weight training and group D act as a control group they did not participate in any of the training programme other than their regular activates. The selected subject asked that they go to the Sree Sai Diagnostic Center, Proddatur in 9 clocks at morning for performing blood examination before and after the training period. Neubauers counting chamber method was use to collect the data. Training was given for twelve weeks and alternative days in a week. The collected raw data on blood sample of each subject from four groups' pre and post of the experimental period and rawdata was statistically analyzed by using Analysis of Covariance (ANCOVA). Scheffe's post hoc test was applied to determine the significant differences between the paired adjusted means. In all the cases 0.05 level of significance was fixed.

Table-I: Analysis of Covariance of data on Erythrocytes between pre and post test of Plyometric training group, Weight training group, Combined weight and plyometric group and control group

	PTG	WTG	WTPTG	CG	Sources of variance	Sum of square	df	Mean Square	'F' ratio
Pre -test									
Mean	4.56	4.38	4.58	4.72	B	0.845	3	0.282	0.73
SD	0.43	0.79	0.39	0.75	W	21.47	56	0.383	
Post- test									
Mean	4.60	4.76	4.70	4.32	B	1.76	3	0.58	2.26
SD	0.40	0.52	0.42	0.64	W	14.51	56	0.259	
Adjusted post- test									
Mean	4.60	4.87	4.69	4.22	B	3.33	3	1.11	10.28*
					W	5.93	55	0.108	

*Significant at 0.05 level of confidence

(The table value required for significant at 0.05 level with df 3 and 56 & 3 and 55 are 2.77 and 2.77 respectively)

The table I show that the pre-test mean values on erythrocytes of Plyometric training group (PTG), weight training group (WTG), combined weight and plyometric training group (WTPTG) and Control group (CG) were 4.56, 4.38, 4.58 and 4.72 respectively. The obtained 'F' ratio of 0.73 for pre-test scores is less than the table value of 2.77 for df 3 and 56 required for significant at 0.05 level of confidence on erythrocytes. The post-test mean values on erythrocytes of Plyometric training group (PTG), weight training group (WTG), combined weight and plyometric training group (WTPTG) and Control group (CG) were 4.60, 4.76, 4.70 and 4.32 respectively. The obtained 'F' ratio of 2.26 for post-test scores is less than the table value of 2.77 for df 3 and 56 required for significant at 0.05 level of confidence on erythrocytes. The adjusted post-test mean values on erythrocytes of Plyometric training group (PTG), weight training group (WTG), combined weight and plyometric training group (WTPTG) and Control group (CG) were 4.60, 4.87, 4.62 and 4.22 respectively. The obtained 'F' ratio of 10.28 for adjusted post-test scores is greater than the table value of 2.77 for df 3 and 55 required for significant at 0.05 level of confidence on erythrocytes.

Table-II
Scheffe's post hoc test for the differences between paired adjusted post test means of Erythrocytes

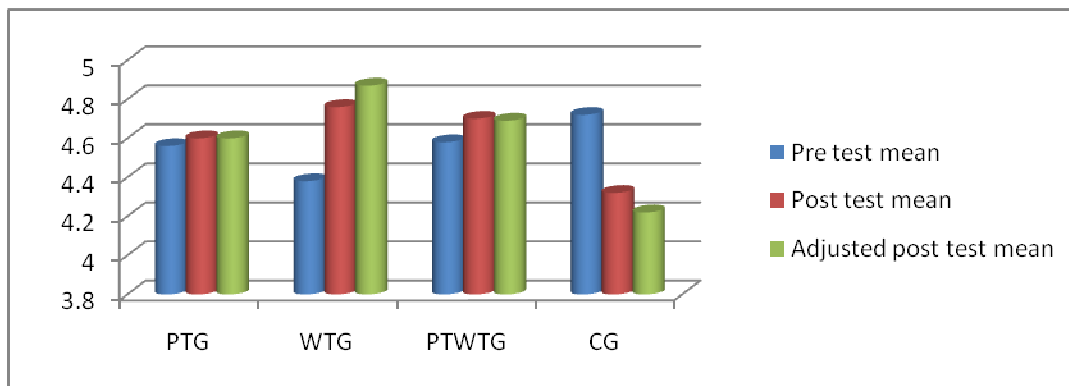
PTG	WTG	PTWG	CG	MD	CI
4.60	4.87	-	-	0.27	0.34
4.60	-	4.69	-	0.09	
4.60	-	-	4.22	0.38*	
-	4.87	4.69	-	0.18	
-	4.87	-	4.22	0.65*	
-	-	4.69	4.22	0.47*	

*Significant at 0.05 level of confidence

The table II shows that adjusted mean differences mean values between PTG and CG , WTG and CG and PTWG and CG were 0.38, 0.65 and 0.47 respectively on erythrocytes are greater than required confidence interval value 0.34 at 0.05 level of confidence. Hence, the above comparison was significant.

The comparison of PTG and WTG, PTG and PTWG and WTG and PTWG were 0.27, 0.09 and 0.18 respectively are lesser than the required confidential value 0.34. Hence these comparisons were insignificant. The pre, post and adjusted post test mean values of plyometric training group, weight training group, Combined plyometric and weight training group and Control group on erythrocytes are graphically represented in the figure-I

Figure-I
Pre, Post and Adjusted Post Test mean Values of Plyometric training group (PTG), Weight training group (WTG), Combined Weight and plyometric training group (WTPTG) and Control group (CG) on Erythrocytes



Discussion on hypothesis

Its mention in the hypotheses that there would be significant increase in erythrocytes count due to the impact of plyometric training, weight training and combined plyometric and weight training when compared with control group. The result of study founded significant increase in erythrocytes count hence the research hypotheses accepted.

Discussion on Findings

The result of the study indicated that there was a significant difference between the adjusted post-test means of plyometric training group and control group, weight training group and control group and combined weight training and plyometric training group and control group. The above result is connected with the Moosavizademonir 2011, Lin 2012, Serkan and Ibrahim 2010, Sathiyavathi and Vallimurugan 2013.

Conclusion

From the study it was concluded that significant positive increase occur in erythrocytes count due to the effect of plyometric training, weight training and combined plyometric and weight training when compared with control group.

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Mechanical Jumping Power in Male Wushu Players

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Abstract

The present study was conducted on nineteen male Wushu players (age: 16.58 ± 1.22 years) comprising of inmates of Sports Training Centre, Centre of Excellence scheme of Sports Authority of India, training at Patiala centre (India). The main objective of the study was to find the status of mechanical jumping power variables of leg extensor muscles in male wushu players and to find the relationship between them. The experimental protocol developed by Bosco et al., 1983 and Mcguigan et al., 2006 were used to measure the mechanical power variables of leg extensor muscles in male wushu players. Karl Pearson's coefficient of correlation was calculated with the help of SPSS version 9.0 software. The results of this study indicated that there was a highly significant correlation amongst all biomechanical parameters like the squat jump flight time, squat jump height, countermovement jump height, countermovement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI), Peak Power (0-15sec), Peak Power (45-60sec) and Mean Power (0-60sec).

Key words: Mechanical Power, Vertical jump test, Leg Extensor Muscles, Muscular Power.

Introduction

Wushu, also known as kung-fu, is a combative sport originated from China. At present, there are hundreds of different Wushu styles. Despite this great diversity, an Olympic Wushu style was recently created to standardize the rules, techniques, and competition patterns. Wushu is a very dynamic combative sport, requiring continuous alterations of intensity and kinetic actions and it is characterized by a great number of side movements, jumps, throws and body contacts all which strictly depend on muscular strength. Strength is the ability to produce maximal force, which is considered a basic motor ability and contributes to high performance in most physical activities and sports for prevention of injury (Coyle et al., 1981, Pangrazi 1999). There is no doubt that in high-level wushu practice the explosive strength is very important for the attack or defence actions. Coaches and trainers are greatly interested in developing training techniques designed to improve the explosive strength, power performance of the legs and vertical jump ability (Blattner, Stuart 1978). The literature on combat sports reports that athletes who grapple with opponents (i.e., wrestlers and judo athletes) have markedly high anaerobic capacity and strength, high or above-average aerobic power, and low body fat (Callister et al., 1991, Franchini et al., 2007, Horswill et al., 1989, Little NG., 1991, Sharratt et al., 1986, Taylor et al., 1981, Thomas et al., 1989), whereas athletes who strike opponents (i.e., karate and taekwon-do players) have marked high aerobic capacity, flexibility, and above-average anaerobic power and capacity (Heller et al., 1998, Toskovic et al., 2004, Zabukovec et al., 1995). Wushu contests combine both grappling and striking techniques, but there is no information regarding the physical attributes of wushu athletes available at scientific literature. Very few studies examined the effect of wushu training program on fitness characteristics in young athletes. Previous studies have reported that the high performance in many sporting endeavors is characterized by the ability to display high amounts of muscular power. Power is the product of muscular force and velocity or as an instantaneous value during a given movement. The latter, often referred to as peak power (PP), is typically associated with explosive movements such as sprinting, jumping, throwing and may be an important variable associated with success in a given discipline. The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process. Changes in peak power throughout the annual plan may be indicative of training status or adaptation to the workload and could be used to plan or adjust the training program based on the athlete's performance.

The knowledge of mechanical power components of lower extremities of athletes of selected game disciplines can be of great interest for coaches and sport scientists to optimize talent selection in many sports disciplines. Therefore, the aim of the present study was to find the status of mechanical power of leg extensor muscles in male wushu players.

Material And Method

Nineteen male Wushu players with mean age of 16.58 ± 1.22 years; height of 170.89 ± 7.26 cm; body mass of 55.89 ± 9.31 kg) briefed for the purpose of the study and the experimental protocol (Bosco et al., 1983, McGuigan et al., 2006) comprising of inmates of Sports Training Centre, Centre of Excellence scheme of Sports Authority of India, training at Patiala centre (India). All the risks involved were also explained to each player and voluntary consent was taken from them. Each volunteer was first subjected to physical examination that include measurements of corporal data like date of birth, age, training age, height, body mass and sports discipline. The participants performed an adaptation process previous to the vertical jump test so that error could be minimized.

The vertical jump test measurement system consisted of a portable hand-held computer unit connected to a contact mat (Swift Performance, New South Wales, Australia). It has been previously reported that the system is reliable compared with a force platform (Cronin et al., 2001).

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

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

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

Statistical Analysis: Mean and standard deviation for all the attributes age, height, body mass and biomechanical transients related to vertical jump tests were calculated. Karl Pearson's coefficient of correlation was calculated with the help of SPSS version 9.0 software to find the relationship between the biomechanical transients. The level of significance was $p < 0.05$.

Results & Discussion

Table 1. Mean \pm SD of Age, height & body mass of male wushu players

No. of Players	Age (years)	Height (cm)	Mass (kg)
19	16.58 ± 1.22	170.89 ± 7.26	55.89 ± 9.31

Table 2. Mean \pm SD of Mechanical power variables of the three vertical jump tests of male wushu players

Squat Jump (SJ)		Counter Movement Jump (CMJ)				Continuous Vertical Jump test 60 seconds(CVJT) Mechanical Power (w/kg)			
JH (cm)	Flight Time (Sec)	JH (cm)	Flight Time (Sec)	EUR	EI	PP (0-15)	PP (45-60)	MP (0-60)	FI
29.21 ± 4.45	0.490 ± 0.04	32.79 ± 4.50	0.517 ± 0.04	1.10 ± 0.05	12.62 ± 5.48	20.72 ± 3.69	11.92 ± 3.09	15.55 ± 2.53	42.19 ± 12.30

JH - Jump Height; FT-Flight Time; EUR-Eccentric Utilization Ratio; EI-Elasticity Index; PP- Peak Power; MP- Mean Power; FI - Fatigue Index

Table 1 shows mean of age, height and mass. Table 2 shows mean of mechanical power variables of the three vertical jump tests.

Table 3. Correlation Matrix for various mechanical power variables of the three vertical jump tests of male wushu players

	AGE	HEIGHT	WEIGHT	SJ HEIGHT	SJFT	CMJJH	CMJFT	EUR	EI	PP (0-15)	PP (45-60)	MP (0-60)
HEIGHT	.567*	-										
WEIGHT	.197	.718**	-									
SJHEIGHT	-.096	-.025	.117	-								
SJFT	-.157	-.076	.061	.986**	-							
CMJJH	-.139	-.070	.080	.952**	.943**	-						
CMJFT	-.106	-.083	.005	.945**	.927**	.980**	-					
EUR	-.146	-.374	-.516*	-.386	-.344	-.124	-.109	-				
EI	-.072	-.141	-.175	-.459*	-.443	-.171	-.190	.920**	-			
PP(0-15)	.111	-.145	-.005	.525*	.535*	.550*	.522*	-.105	-.102	-		
PP(45-60)	.065	-.097	.116	.590**	.607**	.600**	.586**	-.201	-.196	.574*	-	
MP(0-60)	.129	.055	.265	.717**	.710**	.686**	.666**	-.391	-.347	.767**	.884**	-
FI	.050	.022	-.138	-.324	-.332	-.315	-.319	.176	.171	.129	-.728**	-.426

*significant at the 0.05 level; ** significant at the 0.01 level

JH - Jump Height; FT-Flight Time; EUR-Eccentric Utilization Ratio; EI-Elasticity Index; PP- Peak Power; MP- Mean Power; FI - Fatigue Index

The results of present study demonstrate a close relationship between the various mechanical power variables of the three vertical jump tests (Squat jump, Counter movement jump and Continuous vertical jump test for 60 seconds) of male wushu players (Table 3).

The Francisco et al., (2010) observed that the average squat jump height 15.8 \pm 4.2cm, flight time 357 \pm 44.4msec, countermovement jump height 16.9 \pm 4.8cm, flight time 369.0 \pm 49.9msec and elasticity index 7.1 \pm 3.2 for male table tennis players (age 11.32 \pm 1.82 years). Whereas in the present study the average value of squat jump height 29.21 \pm 4.45cm, flight time 490 \pm 40msec, countermovement jump height 32.79 \pm 4.50cm, flight time 517 \pm 40msec and elasticity index 12.62 \pm 5.48 was observed. The Eccentric Utilization Ration (EUR) has been suggested as a useful indicator of power performance in athletes. McGuigan et al., (2006) observed the average value of Eccentric Utilization Ration (EUR) 1.03 \pm 0.20 for male soccer players, 1.00 \pm 0.17 for softball male players, 1.03 \pm 0.20 for football male players & 1.01 \pm 0.20 for rugby male players. Whereas in the present study the average value of EUR 1.10 \pm 0.05 was observed. In the present study the average Mean Power (0-60sec) recorded during the vertical jump test for wushu players was 15.55 \pm 2.53w/kg whereas Bosco et al. 1983 found that average Mean Power (0-60sec) for school going Boys (age 17.3 \pm 0.8 years) was 22.2 \pm 1.8 w/kg. Jefferson et al., (2007) found the average Peak Power (0-15sec) 27.76 \pm 3.78w/kg, Mean Power (0-60sec) 19.56 \pm 2.59w/kg & fatigue index (%) (FI) 48.60 \pm 7.01 for male volleyball players (age 19.01 \pm 1.36 years). In an another

study by Jefferson et al., (2006) of the Intermittent vertical jump tests (IVJT) observed the average Peak Power (0-15sec) 24.68 ± 2.70 w/kg, Mean Power (0-60sec) 18.79 ± 2.23 w/kg & fatigue index (%) 57.50 ± 9.51 for the male handball and basketball players (age of handball players 25.74 ± 4.71 years & basketball players 18.60 ± 0.77 years). Whereas the in the present study the average value of Peak Power (0-15sec) 20.72 ± 3.69 w/kg, Peak Power (45-60sec) 11.92 ± 3.09 w/kg, Mean Power (0-60sec) 15.55 ± 2.53 w/kg & fatigue index (%) 42.19 ± 12.30 was observed.

Conclusion

The results of present study indicate that highly significant correlation exists between the squat jump flight time, squat jump height, countermovement jump height, countermovement flight time, Eccentric Utilization Ratio (EUR), Elasticity Index (EI) and peak power (0-15sec), peak power (45-60sec) and Mean Power (0-60sec). The measurement of Peak Power by strength and conditioning-coaches is an important consideration in the training process. Changes in Peak Power throughout the annual plan may be indicative of training status or adaptation to the workload and could be used to plan or adjust the training program based on the athlete's performance.

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Personality Of Secondary School Teachers Of Bijapur District

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Abstract

In the present study an attempt was made to study the influence of personality traits of MEN & WOMEN Teachers of secondary schools. A sample of 200 Teachers (both male & female . Senior/Junior) was chosen from Bijapur District. Personality scale Cattell~s16PF questionnaire was administrated. It was hypothesized that MEN Teachers and WOMEN Teachers differ in their personality Traits. The statistical tests like, 't'- test was applied to analyze the result. This Study clearly revealed that male Teachers exhibited higher level of personality than the female Teachers. Similarly, MEN Teachers have higher personality than the WOMEN Teachers of Bijapur district.

Introduction:

Personality development is the outcome of a process of interaction between genetic inclinations and environmental conditions. The human being by nature first tries to accommodate himself with the environment around him and then he starts striving to establish his superiority over it. The process of personality development is however, not static. It is a continuous process and prone to natural flexibility. It undergoes many stages of transformation and modification. This, in a way, provides an explanation to the nature of individual differences. Sports activities affect the process of personality development in ways more than one. Social and environmental pressures, biological factors, frustration and tension in life are to be managed with full attention to develop mature form of personality. The psychological approach of teaching, in this regard has been suggested as that of a coach who, while training his athletes tries to understand their personal and emotional problems, motivates their behavioral tendencies and inspires the best of their personality to come out. It has been propounded that only an individual centered culture can nurture the utmost level of personality development but such a pre-condition seems rarely possible.

Statement Of Problem

The problem formulated for the present study was to find out the differences in personality traits, in Teachers as a differences due to gender and Age level (MEN & WOMEN)

Hypothesis

- 1) There is a significant deference in personality traits of Teachers of different status (Senior ,Junior)
- 2) There is significant level gender difference in the personality of Teachers of Bijapur District.

Sample The samples of the study consist of 200 Teachers drawn randomly from Bijapur District. There were an equal numbers of sample categories in two levels (Senior& Junior) and gender. (Male & Female) The respondents were administered 16 personality Factors scale to determine the extent of personality.

Tools Following standardized questionnaires were used in the present study to measure personality traits,

- 1) Cattell's 16 PF Questionnaire consist of 105 items.

Comparisons of sample on personality: As per the scale one scored relatively lower in particular factor is said to have relatively specified amount of characteristics of the personality factor in comparison with higher scores on the same factor. Thus , each 16PF study involves low and higher amount of characteristics to describe the relative amount of personality factor of the given sample.

Table 1: Mean scores SDs and t-value of personality traits of Volley Ball Teachers (Male &Female)N=200

Category		A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
MALE	M	6.37	4.05	6.14	5.50	4.78	5.86	6.19	5.10	3.84	4.71	6.38	4.62	6.84	6.02	5.35	4.59
	S D	1.88	1.64	1.62	1.69	1.56	1.74	1.48	1.59	2.04	1.76	1.72	1.34	2.02	1.58	1.61	1.63
FEMALE	M	5.54	3.33	5.62	6.31	3.95	6.71	5.41	5.67	4.64	5.24	5.91	5.23	5.95	5.50	4.83	5.02
	S D	1.88	1.83	1.55	1.56	1.64	1.88	1.43	1.63	1.96	1.72	1.93	1.48	1.88	1.70	1.63	1.53
t-value		1.18*	4.80*	4.00**	5.78*	6.38*	5.66*	6.50*	4.38*	4.70**	3.78*	3.13*	5.54*	5.56*	4.00*	3.98*	3.58*

** Significant at 0.01 level.

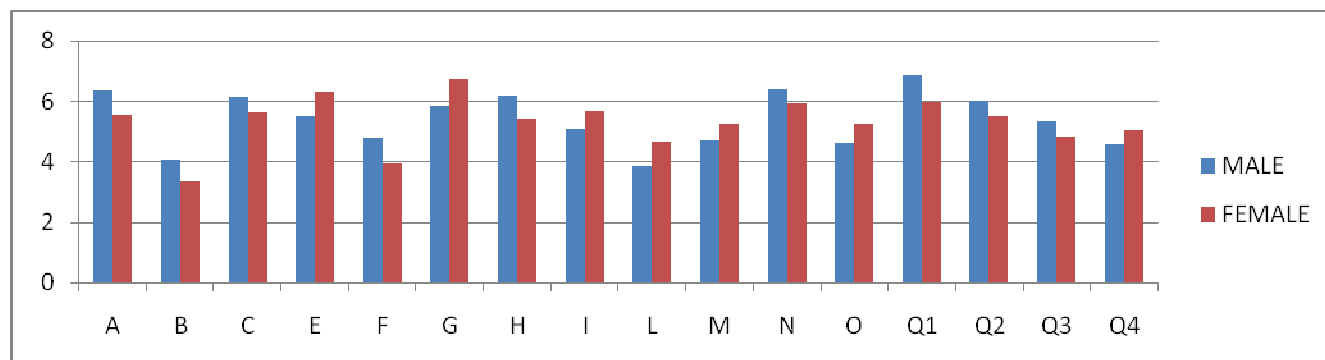


Table 1 presents mean scores, SDs and t-values of personality traits of Male and female Teachers. The personality consists of 16 factors ;(Factor A: Reserved V/s Outgoing, Factor B: Low V/s High Intelligence, Factor C: Affected by feelings V/s Emotionally Stable, Factor E: Humble V/s Assertive, Factor F: Sober V/s Happy-go-lucky, Factor G: Expedient V/s Conscientious, Factor H: Shy V/s Venturesome, Factor I: ToMOMENh-Minded V/s Tender Minded, Factor L: Trusting V/s Suspicious, Factor M: Practical V/s Imaginative, Factor N:Forthright V/s Shrewd, Factor O :Placid V/s Apprehensive, Factor Q1: Conservative V/s Experimenting, Factor Q2: Group-dependent V/s Self sufficient, Factor Q3: Undisciplined Self conflicts V/s Controlled, Factor Q4:Relaxed V/s Tense).So this graph shows that there is a significant(0.05 level) difference between male &female Teachers of Bijapur District.

Mean scores SDs and t-value of personality traits of Teachers (Senior/Junior)

Category		A	B	C	E	F	G	H	I	L	M	N	O	Q1	Q2	Q3	Q4
Senior	M	6.78	5.12	6.85	6.53	6.33	6.65	6.55	4.46	4.27	6.16	5.45	4.75	6.17	6.84	4.71	4.79
	S D	2.01	1.89	2.66	2.77	2.83	2.94	2.64	1.49	2.05	2.98	1.91	1.81	2.68	2.78	1.65	1.81
Junior	M	5.12	4.02	5.31	5.12	5.17	5.89	5.30	5.55	5.13	6.43	5.69	5.69	5.85	5.61	3.23	5.81
	S D	1.9	1.74	1.83	1.88	1.76	1.83	1.49	1.75	2.23	2.89	1.84	1.68	1.79	1.63	1.59	1.84
t-value		7.9	5.10	7.0	6.13	5.14	3.16	5.95	6.81	4.09	0.93	1.33	6.7	1.45	5.59	9.25	5.66

** Significant at 0.01 level.

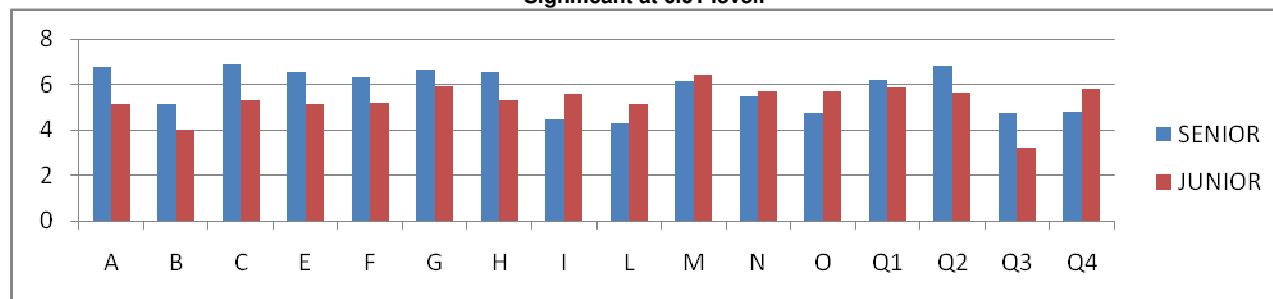


Table 2 presents mean scores, SDs and t-values of personality traits of senior Teachers and Junior Teachers. The personality consists of 16 factors ;(Factor A: Reserved V/s Outgoing, Factor B: Low V/s High Intelligence, Factor C: Affected by feelings V/s Emotionally Stable, Factor E: Humble V/s Assertive, Factor F: Sober V/s Happy-go-lucky, Factor G: Expedient V/s Conscientious, Factor H: Shy V/s Venturesome, Factor I: To MOMEN h-Minded V/s Tender Minded, Factor L: Trusting V/s Suspicious, Factor M: Practical V/s Imaginative, Factor N:Forthright V/s Shrewd, Factor O :Placid V/s Apprehensive, Factor Q1: Conservative V/s Experimenting, Factor Q2: Group-dependent V/s Self sufficient, Factor Q3: Undisciplined Self conflicts V/s Controlled, Factor Q4:Relaxed V/s Tense). This graph shows significance difference (level 0.05) that senior Teachers having the good score and remains positive in nature but Junior Teachers got lower score and remain negative in nature according to 16 factors of personality.

Conclusion

The following conclusions are drawn:

1. There is significant difference in the personality traits among male & female Teachers of Bijapur District.
2. There is significance difference among Seniour /Junior Teachers of Bijapur District.
3. There are many factor those influence on personality of Teachers. Age. Gender. Family. Educational level influence on Sportsman personality.

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“Effects Of Fartlek And Plyometric Training On Agility Performance Of Collegiate Male Silambam Players”

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Abstract

The purpose of the study was effects of fartlek and plyometric training on Agility performances of Male silambam players. 45 Male silambam players from various colleges. The selected subjects were of age group ranging from 18 to 25 years. The subjects were randomly divided into three groups and each group consisted of 15 subjects. Group-I underwent isolated fartlek training, Group-II was isolated plyometric training, and group-III act as control group was not given any special treatment. The experimental period was 12 weeks. Pre-test and posttest were taken before and after the training programme. The selected physical variables were agility. During the intervention phase, a modified training program was offered by a well-trained silambam coaches to the experimental group under the supervision of the researcher at a college in Tamilnadu. All participants were encouraged to continue their standard physical activities and routine procedures. The intervention phase 12 weeks and included morning 60 minutes and evening 60 minutes silambam coaching classes for alternative days in a week. To find out the significant Effects of fartlek and plyometric training on selected physical variable. The ANCOVA statistical technique was used to find the mean difference between the groups on physical variables. The results of the study revealed a significant group \times test interaction ($p < 0.05$). Follow-up analyses indicated that while no group differences in physical variables existed between the four groups of the pre-test. In posttest all the experimental groups were found to have significantly ($p < 0.05$) better performance on the physical variables than the control group. The findings of the present study suggest that plyometric training improved the physical variables in collegiate Male silambam players.

Introduction

Sports are integral part of the system of education. Training is a system of process in which Male silambam players improve their fitness to meet the demands of their sport. Training uses both general and specific exercises to develop the Male silambam players for their sport. Fartlek training refers to the training that uses some kind of fartlek to the contraction of a muscular force. In this training, the effort is normally performed more efficiently operating the Male silambam players. Plyometric training involving repeated rapid stretching and contracting of muscles to increase muscle power. The plyometric training system can provide great amounts of energy but this system fatigues quickly. People participating in speed or power events like silambam, football and basketball are very familiar with this form of energy production.

Methodology To achieve the purpose of the present study, 45 Male football players were selected from Tamil Nadu colleges, who had participated in the inter-collegiate level tournaments. They were selected at random as subjects. All the subjects were residents of Tamil Nadu state and they had a similar academic work and regular activities in accordance with the requirements of their college curriculum. The selected subjects were of age group ranged from 18 to 25 years. The subjects were randomly divided into three groups and each group consisted of 15 subjects. Group-I underwent isolated fartlek training, Group-II was isolated plyometric training, and group-III act as control group was not given any special treatment. The study was conducted 12 weeks training schedule. Agility was selected as a dependent variable and it was tested through 10 meters Shuttle run test. Pre test-post test-random group-research design was followed in this study. To find out the significant effects of aerobic and anaerobic training on selected agility, analysis of covariance (ANCOVA) was computed (Clarke and Clarke, 1972) for the data collected aerobic, anaerobic, combined and control groups during pretest and posttest separately for each variable.

Further to state, since four groups were involved, whenever the F ratio was significant, Scheffe's post hoc test was used determine which of the paired mean differed significance 0.05 was fixed.

Results And Discussion

The statistical analysis comparing the initial and final means of agility due to effect of fartlek and plyometric training on selected physical fitness variable namely, agility among collegiate Male silambam players is presented in Table I.

Table –I **Computation Of Analysis Of Covariance Of Agility**

	fartlek training	plyometric training	Control	Source of Variance	Sum of Squares	Df	Mean Squares	Obtained F
Pre Test Mean	13.05	12.96	12.9	Between	0.36	3	0.12	1.68
				Within	5.45	76	0.07	
Post Test Mean	12.89	12.76	12.9	Between	0.53	3	0.18	2.86*
				Within	4.73	76	0.06	
Adjusted Post Test Mean	12.83	12.77	13.9	Between	0.87	3	0.29	17.75*
				Within	1.23	75	0.02	
Mean Diff	-0.16	-0.20	0.01					

Table F-ratio at 0.05 level of confidence for 3 and 76 (df) =2.73, 3 and 75(df) =2.73 .*Significant

As shown in Table I, obtained F ratio of 1.68 on pre test means of the groups is not significant at 0.05 levels. This shows that there is no significant difference among the means of the groups at the initial stage and hence the random assignment of the groups is successful. The obtained F ratio on post test means is 2.86, and is significant at 0.05 level, being greater than the required F value of 2.73 to be significant at 0.05 level. Taking into consideration the pre test means and post test means, adjusted post test means are determined and analysis of covariance is done and the obtained F value 17.75 is greater than the required value of 2.73 and hence it is accepted. This shows that there are significant differences among the adjusted means on the collegiate Male silambam players. Since significant improvements were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results are presented in Table II.

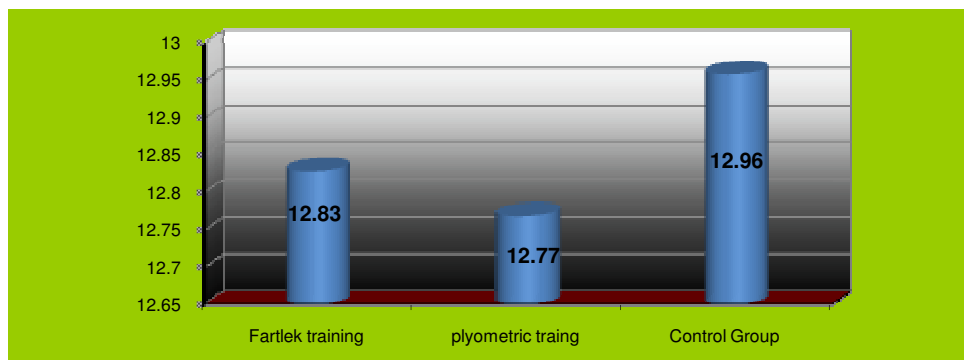
Table II **Scheffe's Confidence Interval Test Scores On Agility**

fartlek training	plyometric training	Control Group	MEAN DIFF	C.I
12.83	12..77		0.16*	0.12
12.83		12.96	0.13*	0.12
	12.77	12.96	0.29*	0.12

* Significant at 0.05 level.

The post hoc analysis of obtained ordered adjusted means prove that (1) there are significant differences between fartlek training and plyometric training groups (2) fartlek and control group (3) plyometric and control group and . It is found that (1) there was no significant difference between fartlek and plyometric group .The ordered adjusted means are presented through bar diagram for better understanding of the results of this study in Figure I.

Figure I



Bar Diagram On Ordered Adjusted Means Of Agility

Discussions On Findings

As shown in Table I, the obtained F value on the scores of pre test means (1.68) is less than the required F value, which proves that the random assignment of the subjects were successful and their scores in agility before the training were equal and there were no significant differences. Taking into consideration the pre test means and post test means, adjusted post test means are determined and analysis of covariance is done and the obtained F value 17.75 is greater than the required value of 2.73 and hence it is accepted. This shows that the interventional programmes significantly improve agility of the collegiate Male silambam players. The post hoc analysis of obtained ordered adjusted means prove that there are significant differences between (1) fartlek group and control group (2) plyometric group and control group. Comparing between the treatment groups, it is found that (1) there are significant differences between fartlek group and plyometric group. Thus, it is proved that while fartlek group and plyometric group improve agility of the college Male silambam players compared to control group, plyometric group is better than improving agility of the collegiate Male silambam players and the differences are significant at 0.05 levels. Bames Schilling and Falvo (2007) found large magnitude of differences on jumping and agility performance among different categories of athletes and agility covers 34% of the variance of performance. Under the twelve weeks fartlek and plyometric training the subjects were induced to exert more energy and training themselves. The findings proved that the twelve weeks fartlek and plyometric training had significant influence in improving agility of the Male silambam players. The finding of this study is in agreement with the findings of Bames Schilling and Falvo (2007) who found significant improvement in run time, agility and improved performance due to frequent training protocol.

Conclusions

1. It is concluded that effects of fartlek and plyometric training Significantly improve agility of the college Male silambam players.
2. The comparing among the treatment groups, the plyometric training would be better than fartlek training group and control agility of collegiate Male silambam players.

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Effect Of Physical Exercise Yoga Asana And Aerobics On Hematological Variables

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Abstract

The objective of this study was to find out the changes in selected hematological variables through Physical exercise, yoga asana and aerobics . For this purpose, thirty Post graduate students of Physical Education were randomly selected as a subjects and name as Physical group, yoga group and aerobics group and were given Physical exercise, yoga asana practice and aerobic dance practice respectively for an hour from 4pm to 5pm in alternative days for twelve weeks. Blood samples from the selected subjects were collected before and after the training period to analyze the changes in hematological variables such as hemoglobin, glucose and cholesterol through laboratory bleed testing. They collected from three groups were statistically analyzed for significance by using analysis of covariance and Post hoc test. The finding of this study showed that there was significant improvement due to the twelve weeks of Physical activity, yoga asanas and aerobics group out performed the asana group and physical groups in selected hematological variables such as hemoglobin, glucose and cholesterol, due to twelve week of aerobics training. The investigator suggests this aerobics dance practice are fun and exciting, using musical rhythms to naturally motivate and thus increasing the efficiency of practice.

Key Words:Physical Exercise, Yoga, Asana, Aerobics and Hemoglobin, Glucose and cholesterol.

Introduction:

Health is the level of functional and or metabolic efficiency of a living being. Hematology, also spelled as hematology is derived from a Greek word 'haima' which means "blood" is the branch of internal medicine, physiology, pathology, clinical laboratory work, and pediatrics that is concerned with the study of blood, the blood-forming organs and blood diseases (Pal.2011). Hemoglobin is a protein that is carried by red cells. It picks up oxygen in the lungs and delivers it to the peripheral tissues to maintain the viability of cells. Hemoglobin is made from two similar proteins that "stick together". Each hemoglobin molecule is made up of four heme groups surrounding a globin group. Heme contains iron and gives a red color to the molecule. Blood sugar, also known as blood glucose, is the body's fuel that feeds the brain, nervous system, and tissues (Maton, 1993). Glucose is the primary source of energy for the body's cells, and blood lipids are primarily a compact energy store. Glucose is transported from the intestines or liver to body cells via the bloodstream, and is made available for cell absorption via the hormone insulin, produced by the body primarily in the pancreas (Chohan,1994).Cholesterol is a soft, was-like substance that is a required building block of all cells in the human body. It is produced naturally in the liver and some cholesterol may come from diet,. It is carried from the liver to the rest of the body in low density lipoproteins (LDL or "Bad" cholesterol) and back to the liver in high density lipoproteins (HDL or "Good" cholesterol). In addition to producing cell membranes, cholesterol is critical to the production of the hormones estrogen and testosterone as well as vitamin D and bile acids that assist in the proper digestion of fat (Maton, 1993).

Need For The Study:

Teacher training refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community. Teacher training to learn the process of educating and teaching others through quality education(Brenowitz, 2003).

The objective of this study was to find out the effect of Physical exercise, Yoga asana and aerobic on hematological variables of Post graduate students of Physical Education.

Hypothesis Of The Study:

It was hypothesized that there would be significant difference in selected hematological variables such as hemoglobin, glucose and cholesterol among physical exercise group, yoga asana group and aerobics group due to twelve weeks of training.

Methodology Of The Study:

For this purpose, thirty Post graduate students of Physical Education were randomly selected as a subjects from Dr. Babasaheb Nandurkar college of Physical Education Yavatmal, HVSKM College of Physical Education Yavatmal and Sardar Patil College of Physical Education Yavatmal, and named as Physical group, Yoga asana group and Aerobics group respectively. Their age was ranged between 22-24 years. Physical exercise such as jogging, straching, fast walking, spot jumping, conditioning were given to Physical group. Yoga asana such as Trikonasana, Vrikshasana, Uttanapadasana, Viparita Karani, Shalabhasana, Bhujangasana, Naukasana and Dhanurasana were given to Yoga asana group. Floor aerobic dance to fast beat music were given to the Aerobic group. Training was given as per the schedule to the selected groups for an hour from 4pm to 5pm in alternative days for twelve weeks. Blood samples from the selected subjects were collected before and after the training period to analyze the changes in hematological variables such as hemoglobin, glucose and cholesterol through laboratory blood testing.

Statistical Technique Used:

The data collected from three groups were statistically analyzed for significance by using analysis of covariance and Post hoc test. No attempt was made to equate the groups in any manner during the study. Hence to make adjustments for differences in the initial means and test the adjusted post test means for significant difference the analysis of covariance was used.

Analysis And Interpretation Of Data:

Table No: I
Computation of Analysis of Covariance on Hemoglobin:

Test	Physical Exercise Group	Yoga asana Group	Aerobic Group	Sources of Variance	Sum of Squares	df	Mean Square	Obtained F
Pre Test	11.7	11.45	11.38	Between	1.12	2	0.56	0.75
				Within	42.54	57	0.75	
Post Test	13.3	13.54	14.84	Between	27.65	2	13.83	9.52*
				Within	82.82	57	1.45	
Adjusted Post Test	13.14	13.58	14.95	Between	34.87	2	17.44	17.97*
				Within	54.33	56	0.97	
Mean Gain	1.6	2.09	3.47					

Table f-ratio at 0.05 level of confidence for 2 and 57(df) is 3.23*

*Significant at .05 level of confidence

Table No.II
Scheffe's Post HOC Test on Hemoglobin

Adjusted Test Mean				Required CI
Physical Exercise Group	Yoga Asana Group	Aerobic Group	Mean Difference	
13.14	13.58	-	0.44	0.78
13.14	-	14.95	1.81*	0.78
-	13.58	14.95	1.37*	0.78

*Significance.

Analysis of covariance and Scheff's Post -hoc test Table I and II respectively showed that there is significant difference was found in hemoglobin between aerobic and physical exercise groups and also between aerobic and yoga asana groups and results indicate that there is no significant difference was found in hemoglobin between aerobics and yoga asana groups. Therefore it is proved that aerobics group increased the level of hemoglobin when compared to other two groups,

Table No III
Computation of Analysis of Covariance on Blood Glucose

Test	Physical Exercise Group	Yoga asana Group	Aerobic Group	Sources of Variance	Sum of Squares	df	Mean Square	Obtained F
Pre Test	98.4	98.05	98.3	Between	1.3	2	0.65	0.01
				Within	6199.95	57	108.77	
Post Test	94.95	93.5	87.4	Between	642.1	2	321.05	3.38*
				Within	5416.75	57	95.03	
Adjusted Post Test	94.82	93.68	87.36	Between	646.25	2	323.13	36.89*
				Within	490.55	56	8.76	
Mean Gain	3.45	4.55	10.9					

Table value at 0.05 level of confidence for 2 and 57(df) is 3.23

*Significance at .05 level of confidence

Table No. IV
Scheffe's Post HOC Test on Blood Glucose:

Adjusted Test Mean				Required CI
Physical Exercise Group	Yoga Asana Group	Aerobic Group	Mean Difference	
94.82	93.68	-	1.14	2.33
94.82	-	87.36	7.46*	2.33
-	93.68	87.36	6.32*	2.33

*Significance

Analysis of covariance and Scheffe's Post-hoc test Tables III and IV respectively showed that there is significant difference was found in blood glucose between aerobic and Physical exercise groups and also between aerobic and yoga asana groups and results indicates that there is no significant difference was found in blood glucose between Physical exercise and yoga asana groups. Therefore it is proved that aerobics decreased the level of blood glucose to normal when compared to other two groups.

Table No. V
Computation of Analysis of Covariance on Total Cholesterol

Test	Physical Exercise Group	Yoga asana Group	Aerobic Group	Sources of Variance	Sum of Squares	df	Mean Square	Obtained F
Pre Test	224.4	224.35	225	Between	5.23	2	2.62	0.03
				Within	4769.35	57	83.67	
Post Test	210.95	212.2	204	Between	780.7	2	390.35	5.40*
				Within	4118.15	57	72.25	
Adjusted Post Test	211.09	212.37	203	Between	877.43	2	438.72	16.58*
				Within	1481.71	56	26.46	
Mean Gain	13.45	12.15	21					

Table value at 0.05 level of confidence for 2 and 57(df) is 3.23*

*Significance at .05 level of confidence

Table No. VI
Scheffe's Post HOC Test on Test Cholesterol:

Adjusted Test Mean				Required CI
Physical Exercise Group	Yoga Asana Group	Aerobic Group	Mean Difference	
211.09	212.37	-	1.29	4.05
211.09	-	203.69	7.40*	4.05
-	212.37	203.69	8.68*	4.05

*Significance

Analysis of covariance and Scheffe's Post-hoc test Tables V and VI respectively showed that there is significant difference was found in total cholesterol between aerobic and Physical exercise groups and also between aerobic and yoga asana groups and results indicates that there is no significant difference was found in blood glucose between Physical exercise group and yoga asana groups. Therefore it is proved that aerobics group decreased the level of total cholesterol when compared to other two groups.

Discussion:

As the results implied that there was significant difference in the improvement of selected hematological variables such as hemoglobin, glucose and cholesterol among Physical exercise group, yoga asana group and aerobics group, the stated hypothesis was accepted at .05 level of significance.

Conclusion:

The findings of this study showed that there was significant improvement due to the twelve weeks of Physical exercise, yoga asanas and aerobics practice among the selected women teacher trainees. The aerobics group outperformed both yoga asana and physical exercise groups in selected hematological variables such as hemoglobin, glucose and cholesterol, due to twelve weeks of aerobics training. This study suggests the aerobics practice with a minimum of three times a week for at least thirty minutes to get full benefits of aerobic dance workouts and to achieve a better level of fitness. Aerobics is a fun activity that helps in strengthening the body, and gives energy to carry out day to day activities effectively and efficiently among the teacher trainees which in turn shapes the lives of the students and the progress of the Nation.

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A Comparative Study On Agression Group Cohesion And Self Concept Among South Zone Senior Woman Volley Ball Players

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Abstract

The purpose of this study was undertaken to study the differences among South Zone senior volleyball women players on selected psychological variables viz., Aggression, Groups-cohesion and Self-concept. The study was conducted on a total population of 60 female volleyball players as subjects drawn from Senior South Zone National championship held in the year 2013. These subjects belonged to different States in South India viz., Andhra Pradesh, Karnataka, Kerala, Pondicherry and Tamilnadu. The age of the sample is above 21 years. Subjects were selected on the basis of their participation in Senior South Zone National Volleyball Championship. Different psychological testing techniques were to measure the score of the psychological variables. They are Aggression inventory developed by Smith (1979), the Group-environmental Cohesion scale developed by Webmayers (1976) and Self-concept scale developed by Piers-Harris (1970). In addition to these a personal information schedule also has used to collect general information such as age, sex, religion etc. Individual administration is the method followed in order to collect data the subjects. The obtained data have been analyzed by using ANOVA and Scheffe's procedure. Further graphical representations are made for the score obtained by the different teams of subjects, using the different variables under the study.

Key Words: Psychological Variables, Female Volleyball Players.

Introduction

Sports is an activity pursued for exercise or pleasure, performed individually or in a group, often involving the testing of physical capabilities and usually taking the form of a competitive game. Sport is the most wonderful human activity that can make us fit. In general terms, it is an unparalleled activity for one's personal fitness, health and enjoyment and fulfils an inmate need in everyone, which of course varies from person to person at different time. Volleyball has come a long way from the dusty-old YMCA gymnasium of Holyoke, Massachusetts, USA, where visionary, William G. Morgan, invented the sport back in 1895. It has seen the star of two centuries and the dawn of new millennium. Volleyball is now one of the biggest events in international sports and the FIVB, with its 218 affiliated national federation is the largest international sporting federation in the world. Over the last decade particularly, Volleyball has witnessed unprecedented growth. The success of the World Championship, the US\$15 million World League, Grand Prix, World Cup, Grand Champion Cup, Olympic Games and the level of participation at all levels internationally continues to grow exponentially. A healthy mind in a healthy body philosophy dates back to the ancient Chinese and Greek civilizations. However, it is only in recent years that the discipline, now known as sport psychology, has become recognized and acknowledged as a major component in the science of sport performance.

Methodology

The purpose of this study was undertaken to study the differences among South Zone senior volleyball women players on selected psychological variables viz., Aggression, Groups-cohesion and Self-concept. The study was conducted on a total population of 60 female volleyball players as subjects drawn from Senior South Zone National championship held in the year 2013.

These subjects belonged to different States in South India viz., Andhra Pradesh, Karnataka, Kerala, Pondicherry and Tamilnadu. The age of the sample is above 21 years. Subjects were selected on the basis of their participation in Senior South Zone National Volleyball Championship. Individual administration is the method followed in order to collect data the subjects. The obtained data have been analyzed by using ANOVA and Scheffe's procedure. Further graphical representations are made for the score obtained by the different teams of subjects, using the different variables under the study.

Results

After the data have been collected, the next step in research process is the analysis of data. Three psychological tests have been used to collect data. They are Aggression Group-cohesion and Self-concept. The collected data were consolidated, coded and subjected to statistical analysis using different statistical techniques mentioned in the previous chapter. The major statistical techniques were ANOVA and Scheffe's procedure. The results thus obtained are presented, interpreted and discussed in the present chapter. The details of analysis were given below.

Table-1
Analysis of variance for aggression

Source of Variance	Sum of squares	df	Mean Square	'F' Value	Table Value
Between Groups	222.767	4	55.692	15.101*	2.560
With in Groups	202.833	55	3.688		

Significant at 0.05level

The table 1 reveals that the obtained 'F' ratio for Aggression is 15.101. It is higher than required table value of 2.560 level of confidence. This shows that there is significant difference among South Zone Senior Women Volleyball Players.

Table-2
Analysis of variance for Group-Cohesion

Source of Variance	Sum of squares	df	Mean Square	'F' Value	Table Value
Between Groups	4109.400	4	1027.356	15.894*	2.560
With in Groups	3555.000	55	15.894*		

*Significant at 0.05level

The table 2 shows that the obtained 'F' value 15.894 is higher than the required table value 2.560.hence it is significant at 0.05 level of confidence.

Table-3
Analysis of variance for Self-Concept

Source of Variance	Sum of squares	df	Mean Square	'F' Value	Table Value
Between Groups	141.733	4	35.433	9.139*	2.560
With in Groups	213.2500	55	3.877		

Significant at 0.05level

The table 3 reveals that the obtained 'F' value 9.139 is higher than the required table value 2.560.Hence it is significant at 0.05 level of confident.

Analysis of Data and Discussion

The result obtained for ANOVA (table 1) shows that in all the 5 States senior volley ball women players are having significant difference among them. In order to make the result more specific, scheffe's procedure of has been done. The mean value of all 5 teams have been compared each other. It was seen that all the different combinations compare each other some of them are showing significant difference. It shows that there will be significant differences among South Zone Senior Volleyball Teams on aggression.Discussions based on results obtained for Group- cohesion of South Zone Senior Volleyball Women players are showing significant differences. The result obtained through Scheffe's procedure so that Kerala and Andhra Pradesh State teams are showing are more differences compare to other State teams. This may be due to their group environmental factor of training and practice.The results of ANOVA on self –concept show that all different South Zone Senior Volleyball Women players are showing significant differences. This shows that all the different teams are having different approach to their self-concept.

To make the result more specific scheffe's procedure was used. Here Kerala and Tamilnadu teams are having more difference compare to other teams. This shows that Kerala and Tamilnadu teams are having more self-concept compare to other teams.

Conclusions

The present investigation was undertaken to study the differences among South Zone senior volleyball women players on selected psychological variables viz., Aggression, Group-cohesion and Self-concept. The study was conducted on a total population Championship held in the year 2013. These subjects belonged to different States in South India viz., Andhra Pradesh, Karnataka, Kerala, Pondicherry and Tamilnadu. The age of the sample South Zone National Volleyball Championship. The study was specially focused on three major psychological variables Aggression, Group-cohesion and Self-concept. Based on the analysis of results and discussions of finding on this study, the

Following conclusions have been drawn.

1. There is a significant difference on Aggression among South Zone Senior Volleyball women players.
2. It is also concluded that there is significant difference Group-cohesion among South Zone Senior Volleyball women players.
3. Further it is also concluded that there is significant difference on Self-concept among South Zone Volleyball women players.
4. When the various South India States viz., Andhra Pradesh, Karnataka, Kerala, Pondicherry and Tamilnadu, we consider to was concluded that the teams differ significantly

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Is Green Tea Reduce The Fat?

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Abstract

When you think of the term “green tea,” exercise and body building probably aren’t the first images that spring to mind. But after learning about some of the improvements that can come from adding green tea extract to your regimen, you may have a different opinion. The health benefits of green tea extract are almost too numerous to list, and they extend well beyond the walls of the exercise room. Not only has green tea extract been shown to promote fat loss to give you a lean and ripped body, it has also been noted as an immune system booster, helping you fend off colds. Further, it can potentially reduce your risk of developing certain cancers, such as prostate cancer, and green tea extract has the ability to lower your cholesterol levels. Tea is the second most commonly consumed beverage worldwide. And, with good reason, tea is a calorie free beverage boosting with natural benefits. If you get bored with water, brew a cup of tea and toast to good health. Each of the four types of tea, green, black, white and oolong, are made from the leaves of the *Camellia Sinensis* plant. The differences in color and taste among each kind of tea are due to differences in processing of the tea leaves. Both black and green tea has been researched for their health benefits, its green tea that is of most interest to scientists. This is because green tea contains significantly higher levels of naturally occurring powerful antioxidants called ‘flavonoids’. There are many different types of flavonoids in the plant kingdom; in green tea however, the main flavonoids are ‘catechins’ of which four are present in high concentrations

- epigallocatechin-3-gallate (EGCG) – approximately 59% of the total of catechin content;
- epigallocatechin (EGC) – approximately 19% of total;
- epicatechin-3-gallate (ECG) – approximately 13% of total;
- Epicatechin (EC) – approximately 6.4% of total.

Green tea extract also contains a small amount of caffeine, providing you with an added boost of energy and focus as you go about your daily work or exercise routine. Be aware that if you suffer from high-blood pressure, high stress levels, or any other symptoms that may be compounded with caffeine intake, green tea extract may not be advisable for you. Sports Nutrition carries the best green tea formulas, always delicious and certain to give you the benefits you need. If you’re looking for a way to burn fat, increase muscle mass and promote your overall health, don’t hesitate another minute-purchase some green tea extract today! The discovery of green tea may have occurred about 4,000 years ago, but its popularity has recently peaked in the bodybuilding community. This intensely studied compound is a staple in the formulas of top fat-burning supplements - and with good reason!

Let's start at the root of this green tea phenomenon. Green tea, along with black and oolong, comes from the tea plant *Camellia sinensis*. This plant is an evergreen shrub that is native to mainland South and Southeast Asia, but can now be found across the world in tropical and subtropical regions. Green, black and oolong tea may all come from the same plant, but the difference stems from the way each is prepared. Green tea, unlike black and oolong tea, is not fermented, so the active constituents are unaltered in the herb.. These incredible polyphenols are more commonly known in the scientific community as flavanols or catechins.

The main catechins in green tea are epicatechin, epicatechin-3-gallate, epigallocatechin and, the one with the highest concentration, epigallocatechin-3-gallate or EGCG. A lot of the studies done on green tea have focused on the highly concentrated EGCG catechin, but there are also plenty of studies on catechins in general. The results of these studies are vital for every bodybuilder trying to get ripped.

Connections Between Green Tea and Weight Loss

Green tea is one of the latest, popular methods to lose weight. Whether it is used as a supplement, in a diet pill, or as a drink, green tea has been shown to be beneficial in assisting the body in shedding pounds. Green tea tends to boost the metabolism, making the body burn more calories and tackle stored, excess fat. Why does green tea affect the metabolism? Its secret lies in a combination of antioxidants and caffeine, both of which work together to make the body function at optimal capacity. Green tea also reduced the amount of fat that is made in the body. When foods are consumed that contain fats and sugars, they are transformed into triglyceride, a power source for the body. This is essential for all vital functioning in the body. However, when there is an overload of either fat or sugar, triglyceride will cause fat to build up in the body. Green tea contains polyphenols, known as catechins, which break down triglycerides in the body. Green tea has been shown to increase stamina for exercise as well.

- Green Tea causes carbohydrates to be released slowly, **preventing rises in blood sugar levels** and this causes your body to burn fat.
- **Green Tea prevents you from gaining weight** by stopping the movement of sugar into your fat cells. Evidence shows that drinking green tea is related to reductions in body fat.
- In a test where 10 men were given Green Tea, caffeine, or a placebo with breakfast, lunch, and dinner. **The men who took green tea burned more fat** than the placebo and caffeine groups.
- Research shows **you can burn 35-to-43% more fat** during the day when you drink 3-to-5 cups of Green Tea
- The International Journal of Obesity states that Green Tea contains polyphenols which **causes your body to produce heat that burns off your body fat**.
- The University of Chicago's Tang Center for Herbal Medical Research shows **Green Tea reduces the fat deposits under your skin** and the fat in your belly area.
- Studies show that when you drink Green Tea every day for 3 months **you'll lose more body fat than those who drink regular tea**.
- Lots of Green Tea weight loss studies prove **green tea lowers blood sugar**. A lower blood sugar reduces making you not eat as much so you won't gain any weight.
- Several studies on obesity have concluded that people who've been drinking Green Tea for more than 10 years **showed lower body fat percentages** compared with those who don't drink green tea regularly. That's a proven fact!

Several studies suggest green tea may promote weight loss by stimulating the body to burn abdominal fat. Green tea contains catechins, a type of phytochemical that may briefly affect the metabolism. To get the most benefit, you may need to drink green tea several times a day.

Dosing considerations for Green Tea.

The following doses have been studied in scientific research:

Doses of green tea vary significantly, but usually range between 1-10 cups daily. The commonly used dose of green tea is based on the amount typically consumed in Asian countries, which is about 3 cups per day, providing 240-320 mg of the active ingredients, polyphenols. To make tea, people typically use 1 teaspoon of tea leaves in 8 ounces boiling water.

- **For headache or restoring mental alertness:** tea providing is up to 250 mg of caffeine per day, or approximately 3 cups of tea per day.
- **For improving thinking:** tea providing 60 mg of caffeine, or approximately one cup.
- **For reducing cholesterol:** drinking 10 or more cups per day has been associated with decreased cholesterol levels. Theaflavin-enriched green tea extract, 375 mg daily for 12 weeks, has also been used for lowering cholesterol.

Green tea has been used for thousands of years and has many benefits. One of them is green tea's thermo-genic properties. This means the green tea causes our metabolism to heat up, or consume fuel at a faster rate. The faster our metabolism, the more fuel it needs. We store fat as fuel for our body. Your metabolism, consuming fat at a faster rate, causes you to lose fat weight. Green tea also creates the feeling of fullness, making it a very effective appetite suppressant. When your body is no longer constantly craving foods, you can concentrate on healthier eating habits.

A proponent in green tea called EGCG reduces the amount of lipids (fat) you absorb when you eat. This benefits your cholesterol level, causes weight loss and is very healthy for your heart.

Then read on for some important tips:

Replace your morning coffee with some green tea. **Green tea** has caffeine, so it can give you a boost when starting off your mornings, but it can also kick-start your metabolism into action so that you burn more calories all day long. Try to not add too much filler to the tea, however – things like sugar, honey and milk add calories that can counteract with the **green tea's weight-loss** properties. You can use green tea as a supplement to meals, as well. Drink a cup before or right after eating, so that you don't eat too much. Do be aware that since green tea contains a diuretic, you may also be visiting the restroom more frequently – but that's not necessarily a bad thing! **Water weight** counts on the scale, too.

When you drink green tea regularly (think every day for several months as opposed to having off and on weeks) you experience **extra weight loss benefits**. The more you stick to it, the more it trains your body to absorb **less fat** in the long run. This is a good reason to keep drinking, even if you haven't noticed a lot of benefits in the first couple of days. Some things simply take time, but are worth waiting for.

Learning how to lose weight with green tea opens the doors to other good habits. Because green tea is such an effective appetite suppressant, your cravings for snacks and bad foods will be stopped. No longer controlled by food, you can control what foods you eat. Use this time to learn new and healthier ways of eating. Begin to replace foods high in fat and calories with foods that are better for you. If you reduce your caloric intake by just 500 calories a day, you will lose one pound a week! Your body will begin to feel more vigorous with smarter choices in balanced, healthy foods.

Green tea does more than kick-start your metabolism. Green tea contains an amino L-theanine. This amino increases your brain wave activity, leading to a more focused, yet calm, piece of mind. Take advantage of this energy by taking a simple walk before starting your day. A simple walk every day can lose up to three pounds per month! That is over thirty pounds in one year. Walking is good cardiovascular exercise and burns calories. Exercise also releases endorphins, making you feel great! Green tea keeps your arteries around your heart open and flexible, making it a good addition to a heart-healthy diet.

When choosing green tea as a component in a weight loss program, a quality product from a reputable source is the first step. Next, it's going to take old-fashioned diet and exercise to get the best results. No matter how hard people try to get that instant solution, losing weight takes work. Eating a calorie-reduced diet with plenty of produce, lean proteins, and whole grains will provide the body with the proper fuel. Staying hydrated with eight to ten glasses of water is a must. Add daily exercise and green tea as a body booster to shed pounds. **Always remember to talk to your doctor before taking any dietary supplement.**

Now that you have learned how to **lose weight with green tea**, tell others what you know! Obesity is reaching epidemic proportions. Almost one in three people are overweight or obese. Losing weight with green tea may change someone's life!

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Effect of Plyometric Training on Agility, Balance and Playing Ability of karate Players

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Abstract

The present study was undertaken to find out the effects of Plyometric exercise to develop the motor fitness components of karate player. This experimental design consists of an experimental group which was compared with a control group for the testing of effects of specific training program on selected motor fitness components i.e. Agility and Balance and performance in Karate. This experimental design was the parallel group design where the experimental group received the Plyometric training and the control group did not. The result could compare the effects of ten weeks training programme. The sample of the present study comprised of 40 boys age ranged from 13 to 15 years. The collected data were analyzed by using 't' test. After the Ten weeks training it was found that there is an improvement in the selected motor fitness component and also in Karate skill.

Keywords: Plyometric Exercise, Agility, Balance

Introduction :

Plyometric is defined as exercises that enable a muscle to reach maximum strength in as short a time as possible. This speed-strength ability is known as power. Plyometric Training are drills which involve combination of jumps-in-place and standing jump they require maximal effort. Plyometric is the term now applied to exercises that have their roots in Europe, Where they were first known as simply jump training. Interest in this jump training increase during the early 1970 as east European Athletes emerged as powers on the world sport scene, but the actual term Plyometric was first coined in 1975 by Fred wilt, one of Americas track and field coach, Latin origin, plyo + metric is interpreted to mean "measurable increases". However various training programme proved that Plyometric exercise are effective in the development of the motor fitness components. Therefore the researcher realized the importance of the Plyometric exercise in order to develop motor fitness Component and these in turn also helpful in the development of skill and performance among the Karate players.

Objectives :

The specific objectives for the present study are as under :

- To compare the mean gain scores of Agility as measured by 4 x 10 m Shuttle run test of experimental group and control group
- To compare the mean gain scores of Balance as measured by Stroke stand test of experimental group and control group
- To compare the mean gain scores of Playing Ability in Karate of experimental group and control group

Hypothesis :

The null hypothesis to be tested was formulated as under :

H₀1: There is no significant difference in mean gain scores of Agility as tested by 4 x 10 m Shuttle run Test. Between the Experimental & Control group, due to the Plyometric Training Programme.

H₀2: There is no significant difference in mean gain scores of Balance as tested by Stroke stand Test, between the Experimental & Control group, due to the Plyometric Training Programme.

H₀3: There will be no significant difference in mean gain scores of Playing Ability in Karate. Between the Experimental and Control group, due to the Plyometric Training Programme

Design of the study :

The design of the present study was parallel group design. The experiment design of the study was **Pre test – Post test control group design**. A sample of Forty (n=40) male subjects was selected randomly from Shitoryu Karate do Academy of India in Mumbai. Aged 13 to 15 years Karate boys.

Dependent Variables:

Selected motor fitness components & skill test of karate was considered as dependent variables.

Sr.No.	Variable	Test	Unit
1	Agility	4x10 m Shuttle run	Seconds
2	Balance	Stroke stand test	Seconds
3	Playing Ability in karate	Karate Playing skills put forward	Points

Independent variables:

The following Plyometric training programme was considered as Independent variables

Stadium Hop	Depth jump with 180 Degree turn
Depth Jump	Single foot side to side Ankle hop
Standing Long Jump With Later Sprint	Single leg hops
Standing Long jump with Sprint	Zig Zag Drill
Cone Hops with change of Direction sprint	Straight Pike jump

Statistical Analysis:

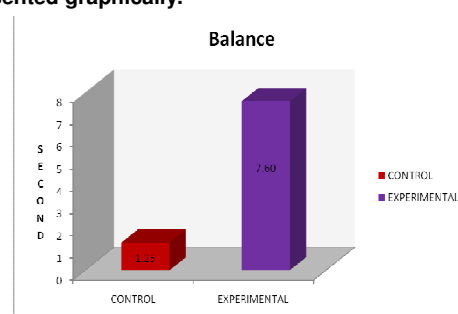
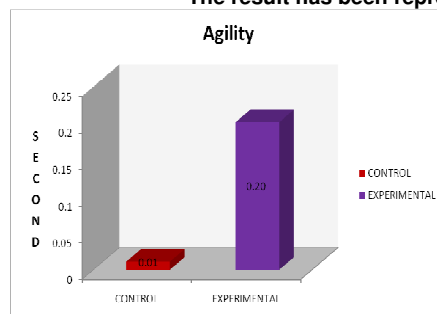
Since, there were two groups for this experimental study viz., experimental group and control group, where in the researcher has decided to compare within group and between group mean gain in order to see the efficacy of treatment, the 't' test was appropriately used for the data analysis.

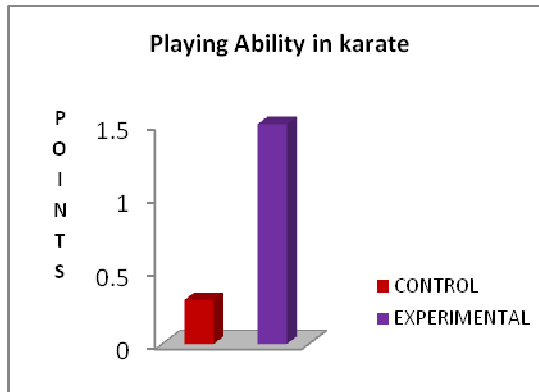
Result Of The Selected Variables On The Experimental Group (Within Group)

Table 1 show that the comparison of mean gain in selected variables of the control and experimental groups. The data was analyzed by using paired sample 't' test on between group.

Table 1 Comparison of Mean Gain in selected variables between the Control and Experimental Group (between group n =40)						
Variable	Group Compared	Mean Gain	MEAN DIFF	Std Err Mean Gain	't'	Sig.
Agility	Control	0.01	0.19	0.11	5.72	0.000 P<0.05
	V/S experimental	0.20				
Balance	Control	1.25	6.35	0.68	3.58	0.001 P<0.05
	V/S Experimental	7.60				
Playing Ability in karate	Control	0.30	1.20	0.22	2.59	0.015 P<0.05
	V/S experimental	1.50				

The result has been represented graphically.





Findings:

After the analysis and interpretation of the data the following findings are as follows:-

- The Plyometric training programme improves the Agility significantly.
- The Plyometric training programme contributes to improve the Balance significantly.
- The Plyometric training programme helps to improve the Playing Ability in karate significantly.

Conclusion

On the basis of the results obtained and the interpretation of the data, the present study concludes-

- The Plyometric training programme for the 10 weeks could significantly improve the Agility and balance of Motor Fitness components and also the playing ability of karate players.

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A Comparative Study On Speed Among Football Players And Basketball Players Of Engineering College Students In Sgb Amravati University,Amravati

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Abstract:

Human growth and development to become an athlete is a long journey. Physical features are partly inherited genes but also developed through versatile training, using the developmental stages and specialization models as guidelines through childhood .to become a good Basketball and Football player one must have a high level of fitness to maintain the high levels of intensity of basket and football game. This is very versatile ball game and it includes continuous chain of events. The main objective of the present study is to compare the speed and recognizing the best in speed among football players and basketball players of three engineering college in Amravati university, Amravati. 15 football and 15 basketball player of each college those who have participated in the inter collegiate football and basketball tournament for the year 2011-12 and 2012-13 were taken for the study the 50 meter run test is used to measure the speed of a football player and basketball player the study is limited to the football players and basketball players of three engineering college in Amravati university .The study shows that the football players are having good speed compare to basketball players. This study shows that the speed training is good among football players.

Key Words: Speed, football, basketball, etc.

Intrduction

Football refer to a number of sports that involve, to varying degrees, kicking a ball with the ball with the foot to score a goal .The most popular of these sports world wide is association football, more commonly known as 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 rule football, Canadian football, Gaelic football, rugby league, rugby union and other related games. Thus variations of football are known as football codes. Various forms of football can be identified in history, often as popular present games. Contemporary codes of football can be traced back to the codification of these game at English public school in the eighteenth and nineteenth century. The influence of power of the empire allow these rule of football to spread to areas of British influence outside of the directly control empire, though by the end of the nineteenth century, distinct regional codes were already developing: Gaelic, for example, deliberately incorporated the rules of local traditional football games in order to maintain there heritage. In 1888, the football league was founded in England, becoming the first of many professional football competitions. During the 20th century several of the various kinds of football grew to become among the most popular team sport in the world.Basket is sports played by two teams of five players on a rectangular court. T objective is to shoot a ball through a hoop 18 inches (46cm) in diameter and 10 feet (3.0m) high mounted to a back board at each end. Basket is one of the world 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 point for the shooting team if a player is touching or closer to the basket than the three-point line, and three point if the player is behind the three-point line. The team with the most point at the end of the game wins, but additional time may be used 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 teammate .It is a violation to move without dribbling the ball, to carry it, or to hold the ball with both hands then resume dribbling.

Speed Tests Definition : speed test are designed to assess how quickly a test taker is able to complete the items within a set time period. The primary objective of speed tests is to measure the person's ability to process information quickly and accurately, while under duress. Speed test contain more items than the vast majority of applicants will be able to answer in the time allotted, and the time are usually not high in difficulty. Scoring is based on how many questions are answered by the applicant within the time limit. Often these tests are used by human resource professionals and I/O Psychologists during the hiring process.

Methodology

AIM: To know the speed between football players and basketball players of three engineering college Amravati university ,Amravati.

Sample: The sample for present study of fifteen football player and basketball players between the age group of 20 to 25 years of engineering college student in Amravati university, Amravati who has taken part in inter collegiate tournament 2011-12 and 2012-13.

Tools: 50 meter Run is used to collect the data for speed

Limitations: The study is limited to student of three engineering college Amravati university, Amravati and fifty meters run is chosen for the study to find out the speed among football and basketball player.

Procedure of data collection:The football & basketball Player are made to run 50meters in each batch of two members. The timing is taken by the IAAF qualified technical official in Athletics at Amravati university, Amravati grounds.

50 Meter Run

Purpose: to measure the speed among the football and basketball players.

Equipment: Two stop watches or one with a split second timer speedometer

Description: It is preferable to administer thus test two players at a time. Both have to take standing start position behind the starting line. The starter will use the command on your marks & clapper will be clapped.

Rules:The starter may take any position the starting line. On the command on your mark and the player runs as fast as he can across the finishing line. Do not slow up until you across the finish line. Then he may down slow gradually.

Scoring: The score is the elapsed time to the nearest tenth of a second between the starting single and the instant the player crosses the finish line time.

Analysis

Table-1:The speed among the football players of selected three colleges

Sr.No	College-1	College-2	College-3
1	7.12	6.97	7.26
2	7.25	7.06	6.94
3	7.2	6.93	7.08
4	7.23	7.05	6.9
5	6.78	6.89	7.15
6	7.07	6.96	6.87
7	7.04	7.13	7.16
8	7.07	6.98	7.24
9	7.05	7.23	6.67
10	7.15	7.18	6.71
11	6.98	6.86	7.10
12	6.92	6.92	7.05
13	7.21	7.18	7.20
14	7.03	7.00	6.70
15	6.88	7.14	7.09

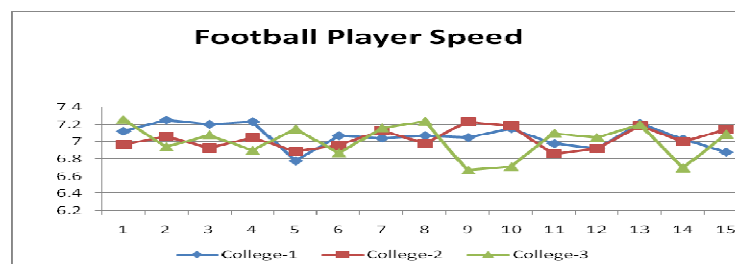
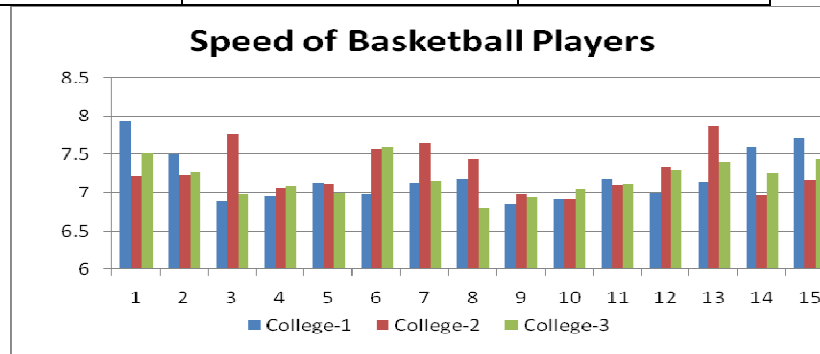


Table-II: The speed among the basketball players of selected three colleges

Sr.No	College 1	College2	College3
1	7.93	7.22	7.53
2	7.51	7.23	7.27
3	6.89	7.78	6.98
4	6.96	7.07	7.10
5	7.13	7.12	7.00
6	6.98	7.57	7.60
7	7.13	7.65	7.15
8	7.18	7.45	6.80
9	6.86	6.98	6.95
10	6.92	6.92	7.05
11	7.18	7.11	7.12
12	7.00	7.33	7.30
13	7.14	7.88	7.40
14	7.6	6.97	7.26
15	7.72	7.16	7.45



Result And Discussion:

On the basis of above data presented in table 1, to know the speed of football players of three engineering college in Amravati university, Amravati statistical analysis is carried. The result of the analysis are as follows

Sr.No	College1	College2	College3
Mean	7.065333	7.032	7.008
Std.deviation	0.135429	0.116754	0.198717
Mean error(1)	0.009029	0.007784	0.013248

On the basis of above data Presented in Table 2,to know the speed of basketball players of three engineering college in Amravati university, Amravati statistical analysis is carried. The result of the analysis are as follows.

Sr.No	College1	College2	College3
Mean	7.208667	7.296	7.197333
Std.deviation	0.328261	0.303945	0.230232
Mean error (t)	0.021884	0.020263	0.015349

It was found that the average speed of football players are 7.048 & basketball players are 7.252. Football are having good speed compare to the basketball players because the football players are running on the ground & the basketball players are playing in court.

Conclusions:

It is concluded that football players are having good speed compare to the basketball players speed. Training must be given to all football and basketball players to enhance the performance.

Recommendations:

The similar studies can be conducted on different sports & games

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Reaction Times of Various State Indian National Volleyball Players

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Abstract

This study was aimed for comparing the reaction times of various state Indian National volleyball players. Visual Reaction times of the 300 subjects were measured with Top End sports Online Reaction time test in an environment which is fairly convenient for measurement. Student t-test for independent samples was used to ascertain the difference between various state volleyball players. The $P < 0.05$ value was considered to be significant. It was observed as a conclusion of the study that, although the reaction time difference between various state volleyball players was numerically in favor of the healthy players, only the visual reaction time difference was studied which was found to be statistically significant ($p < 0.05$). A skill-orientated ability underlying tasks for which there is one stimulus and one response, and for which the subject must react as quickly as possible to a stimulus in a single reaction time situation: for example, a sprint start in swimming. See also choice reaction time, digit symbol substitution test, response time, simple reaction time. As a conclusion, it is considered that the reaction times of the various state volleyball players vary irrespective of individual physiological differences and the direct relation was found that best volleyball teams had better reaction Time.

Key words: • Volleyball players • Reaction time

Method for Reaction Time

In many sports, maximum speed is rarely reached or needed, but explosive reaction is often necessary. Athletes can improve reaction times by training to make the right choices (choice reaction). Here are some examples: A defensive back makes an interception because he reads the quarterbacks eyes/motions, reads the receiver's body moves, positions his body based on the receiver's actions and reacts to the thrown ball. These different stimuli could happen in any order. The most successful defensive backs anticipate, react quickly and explosively with proper posture and control. One of the most important decisions a batter makes at the plate is to "go" or "no go" i.e., whether to swing the bat or not swing. The most successful hitters are able to wait longer and react quicker. This allows the batter to read the pitch (fastball, curve, etc.) and "go" or "no go". When facing a 90+ per hour fastball, there's not much time to react. Reaction time drills should be done from an athletic stance, staggered stance, kneeling position, back-to-ball position, eyes-closed position, two-point stance, etc. to simulate game-time situations. Reaction time and explosive quickness is an important part of overall speed training and the best athletes expected to cover this quality. However, if we compare our results of the click reaction time to the 'make our own' test, we may notice that we get quite different scores, even though the tests are measuring similar abilities. The slight differences between the tests As with all sports fitness testing, specificity is very important, and if we were to seriously want to measure an athlete's reaction time in a certain sport, we would want a test that is more specific to the visual cues and muscle reactions that are encountered during that sport. There were large lists of reaction time tests. For example, in the click reaction time test, when we see the screen color change, the signal for the change in color travels from your eye along the optic nerve to be registered in your brain, from which a message is sent to another part of our brain that controls our muscles. Our brain must then send a signal along the nerves to our muscles, telling them to depress the mouse button. Signals travel fast along each of the nerve pathways required, however the majority of the reaction time is taken up at the junction points in between the different nerves involved, and between the nerves and the muscles at our fingers. The computer software may explain the different results we will get. Performers receive stimuli from the eyes (position of other players, the ball etc), the ears (calling from players, the referee, even spectators), and kinesthetic sense (the performer's position, their options etc). Skilled players reduce reaction time by selecting the most important information, and by anticipating other player's actions and the path of the ball quickly.

Aim of the Study

This study was aimed for comparing the reaction times of various state Indian National volleyball players. Visual Reaction times of the 300 subjects were measured with Top End sports Online Reaction time test in an environment which is fairly convenient for measurement. Student t-test for independent samples was used to ascertain the difference between various state volleyball players. The $P < 0.05$ value was considered to be significant. A skill-orientated ability underlying tasks for which there is one stimulus and one response, and for which the subject must react as quickly as possible to a stimulus in a single reaction time situation: for example, a sprint start in swimming. See also choice reaction time, digit symbol substitution test, response time, simple reaction time. Using SPSS package the calculations of the players of best eight teams with the remaining was compared with student T test and tabulated in the following table No. 1. The values calculated were comparing at the 0.05 level of significance for T calculations. Though the calculated T values had shown less significance that is null hypothesis was rejected and could be stated that there is less difference of Reaction time amongst all Indian National Volleyball players. Mean Values shows certain difference of reaction time.

Table 1 Cal T Value and Mean of RT

Sr. No.	Name of State	Mean Reaction Time	T - Calculated
1	KERALA 1	0.188083333	0.000006699
2	TAMIL NADU 2	0.19175	
3	RAILWAYS 5	0.189583333	
4	HARYANA 4	0.192333333	
5	UTTARAKHAND 3	0.194583333	
6	SERVICES 6	0.196083333	
7	PUNJAB 7	0.216083333	
8	KARNATAKA 8	0.2115	
9	CHHATTISGARH	0.28825	
10	ANDHRA PRADESH	0.2265	
11	JHARKHAND	0.22725	
12	JAMMU & KASHMIR	0.244	
13	UTTAR PRADESH	0.259916667	
14	CHANDIGARH	0.204333333	
15	GUJARAT	0.240583333	
16	ASSAM	0.219833333	
17	ODISHA	0.241666667	
18	RAJASTHAN	0.269	
19	BIHAR	0.21475	
20	MIZORAM	0.260416667	
21	WEST BENGAL	0.247666667	
22	DELHI	0.223416667	
23	MAHARASHTRA	0.236	
24	MADHYA PRADESH	0.251166667	
25	HIMACHAL PRADESH	0.2485	

Here we see $T_{cal} < T_{tab}$

From the above table it could be statistically stated that $T_{cal} < T_{tab}$ which shows the less statistical significance between the best eight teams and other state National Players. But the mean values show certain difference as per the norms of RT the best visual reaction time is 0.17. Near to this figure are supposed to be better in RT, while the difference become greater and it will suppose to be poor in reaction time. Graphical representation clearly shows clearly the difference in Reaction time.

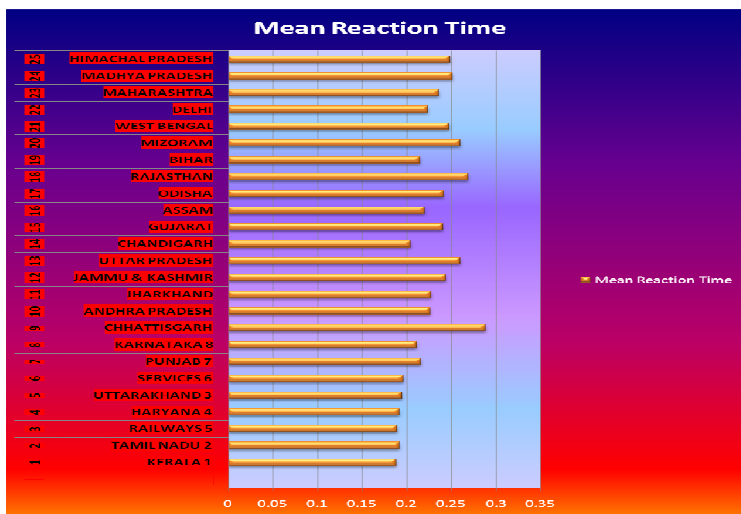


Figure 1: Reaction Time State wise

Conclusion:

As a conclusion, it is considered that the reaction times of the various state volleyball players vary irrespective of individual physiological differences and the direct relation was found that best volleyball teams had better reaction Time.

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A Study Of Significant Changes In The Trends Of Kabbadi Game

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Abstract :

Kabaddi is basically a combative sport. The modern Kabaddi game was played all over India and in some parts of South Asia from 1930. The All India Kabaddi Federation was formed in the year 1950. Senior national championship started from the year 1952. The new body All India Kabbadi Federation of India came into existence from the year 1972 affiliated to India Olympic Association (IOA) with a view of popularizing the game in India and neighboring countries of Asia. After formation of this body, Kabaddi took a new shape. There is change in playfield of Kabaddi men & women category. Due to change of playfield of Kabaddi court more benefit to defence side, when there is not more than 5 players at defense side, means Bonus line not in use in game. Significant change or new needs i. e. due to weight category some players have to much skillful and high level performance but because of over weight they can't participated in competition which is organized by All India Kabbadi Federation of India. This is the most important disadvantage for them. Another new change i. e. technical point, technical point is awarded to opponent in some specific rules situation. But due to technical point to make discipline in Kabaddi at the time of competition. Each team shall awarded two 'time out' of 30 sec. each in each half. This time coach can substitute to players and guide to them and if there is a tie in match fresh toss will be taken and team wins the toss shall have a change to raid, i. e. golden raid due to amendment of this golden raid result will be declared by playing match this is the some advantages and disadvantages of new trends in Kabaddi game.

Introduction :

Kabaddi is basically combative sports. The origin of the game dates back to pre-historic times played in different forms. The modern Kabaddi game was played all over India and some parts of South Asia from 1930. The first known framework of the rules of Kabaddi as an indigenous sports of India was prepared in Maharashtra in the year 1921 for Kabaddi competitions on the pattern of Sanjeevani and Jemini in combine forms. Thereafter a committee was constituted in the year 1923, which amended the rules framed in 1921. The All India Kabaddi Federation was formed in the year 1950 to look after the promotion of the game and the senior national championship started from the 1952. The body AKFI came into existence from the year 1972 affiliated to Indian Olympic Association (IOA) with a view to popularize the game in India and neighboring countries of Asia. After formation of this body, Kabaddi took a new shape and national level competition started for junior & Sub Junior boys and girls also. International Kabaddi Federation (IKF) was formed during first world cup in Kabaddi (Men) 2004 at Mumbai in India.

Data Collection and Interpretation :

- 1. Play field of Kabaddi for men and junior boys are as follows**
13 mts. In length and 10 mts. In width
Distance from mid line to end line shall be 6.50 mts.
Distance from mid line to baulk line shall be 3.75 mts.
The distance from baulk line to bonus line shall be 1 mts.
The distance from bonus line to end line shall be 1.75 mts.
Play field of Kabaddi (Men) and Junior Boys increase by 0.50 mts in Length only not in width.
- 2. Play field measurement of Kabaddi court for women :**
12 mts. In length and 8 mts in width
The distance from mid line to end line shall be 6 mts
Distance from mid line to baulk line shall be 3 mts
The distance from baulk line to bonus line shall be 1 mts
The distance from bonus line to end line shall be 2 mts.
Play field of Kabaddi for Women increase by 1 mtr. In length only not in width.

3. **Significant Changes in Weighth Category :**
 - a. for men – below 80 kg
 - b. for Jr. Boys – Below 65 kg
 - c. for women and Junior girls – Below 70 kg.
 - d. for junior girls - Below 50 kg.

Weight category is the new change in Kabaddi.
4. **Age Limit :**
 - a) for junior boys & girls – 20 years and below (Last day of the year)
 - b) sub junior boys & girls – 16 years and below (Last day of the year)

Before the change of age limit for junior boys and girls were 19 yrs.
5. **Technical point :**
 - a) If a raider starts the cant late, the technical point will be give to opponnets.
 - b) If more than one raider enters the opponent court at a time, technical point will be awarde to opponent and hcnage to raid.
 - c) In case of raider fails to start his raid within 5 seconds, the team looses its chance to raid and the opponent to team get a technical point.
 - d) All the players who are out, at the time of Lona, shall enter his court within 10 sec.otherwise one technical point will be awarded to the opponnets.
 - e) If a raider is warned or in any way instructed by all of his own side, the technical point will be awarded to the opponnets.
 - f) During the "time out" the team shall not leave ground, otherwise technical point will be given to opponnets.

Due to the amendment of the technical point to help make a discipline in Kabaddi.
6. **Time out :**
 - a) Each team shall awarded to take two 'time out' of 30 sec, each in each half.
 - b) during the time out the team shall not leave the ground.

For the coaches there is a chance to substituted the payers and coaching to them also.
7. **Substitution of players :**
 - a) Five reserve players can be substitute with the permission of referee during thetime out or an interval
 - b) Substituted players can be re-substituted.
 - c) Substitution is not allowed for out players.
8. **Golden raid :**
 - a) Even after 5-5 raid, if there is a tie a fresh toss will be taken and team wins the toss shall have chance to raid, i. e. golden raid.
 - b) If there is tie even after golden raid. The chance willbe given to opponent team for the golden raid.
 - c) In the golden raid the team which scores the leading point shall be declard as a winner.

Conclusion :

Due to the change of Play field of Kabaddi court, more benefits to defence side when there is not more than five playing members.

Due to the new amendment of weight category over weight players shall not chance to participate in various level tournaments which is organizes by AKFI.

To maintained the discipline in Kabaddi because of technical point.

Due to amendment of golden raid there is not chance to tie in match.

Due to amendment of time out we can substitute the palyers and guide to them also.

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Tackling the digital future of sports journalism in developed countries, Special reference with U.K and U.S.A

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Introduction

People increasingly want more. More money, more time, more space. And it is no different with news. Audiences are expecting sports news on an as-it-happens-basis and, as digital technology continues to develop, that news is being readily presented. Not so long ago sports fans would have had to wait until the next day's newspaper or the evening's news broadcast, to find out the score of a sports match. Now, via a huge array of platforms, they can access the score, a match report, post-match comments, video highlights and every imaginable statistic almost as soon as the final whistle is blown. It's telling of the age we are living in and the impact digital technology and, in particular, the internet, is having on traditional sports media. But what does it mean for sports journalists, sports journalism and the audience? The digital era is certainly presenting sports newsrooms with constant challenges. Not only is it having significant financial implications for traditional media – print media in particular – but it is also challenging sports journalists to use a multitude of skills. Sports news consumers are no longer satisfied to consume their news on just one platform: they are looking everywhere for it. Whether it is through websites, social networking sites, blogs, print newspapers, television live or on demand radio, sports websites, dedicated sports television channels or radio stations, fan-based websites, tablet devices or via mobile: the choice of where and when audiences access sports news and information has never been greater. Six out of ten Americans access some news online during a typical day and almost half of Americans get their news from four to six different platforms. Of those that use the internet for news and information, more than half access sports news and information. [Edmonds and Pew Project for Excellence in Journalism: 2010] The challenge for sports media is ensuring there is constant, up to date and accurate information on whatever platform the news consumer is on, whilst maintaining high journalistic standards and quality of work. The Scotsman digital editor Alan Greenwood says people use different platforms for different types of news. "The Scotsman has been around for more than 260 years and there's a market group who will always want to buy the paper. But the online audience is different. People go to the site, interested in a specific score or rugby club or issue and hone in specifically on that – they're not traditional newspaper consumers." The depth of journalism required on each platform varies. Via mobile it is likely people will be looking for a score or a bit-part news item, rather than an investigative piece. That bit-part information is now being provided with an immediacy never seen before. Tim Franklin, director of America's National Centre for Sports Journalism, says now is the "golden age of news consumption", and believes, while the audience is now enjoying a wealth of sports news and information on every level, there are dangers with that. "We've never lived in a period in our history where you could get instantaneous information on so many different devices as you can now," he says. "Although there have been studies that most people go to the same set of news sources during any given day – they're not out trolling for new and different news sources, they're going back to the sources they know and trust for information." This indicates people are opting to get tailored news and may not be as well-rounded in their news consumption habits as they were, Franklin says, and, as the future becomes increasingly digital-based this could have wider implications for sports news consumers. It seems, for the moment, sports newsrooms are adapting well to the digital era – perhaps even better than other news sectors. Sports departments often need to deal with immediacy in news that other departments do not face on a regular basis, not only with full match reports but with blog posts, live game updates and tweeting. [Brown-Smith and Grove: 2010] They are used to presenting news as it happens, because the demand for that news, particularly sports scores and results, has always been high.

Sports coverage fits the web. [Fry: 2010] Game updates, in particular, fit brilliantly with the opportunities the web presents for continuously updated coverage. Television broadcasters can – when broadcasting

rights allow – stream live games, post-match interviews and game highlights. Audiences can check in on games or sports news at any time they don't have to wait until the game is over and the match report is written. Digital technology also allows out of town – even out of country – fans to follow their favourite sports teams and can access live score updates on any number of websites. Ronnie Ramos, who has 25 years of print media experience in the US and now manages the digital operations for the National Collegiate Athletic Association (NCAA), says sport has been at the forefront of the digital revolution. "People try stuff in sports more readily than they would in other departments, mostly because they're not seen as being quite as serious as news or politics or that people are more ready to let sports people try something new. Blogs took off much better in sports before they worked in other areas of newspapers. Most of the record days on Twitter have been sports related. And partly, I think that's because the whole genre has embraced that more rapidly than the hard news. They've all come along now, but I think a lot of innovation happens first in sports areas." The need for traditional sports media to produce consistently high quality work is more important than ever, because competition from online is so fierce. But there is a healthy, seemingly inexhaustible demand for sports news and information. Sports fans have long looked further than the sports section for information on the teams they support or issues within sport. Now they can virtually get as much news as they want whenever they want it. [Fry: 2010] The future of sports journalism may indeed be digital, but it seems there will long be a need for the printed word. Sports journalism is becoming increasingly complementary there is still a need for all forms of it on a huge variety of platforms. Many sports fans are no longer satisfied with one source of news: they want the blogs, the tweets, the constant updates, but they also want the longer form documentaries and the crafted narratives. Sports journalism is about reporting, enquiring and explaining sports news [Boyle: 2008] and the hunger for that news is such that there will always be a place for sports journalism. This paper will examine the ways traditional media are using digital technology to improve audience experience. It will look at the impact digital involvement is having on sports journalism, the changes that have been forced upon many sports departments and the approaches leading media in the United Kingdom and United States are taking to ensure they maintain high quality content. Given the constant involvement of digital technology and that a clear business model for the digital age is yet to be established, this paper gives a broad overview of the changes in sports media at this time and of an anticipated future revolving around digital coverage, whilst maintaining and improving traditional forms of sports coverage. It will also look into what leading sports journalism schools and courses are focussing on as we herald a new age of multimedia sports reporting. It will examine the ways sports organisations are taking over their own publicity online and the impact of this on sports journalists. It will also discuss new media and how it can operate on a communications level for high profile events such as the London Olympics in 2012, and it will look into Major League Baseball and its success in securing its own digital rights and charging a subscription rate for access. Finally, this paper will offer a broad conclusion as to how sports journalists can prepare for a digital future, whilst maintaining high journalistic standards. It is a challenging time to be a sports journalist, but it's also a hugely positive one and this paper will explain why.

Newspapers to New Media

Of traditional media, it seems print newspapers have been the hardest hit by the digital age. There is intense competition, a 24/7 news cycle and more ways to present news than ever before. Hence, the future of print newspapers has been cloudy at best; tainted by the recession, cut backs and job losses. From 2007 to 2009 roughly 13,500 jobs for fulltime newsroom professionals in the United States disappeared, shrinking newsrooms by 25percent in just three years. [Edmonds & Pew Project for Excellence in Journalism: 2010] Audit Bureau of Circulation (ABC) figures show that in December 2010 all of the national UK newspaper circulation rates were lower than in December 2009. Six national newspapers saw year-on-year circulation decreases of more than 10percent. Between 2000 and 2009 cumulative newspaper circulation in the US has decreased by 25.6percent.

Overall, newspapers' audience is growing but there is a clear migration to the web. In December 2010 41percent of Americans cited the internet as the place they got "most of their news about national and international issues" – up 17percent on the previous year. [Edmonds and Pew Project for Excellence in Journalism: 2011] Sports editors in the UK and US remain optimistic about the future of print newspapers. In 2010, there were less cutbacks and newspapers started re-hiring staff. Sports editors admit there are challenges, but also see huge benefits in digital coverage and are slowly working out how to take advantage of constantly increasing online audiences.

The situation for print is far from all doom and gloom. More than 12.5million newspapers are sold every day in the UK. With a population of just more than 60million it is, proportionately, a very encouraging

figure. Professor of Journalism at London's City University, Roy Greenslade, says the figure shows the UK is a "nation of avid newspaper readers." "The power of the British press is not an illusion and it is obviously not a thing of the past," he says.

The power of the press is very much a thing of the future – but that future is being heavily influenced by the digital age and, in particular, a migration to consuming news online. The work sports journalists do is now reaching more people than ever – at times with audiences in their millions – and, while circulation may be down, online audiences are growing quickly. In October 2010, ABC figures show the UK's Daily Mail became the first UK newspaper to surpass 50million unique monthly browsers and it has maintained that figure since. Its website attracted 3million daily browsers in December 2010 – up 60percent on December 2009.

Conclusion

New York Times sports editor Tom Jolly says, while the print version of the paper has maintained a solid subscription base, digital involvement has had a big impact on the news cycle. Print newspapers have traditionally been once-a-day news mediums. They have now become 24/7 news machines, constantly updating and breaking news online and to mobile devices. As such, demands on sports journalists have never been greater. With a once-a-day news cycle sports reporters would write one or two stories for the next day's paper. Now, at the New York Times at least, they are required to write stories for the web, update those stories throughout the day, write another updated story for the print paper and perhaps write a blog item or tweet an update. They might also be asked to be interviewed for the paper's Times Cast daily video, or to capture video and/or audio from a press conference.

There is a lot of pressure on sports reporters but, inevitably, this is leading to a higher quality of sports journalism. Sports reporters have to look into more angles, talk to more people, get more investigative lines of enquiry and, in many cases, they are getting a much more rounded story than they might have previously. Another impact of the digital age is the potential demise of the printed match report. Given the huge amount of information available digitally and the increased ability to watch sport on different platforms, many newspapers are opting not to run match reports; instead looking at a key moment in a game, or taking the result forward for the next day's newspaper.

Jolly feels it is more important to give readers an insight into why things happened than it is to run play by play details of a game, which are details that may be used for online use only, if at all. For the 2010 Baseball World Series, along with its typical print coverage, the New York Times assigned one reporter to write in-depth for the web only, with the aim of uploading copy at 11am the following day. While, at present, that is a luxury only large newspapers can afford – with staff and resources still tight it shows the papers' commitment to its digital coverage and ways it is diversifying that from its print product. Many newspapers do opt to run match reports in print. The Scotsman is one of those and digital editor, Alan Greenwood, says it has maintained its traditional philosophies, whilst showing a commitment to online development.

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The Role of Mass Media in Women's Sport special reference with Arab countries

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Introduction

This study examined the role of Mass Media in women's sport from expert's viewpoint. This study is descriptive - scaling which conducted in field study. Among the experts, 100 experts in media, 100 experts in sport and 100 national and international women athletes were selected as samples of this study. Data was collected by self administered questionnaire. The questionnaire is included of 21 questions that measure the role of Mass Media in five variables of sport (four questions), improvement of performance (six questions), management and planning (four questions), financial resources (four questions) news resources (three questions), in current and desired situation. Also results showed a meaningful difference between subject's viewpoint about desirable role of Mass Media in current and desired situation in women's sport. Difference between current and desired situation in all variables showed that Mass Media has high potential role in women's sport, but for some reasons, they don't do it properly. In each society women are the major part of the population that the burden of nurturing, family formation & family life continuing are mostly depends on their effort. In our society women's presence in sport and physical education activities as the half population of our society considered as an undeniable necessity & is vital for providing physical & mental health, preventing different kinds of social aberrations, reducing medical expenses, increasing production & productivity. Although many factors affect women's improvement in sport, but if only media depict a better view of women's sport, many girls will be attracting to sport. Radio, television & newspapers have an important role in informing, developing viewpoint toward women, sport & their progress in the future. So media's coverage for women's sport is very necessary. If mass media pay attention to the female athletes, it can awaken movement & sport motivation in society's women and led them to physical health & consequently to spiritual health. Mass Media with widespread information about women can be effective in development of women's sport in society, and help public opinion to discuss about women's role, criticism, negotiation, comparison and lags' compensate. Despite the efforts of Iranian women, their share of sports news in Iran's mass media is very low & negligible. When people are not able to know our athlete's efforts, how can be expected Iranian female athlete to be motivated & appear in high rankings? When advertising is improper and women's sport is not known to the society, how can we expect government to provide facilities for women's sport? How is the present situation of mass media's role in women's sport? What is the desired situation of mass media in this regards? Is there a difference between current & desired situation of Medias' role in women's sport? Many research studies showed that male & female athletes were treated & covered in different ways by Medias.

Materials and Methods

This research samples are experts of sport, media & female athletes in national levels. Because of existing no exact statistics of statistical society, considering research goals, statistic sample of study in the field of media experts targeted, involved 100 sport newspaper editors, female journalists, sport news press editors, sport managers of TV & radio channels. In the section of experts in the field of sport, 100 deputies of physical education staffs, presidents & vice presidents, sport federation secretaries were selected as statistic samples of study. In addition, 100 individuals of female athletes in the national & country championship levels were selected as the statistical samples of this study among 10 sport fields such as volleyball, basketball, karate, taekwondo, fencing, horseback riding, badminton, football, shooting. Data collection method is a researcher questionnaire that its validity & reliability was proved. This questionnaire evaluates function variables included; sport components, performance improvement, management & planning, financial resources and news source, in present & desired situations. The initial questionnaire was prepared by studying the present resources & available questionnaires, and it was distributed among university physical education professors, medias' experts & female athletes in order to prove its content validity, then the ambiguous points were removed from the questionnaire.

To estimate the validity of the research questionnaire, it was distributed among 30 persons of 3 test groups during the primary studies. The questionnaire questions were arranged based on the five value Likert scale. Descriptive statistics were used to determine the average, standard deviation and also drawing tables & diagrams. Kolmogorov-Smirnov Test showed that the distribution of research data is not normal; therefore non – parametric tests were used. For this purpose, Kruskal-Wallis test was used in order to study different views of study variables in the current & desired situation and Wilcoxon test was used to test the difference between the current & desired situation from the viewpoint of the subjects.

Conclusion

The research results showed a meaningful difference in the current situation of Medias' role in sport components from test subjects' point of view, and this difference is meaningful between two groups of media experts & athletes. Athletes in average rated this variable lower than Medias' experts. In the subjects' point of view, mass Medias have a weak role in the women's more active presence in public sport, sport training, professional sport and championship showed, low (20%) but meaningful correlation between development of public sport, championship and media. Ghassemi obtained opposite result, and said that the reason of this difference is probably due to the test subjects' group. In his research athletes were not considered in test subjects. There is a meaningful difference between subjects' point of view about Medias' role in women's sport performance improvement, and the results showed a meaningful difference between two groups of media experts & athletes. Also athletes rated this variable lower than media experts. he achieved a meaningful difference between subjects' point of view in human resources variable and the impact of media in upgrading technical level of athletes & coaches, which in this research examined as the questions of performance improvement variable. Najafi Ali in his research concluded that 46% of viewers of women's sport programs, express that these programs encourage women to take part in sport. (Rahimi Ajdadi) also stated that television, radio and newspaper have a vital role in the women's development in the society, and they could help public ideas to society improvement and criticism. There is a meaningful difference in subjects' point of view on women's sport management & planning in the current situation, and results showed a meaningful difference between the media experts & sport experts and media experts & athletes. The average rate of this variable represents that athletes, sport & media experts, respectively consider lowest to highest role for mass Medias in the current situation. A meaningful difference obtained in financial resources between subjects' point of views and results showed a meaningful difference between media & sport experts. Media experts rated this variable higher than average in comparison to sport experts on the role of mass Medias in the current situation. As well as in the role of mass Medias in women's sport news resources variable, found a meaningful differences between subjects' point of view. The results showed differences between media & sport experts, and sport experts rated this variable lower average than media experts in the current situation. All get the same results about the women's sport news coverage in Iran, and that is media's inappropriate and low coverage percentage. There is a meaningful difference between subjects' point of view about sport components in desired situation, and this is consistent with the results of Ghassemi's research. This difference between Medias & sport experts point of views and between media experts & athletes is meaningful. The averages rates show that athletes give more roles to mass Medias in this variable than sport experts and sport.

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Evolution of Sports and Games in Ancient India

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Introduction

Games such as Chess, Snakes and Ladders, Playing Cards, Polo, the martial arts of Judo and Karate had originated in India and it was from here that these games were transmitted to foreign countries, where they were further developed. Several games now familiar across the world owe their origins in India, particularly, the games of chess, ludo (including ladders and snake), and playing cards. The famous epic Mahabharata narrates an incidence where a game called Chaturang was played between two groups of warring cousins. The age when epic Mahabharata was written is variously dated around 800 BC to 1000 BC. In some form or the other, the game continued till it evolved into chess. H. J. R. Murry, in his work titled *A History of Chess*, has concluded that chess is a descendant of an Indian game played in the 7th century AD. The game of cards also developed in ancient India. Abul Fazal was a scholar in the court of Mughal emperor Akbar. In his book, *Ain-e-Akbari*, which is a mirror of life of that time, records game of cards is of Indian origins. Martial arts by the name of Kalaripayattu were a native of Kerala, a state of India. Kalaripayattu consists of a series of intricate movements that train the body and mind.

Chess

Chess originated in ancient India and was known as *Chatur-Anga* - Meaning 4 bodied, as it was played by 4 players. From this name we have its current name *Shatranj*. One such instance is in the Mahabharata when Pandavas and Kauravas play this game. Yudhistira the eldest of the Pandavas places his bets on his kingdom, his wife Draupadi and all other material possessions. And by a malevolent trick he loses to the Kauravas everything that he had placed his bets on. Consequently to humiliate the Pandavas, Dushasana one of the evil Kaurava brothers takes hold of Draupadi whom Yudhistira has lost to the Kauravas, and tries to disrobe her in front of the assembled court. The Pandavas though powerful are helpless as they have lost Draupadi and according to the rules of the game they have no claim on her anymore. In distress, Draupadi invokes Lord Srikrishna to come to her rescue. And in answer to her prayers the lord appears and in a miracle sends a continuous stream of apparel to clothe Draupadi's body.

The evil Dushasana tires himself out trying to tear away Draupadi's clothes but he is powerless against the divine strength of Lord Srikrishna. After hours of struggling to achieve his evil intention he falls unconscious to the floor. Draupadi's honor is saved. In deference to Lord Srikrishna's wishes, the Kauravas relinquish their claim to Draupadi. But in return the Pandavas are obliged to relinquish their kingdom for fourteen years and go into exile in forests, after which they return and regain their from the Kauravas, but not before a devastating war is fought between the two clans on the battlefield of Kurutshetra. The Mahabharata story throws light on the fact that a game similar to Chess was played in ancient India. The Mahabharata is variously dated around 800 and 1100 B.C. Thus this game was known in India nearly 3000 years ago. It is the view of some historians that this game was also used in the allocation of land among different members of a clan when a new settlement was being established.

The concludes that "Other Persian and Arabian writers state that Shatranj came into Persia from India and there appears to be a consensus of opinion that may be considered to settle the question. Thus we have the game passing from the Hindus to the Persians and then to the Arabians, after the capture V of Persia by the Caliphs in the 7th century, and from them, directly or indirectly, to various parts of Europe, at a time which cannot be definitely fixed, but either in or before the 10th century. That the source of the European game is Arabic is clear enough, nor merely from the words "check" and "mate", which are evidently from Shah mat ("the king is dead"), but also from the names of some of the pieces.

Cards

Ancient India was the birthplace of the game of playing cards and has since spawned a plethora of card based games which are played the world over. Some of the most popular games such as blackjack, baccarat and poker. For reference Casino.org has a list of strategies for these card games. The game of playing cards was also one of the favourite pastimes of Indians in ancient times. This game was patronized especially by the royalty and nobility. This game was known in ancient times as Kridapatram, in the middle ages, it was known as Ganjifa.

In medieval India Ganjifa cards were played in practically all royal courts. This game is recorded to have been played in Rajputana, Kashyapa Meru (Kashmir), Utkala (Orissa) the Deccan and even in Nepal. The Mughals also patronized this game, but the Mughal card-sets differ from those of the ancient Indian royal courts. Some scholars are of the opinion that this game was in fact introduced into India by the Mughals. But according to Abul Fazal author of the Ain-e-Akbari, the game of cards was of Indian origin and that it was a very popular pastime in the Indian (Hindu) courts when the Muslims came into India.

According to Abul Fazal's description of the game, the following cards were used. The first was Ashvapati which means 'lord of horses'. The Ashvapati which was the highest card in, the pack represented the picture of the king on horseback. The second highest card represented a General (Senapati) on horseback. After this card come ten other with pictures of horses from one to ten. Another set of cards had the Gajapati (lord of elephants) which represented the king whose power lay in the number of elephants. The other eleven cards in this pack represented the Senapati and ten others with a soldier astride an elephant. Another pack has the Narpati, a king whose power lies in his infantry. We also had other cards known as the Dhanpati, the lord of treasures, Dalpati the lord of the squadron, Navapati, the lord of the navy, Surapati, the lord of divinities, Asrapati, lord of genii, Vanapati, the king of the forest and Ahipati, lord of snakes, etc.

On the authority of Abul Fazal we can say that the game of playing cards had been invented by sages in ancient times who took the number 12 as the basis and made a set of 12 cards. Every king had 11 followers, thus a pack had 144 cards. The Mughals retained 12 sets having 96 cards. These Mughal Ganjifa sets have representations of diverse trades like Nakkash painter, Mujallid book binder, Rangrez, dyer, etc., In addition there were also the Padishah-i-Qimash, king of the manufacturers and Padishah-izar-i-Safid, king of silver, etc. Cards were known as *Krida-patram* in ancient India. These cards were made of cloth and depicted motifs from the Ramayana, Mahabharata, etc. A tradition carried on today with floral motifs and natural scenery.

The pre-Mughal origin of the game of cards is evident if we examine the pattern of painting the cards. We also find that despite the observation of Abul Fazal that Akbar introduced the pack with 8 sets, we find that even earlier, in Indian (Hindu) courts we have packs with 8, 9 and 10 sets apart from the usual 12. The numbers were derived from the eight cardinal directions Ashtadikpala, for the pack with 8 set, from the nine planets Navagraha for the one with 9 sets and from ten incarnations Dashavatara of Vishnu for the pack with 10 sets. Themes from the Ramayana and Mahabharata are painted on these cards. The largest number of such cards is to be found in Orissa. The largest number of such cards is to be found in Orissa. The painters from Orissa have represented various illustrations like the Navagunjara, a mythical birdhuman animal which was the form assumed by Sri Krishna to test Arjuna's fidelity, illustrations from the Dashavatara of Vishnu are also portrayed.

All these cards were hand-made and were painted in the traditional style. This required considerable patience and hard meticulous work. The kings usually commissioned painters to make cards as per their preference. The commoners got their cards made by local artists who were to be found in urban and rural areas. In order to obtain the required thickness a number of sheets of pieces of cloth were glued together. The outlines of the rim were painted in black and then the figures were filled with colors.

Martial Arts

Ancient India claims to have been the origin of Judo and Karate. Something similar to karate, it was called *Kalaripayate*. This art form seems to have traveled from India to the countries of the far-east along with the Buddhist religion. Buddhist monks who traveled barefoot and unarmed to spread the gospel of Buddha seem to have accepted this art with alterations suitable to the philosophy of nonviolence. Such a technique of defense would have been necessary for them as they traveled individually or in small groups in foreign lands during which they were exposed to dangers from bandits and fanatics from other religions. Buddhist monks seem to have tempered the originally violent character of this art. The violent and exterminative nature of Kalaripayate is evident from the daggers and knives that are used. Unlike Kalaripayate, Judo and Karate do not allow the use of lethal weapons.

The aim of a Karate practitioner is mainly to disarm and disable his opponent without mortally wounding him. This can be looked upon as a reflection of the Buddhist attitude towards life. Further both Judo and Karate are deeply interwoven with meditation unlike other martial arts like boxing, wrestling, fencing, etc. The concentration aspect in Judo and Karate perhaps stems from this. Both Judo and Karate are sought to be kept as arts to be used for just purposes for protection of the weak, etc.,

The oath that every student of these disciplines has to take is evidence of this. A teacher of Judo or Karate traditionally commands deep respect of students and a lesson always starts with a bow of the students to the teacher. The teacher here is not looked upon only as a coach as in western martial arts like boxing and fencing. This relationship between a teacher and student in Judo and Karate could have its roots in the Guru-Shishya tradition of India. Thus it is quite possible that these martial art forms originated in southern India and were transmitted to China, Korea and Japan by Buddhist monks. But it has to be conceded that they were neglected in India where like Buddhism they atrophied and today the world considers them to be a legacy bequeathed by the countries of the far-east.

The renowned Chinese travelers Hieun Tsang and Fa Hien wrote of a plethora of sporting activities. Swimming, sword - fighting (fencing, as we know it today), running, wrestling and ball games were immensely popular among the students of Nalanda and Taxila. In the 16th century, a Portuguese ambassador who visited Krishnanagar was impressed by the range of sports activity, and the many sports venues, in the city. The king, Raja Krishnadev was an ace wrestler and horseman, himself. The Mughal emperors were keen hunters of wild game, and avid patrons of sports, especially wrestling. The Agra fort and the Red Fort were the popular venues of many a wrestling bout, in the times of Emperor Shahjahan. Chatrapati Shivaji's guru, Ramdas, built several Hanuman temples all over Maharashtra, for the promotion of physical culture among the youth.

Conclusion

Kerala's martial art form, Kalari Payattu, is very similar to Karate. Those who practice it have to develop acrobatic capabilities, when using swords or knives to attack their adversaries, and even an unarmed exponent can be a force to reckon with. With the advent of Buddhism, this art form spread to the Far East countries. Buddhist monks who travelled far and wide, mostly unarmed, to spread the teachings of the Buddha, accepted this form of self-defense, against religious fanatics, with alternatives that were suitable to their philosophy of non - violence. The relationship between a student and teacher in the disciplines of Judo and Karate could trace its roots to the guru - shishya tradition, India was, and continues to be famous for. It is quite possible that some of our martial art forms travelled to China, Korea and Japan, but as in the case of Buddhism, atrophied in India

The technique of Pranayama or breathing control, which is a prominent feature of Tae - kwan - do, Karate, Judo and Sumo wrestling was one of the many techniques spread in the Far East by Buddhist pilgrims from India. The idea that man enters into harmony with the five elements, through the science of breathing, is to be found in the most ancient records of Indian history. If mind and body are one, the possibilities of development of one's physical and mental capabilities are limitless, provided they are united and controlled. Using this as the foundation, Bodhidharma, a Buddhist monk started a new trend in the Shaolin temple in China, from which probably stemmed most of the rules and precepts which govern all martial art forms. Festivals and local fairs are the natural venues of indigenous games and martial arts. Post - Independence the government made special efforts to preserve and nurture the awesome cultural heritage, by setting up a number of new incentives, and by heightening media exposure at the national level, to propagate and popularize indigenous games.

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Effect of Reasoning Ability and depth perception upon Dribbling Skills of basketball players

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Abstract

The present study examined the effect of reasoning ability and depth perception upon dribbling skills of basketball players. 200 intercollegiate basketball players (Ave. age = 21.34 yrs.) constitutes the sample for present study. Johnson Basketball Dribble Test was used to ascertain dribbling skills of the selected subjects. Reasoning ability of the selected subjects was assessed by MGTI prepared by Mehrotra (1984). To conduct the study, a 2x2 factorial design was used. Results reveals non significant main effect of reasoning ability and statistically significant main effect of depth perception upon dribbling skills of basketball players. The two factor interaction effect of reasoning ability and depth perception upon dribbling skills turned out to be non-significant. It was concluded that reasoning ability and depth perception, together have no impact upon dribbling skills of basketball players.

Introduction

Athletes have different cognitive style and it is true that cognitive abilities plays an important role in sports performance because to solve a problem or deal with a tricky or tactical situation during play, a player need to have cognitive ability such as reasoning in order to overcome such situation. Otherwise player will get frustrated and loose his concentration, emotional control etc. and that will certainly hamper his/her sports performance.

Another aspect which is important in the context of sports performance is depth perception. It is the ability to assess the distance between the object and himself/herself. Like reasoning ability it is equally important to know the distance between himself/herself and other players position specially in a sport like basketball.

Hence spatial visualization is important in basketball to perform fundamental skill such as dribbling. Reasoning ability may also be important while performing fundamental skills in basketball because a fast paced sport like basketball requires quick processing of situation or information on the court.

Researchers in the past have conducted quite a few studies on basketball players skill related aspects [Stier et al (2006), Karalejic et al. (2009), Shalaby (2010)] but surprisingly no study so far has been conducted to find out the effect of reasoning ability and depth perception, alone or in interaction with each other upon dribbling skills of basketball players. Hence the present study was planned to assess the effect of reasoning ability and depth perception upon dribbling skills of basketball players.

Hypothesis

It was hypothesized that basketball players with superior binocular depth perception and reasoning ability will be more adept in dribbling as compared to basketball players with inferior binocular depth perception and reasoning ability.

Methodology :-

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

Sample :-

200 intercollegiate basketball players (Ave. age = 21.34 yrs.) were constitutes the same for present study. The selection of subjects was done from Inter-collegiate tournaments held in the State of Chhattisgarh India through convenience sampling technique.

Tools:

Johnson Basketball Dribble Test: To assess dribbling skills of selected basketball players, Johnson Basketball Dribble Test was used. This test is highly reliable and valid. The direction of scoring for this test is "higher the score better is the ability".

Reasoning Ability :

To assess reasoning ability of the selected subjects Mehrotra's (1984) Mixed Type Group Test of Intelligence (MGTI) was used. Only non-verbal intelligence part was used in the present investigation.

Depth Perception :

Specially designed depth perception was an instrument by which depth perception of the selected subjects was recorded. As per interpretation of data, "higher the deviation, lower the binocular depth perception" was the direction.

Procedure:

Johnson Basketball Dribble Test was administered to selected basketball players under the supervision of investigator. Each individual subject took the depth perception test. The reasoning ability part of MGTI test was administered to each selected basketball player in a peaceful corner. The response pertaining to MGTI was scored off as per author's manual. Scores on Johnson basketball dribbling test and depth perception was also recorded for each selected subject. To divide cases into superior and inferior reasoning ability, Q_1 and Q_3 statistical technique was used. Subjects whose reasoning ability scores lies below Q_1 was assigned to inferior reasoning ability category, and subjects whose scores lies above Q_3 was assigned to superior reasoning ability category. Regarding bifurcating the scores of depth perception into superior and inferior categories, again Q_1 and Q_3 statistical technique was used. Subjects whose depth perception scores lies below Q_1 was assigned to superior depth perception category, subjects whose scores lies above Q_3 was assigned to inferior depth perception category. To find out the joint action effect of depth perception (superior-Inferior) and reasoning ability (Superior-Inferior) on dribbling skills of basketball players, 2x2 ANOVA technique was adopted. The results are presented in table 1 and 1(a) respectively.

Analysis Of Data

Table No. 1 Reasoning Ability (A) x Depth Perception (B) on Dribbling Skills of Basketball Players (N=73)				
		Depth Perception (B)		M
		b_1 Superior	b_2 Inferior	
Reasoning Ability (A)	a_1 Superior	M=26.00 S.D. = 2.92 N=39	M=24.60 S.D. = 3.13 N=05	25.30
	a_2 Inferior	M=25.60 S.D. = 1.94 N=05	M=21.20 S.D. = 3.76 N=24	23.40
	M	25.80	22.90	

Table No. 1 (a)
ANOVA Summary

Source of Variation	SS	df	MS	F
A	30.765	1	30.765	3.00 (NS)
B	71.780	1	71.780	7.01**
AB	19.152	1	19.152	1.87 (NS)
Within treatment (Error)	706.358	69	10.237	

** Significant at .01 level NS Not Significant

From the analysis of table 1 and 1 (a) following inferences were drawn :

The main effect of reasoning ability upon dribbling skills of basketball players was not found to be statistically significant. The reported $F=3.00(p<.06)$, although not statistically significant gives a clear indication that subjects with superior reasoning ability ($M=25.30$) have significantly better dribbling skills as compared to subjects with inferior reasoning ability ($M=23.40$). The F of 7.01, an indicator of the main effect of depth perception upon dribbling skills of basketball players turned out to be statistically significant. It thereby reveals that subjects with superior depth perception ($M=25.80$) have significantly better dribbling skills as compared to subjects with inferior depth perception ($M=22.90$) at .01 level of statistical significance. The two factor interaction effect of depth perception and reasoning ability upon dribbling skills of basketball players was not found to be statistically significant ($F=1.87, p>.05$).

Discussion :

In the present study impact of reasoning ability was not found to influence dribbling skills of basketball players but the results clearly indicate that grades of reasoning ability (superior-inferior) does have an impact upon dribbling skills of basketball players although statistically not proved. Previously the role of cognitive abilities in sports performance is very well document which support this finding. In the present study, the main effect of depth perception was found to be significant upon dribbling skills of basketball players. It is quite natural because depth perception is nothing but spatial visualization and players with better spatial visualization showed better dribbling skills is no surprise.

Result

1. No significant effect of reasoning ability was observed upon dribbling skills of basketball players but basketball players with superior cognitive ability have excelled in dribbling skill as compared to basketball players with inferior cognitive ability.
2. Significant impact of depth perception was observed upon dribbling skills of basketball players i.e. players with superior depth perception showed better dribbling skills as compared to players with inferior depth perception.
3. Two factor interaction effect of reasoning ability and depth perception unable to generate any significant effect upon dribbling skills of basketball players.

Conclusion

Hence on the basis of results it was concluded that depth perception do influence dribbling skills of basketball players whereas reasoning ability to an extent also has an impact upon dribbling skills of basketball players.

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Effect Of Meditational Practice On The Shooting Ability Of Basketball Players

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Introduction

Basketball is the world's most popular sports in terms of spectator's attendance and player participation. In American sport it takes its pride of place as most popular and more people in U.S.A play basketball than any other game. The standard of play there is so good and the game so exciting that the Basketball fans of that continent outnumber all others. This wonderful game, which originated in the United States, has spread to other countries of world – thanks largely to Y.M.C.A physical directors and Army, Navy and Air force personnel. The pleasure and the thrill the game produces have impelled the people of all classes to play basketball or witness the game the world over. From humble beginnings basketball has progressed to be a "world-wide game" internationally popular and universally accepted. It is probably the leading ball game in the world as far "Action occurrence" is concerned within one second many things may happen in this game in comparison with other games. Basketball may be called movement oriented game as "action" implies movement.

Yoga

The tree of knowledge has indeed yielded much fruit of great variety sweet, sour, bitter, wholesome according to our use of it but it is more imperative than ever, that we cultivate the tree, we nourish its roots, those who pasted the tree of "yoga" are not alive to see the use and benefits of their endurance but these days the interest in yoga is growing with rapidity. Though yoga originated from India. It is being practiced and taught in various institutions in India and abroad as well. The need, understanding and practice "yoga" is growing in proportion to modern man's inability to solve the multi various problems covering all aspects of his life. The most important authority on yoga philosophy the "Bhagawath Gita" states that when the mind, intellect and self are under control, free from restless desire so that they rest in the spirit within. Patanjali has enumerated the yoga having its right limbs for the guest of soul. These eight limbs called as "Astanga Yoga".

Yama, Niyama, Asana, Pranayama, Prathyahara, Dharana, Dhyana and Samadhi

These eight limbs divided into 2 parts

1. Bahiranga Yoga.
2. Antaranga Yoga.

The first four parts of right limbs comes under Bahiranga yoga. And the other four comes under Antaranga yoga.

Meditation

Joan and Miroslav Borysenko in his book 'The power of Mind to Heal' "Meditation is not just a practice it is a way of life. Initially that way of life is learned through formal practice, just as we learn to play a musical instrument in this passion. Some people will choose that continued practice periods and others won't, but both will have paradigm through which they relate to the world" Normally the people in general carry a misconception about meditation. It is not meant for only those who sit in a quite place with their eyes closed and perform various practices to induce mediator. This is merely one method of meditation. However remain absorbed in discharging the basic duties this life demands of them. You don't need some special conditions to perform meditation. Some of its practices can even be performed by you while moving in a train or discharging your normal duties. In fact it is more needed by those who by compulsion of life have to bear most tension ridden and stressful conditions.

According to sage Patanjali are two terms

1. Dhaarana (concentration)
2. Dhyana (meditation)

Concentration is the mind's fixation on one point so when you can fix your mind on a particular point just for an instant, you are concentrating But how is concentration related to meditation?

Patanjali states in a second aphorism that Dhaarana the continuous flow of similar mental meditations is meditation in short concentration is to fix one's mind for a moment while meditation is to fix one's mind for a longer time. Simple imagine a Necklace each bead is concentration while the entire aggregate of beads is meditation. Dhyaana or the state of meditation is obtained when the mind is trained to concentrate on an outer or inner object, long enough for all distractions to be eliminated and when the strain of thought flows in single direction without interruption towards a definite object.

Meditation as **STHIRAM-SUKHAM-ASANAM** (A comfortable and firm position).

Meditation And Basketball

Once we master our minds, we can then maximize our potential. This is how meditation relates to basketball. When you are able to let go, your whole body becomes your instrument that you have full control of. Meditation will strip away the anchors that hold you back, whether its mental or physical. This all might not make complete sense now, but after practicing meditation for an extended period of time can one truly understand the effect.

Significance Of The Study

.The significance of the study is to inculcate the importance of Meditational practices on improvement of the performance is shooting ability of Basketball players. This will help the coaches to evaluate the required level of performance of their players.

Procedure For Data Collection

The study was based on simple random sampling. The sample consists of 60 elite basketballs of 14 to 16 years of age group of St. Joseph Public School. This sample divided into two groups consists of 30 in each group both were homogeneous groups. The two groups were assigned by lots and one group was kept as control and the other one was taken as experimental group. The initial performance of the subjects, both control and experimental groups were recorded in number i.e., out of ten(10) trails for each basket 1 point, before taking the initial performance the subjects were asked to practice shooting. The subjects were asked to shoot from free throw line with standing position.

The experimental was given six weeks of meditational practice then the final performance of all subjects, both experimental and control groups was taken as voice done at the time of taking initial performance. The initial and final performance of subjects was recorded in points.

Test Administration

The free throw shooting test was taken to test the shooting ability of the players. Before administering the test all the subjects were oriented to the test in procedure and objectives of the test.

Statistical Tools And Techniques

The present study under report was study the significance effect of meditational practice on shooting ability of basket ball players. Finally comparison will be done by the T-ratio.

To find out whether there is any influence of the Meditational Practice on shooting ability investigator used Mean, Standard Deviation, Standard Error and t-ratio for significance of the Means. For these data analysis mean, standard deviation, standard error and t-ratio are used and they are given in the table 1.1 and 1.2

Table 1.1
Table Showing The Mean, Standard Deviation, Standard Error And T-Value Of Pre-Test

Group		Number Of Subjects	Mean	Standard Deviation	Standard Error Of Mean
Pre Test	Control	30	4.0000	1.17444	.21442
	EXPERIMENTAL	30	4.0000	1.23176	.22489

Independent Samples Test

		t-test for Equality of Means			
		T	Df	Sig. (2-tailed)	Mean Difference
Pre Test	Equal Variances Assumed	.000	58	1.000	.00000

Discussions

The above table shows Pre-Test results of the Basketball shooting done by the Control Group and the Experimental Group. The calculated value of Mean of the Experimental Group is 4.0000 which is equal to Control Group because of Homogenous Group. The calculated value of Standard Deviation of the Experimental Group is 1.23176 which when compared to Control Group is 0.05732 lesser. The calculated value of Standard Error of Means of the Experimental Group is .22489 which when compared to Control Group is 0.01047 lesser. In the independent samples test in the t-test for equality of means the value of t is .000 and the df is 58.

Table 1.2: Table Showing The Mean, Standard Deviation, Standard Error And T-Value Of Post-Test

Group		Number Of Subjects	Mean	Standard Deviation	Standard Error Of Mean
Post Test	Control	30	5.0000	1.32570	.24204
	Experimental	30	7.0333	1.23176	.22489

Independent Samples Test

		T-Test For Equality Of Means			
		T	Df	Sig. (2-Tailed)	Mean Difference
Pre Test	Equal Variances Assumed	6.154	58	.000	2.03333

Discussions

The above table shows Post - Test results of the Basketball shooting done by the Control Group and the Experimental Group. The calculated value of Mean of the Experimental Group is 7.0333 which when compared to Pre Test was 4.000 and the difference in the mean is 3.0333 higher. The calculated value of Mean of the Control Group is 5.0000 which when compared to Pre Test was 4.0000 and the difference in the mean is 1.0000 higher. The calculated value of Standard Deviation of the Experimental Group is 1.23176 which when compared with the pre test was 1.23176. The value of the standard Deviation of the control group is 1.32570 which when compared with the pre test was 1.17444. The calculated value of Standard Error of Means of the Experimental Group is 1.23176 which when compared to Control Group is .24204. The two tailed test of significance shows .000 which is highly significant.

Conclusions

The results from the study are very encouraging and demonstrate the benefits Meditational Practice can have on improvement of shooting ability in Basketball. Basketball players can have good Strength, Speed and Agility apart from Concentration while shooting. To improve concentration basketball players must adopt such activities which improve concentration. The average performance of Control Group is equal to that of pre-test and there is no significant variation, thus shows that the improvement in any area can only be achieved through regular and systematic training. To find out whether there is any significant difference in shooting between the pre-test and post-test of Experimental Group 't-ratio' was tabulated. The calculated value of t-ratio shows that there is a significant change in the shooting of the Experimental after six weeks of training. In addition, our results support that improvements in shooting through Meditation can occur in as little as 6 weeks of training which can be useful during the last preparatory phase before in-season competition for Basketball players.

Recommendations

In the light of the facts presented above the investigator takes the pleasure to give the following recommendations. It is recommended that the similar studies may be conducted in a large sample on the other variables at different age groups and other games. It is recommended to the Basketball Players and coaches that the Meditational Exercises are one of the Fitness components required by a player, to execute an elite performance the players must adopt different fitness development components.

The above recommendations are for the benefit of players and also for the pride of the Nation. Through players one develops discipline, peace, friendship patriotism, self- confidence, leadership qualities etc.

A Study On Impact Of Medicine Ball Exercises Among Handball Players Of Hyderabad District

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Abstract:

Hand Ball is a team game played with Ball, under specified rules each side seven players. Modern world has introduced a number of games and sports. Handball is an ancient game. Particularly it occupies a unique place among them. Medicine ball training can be effective in improving muscular power, and movement velocity is a critical factor in power development. A total of 30 National Handball players were considered as the sample of the study who were aged above 16 years were considered as participated in nationals. All these subjects are receiving regular and systematic training from qualified coaches and proper Nutritional diet at National camps. The subjects were made to do medicine ball exercises training daily for six weeks. To assess the shooting efficiency the five Jump shot and five Standing Shot were taken in Pre Test and Post Test. There is a significance difference among Handball Players in related the Medicine Ball Training to improve their Strength ability and Shooting Efficiency. It is concluded that due to medicine ball exercises there is an improvement of shooting efficiency among hand ball Players.

Key words:

Hand Ball, Medicine Ball Exercises, shooting efficiency etc.

Introduction:

Hand Ball is a team game played with Ball, under specified rules each side seven players. Modern world has introduced a number of games and sports. Handball is an ancient game. Particularly it occupies a unique place among them. Medicine ball training can be effective in improving muscular power, and movement velocity is a critical factor in power development. Handball (also known as team handball, Olympic handball, European team handball, European handball, or Borden ball) is a team sport in which two teams of seven players each (six outfield players and a goalkeeper on each team) pass a ball to throw it into the goal of the other team. A standard match consists of two periods of 30 minutes, and the team that scores more goals wins. Modern handball is usually played indoors, but outdoor variants exist in the forms of field handball and Czech handball (which were more common in the past) and beach handball (also called sandball). The game is quite fast and includes body contact, as the defenders try to stop the attackers from approaching the goal. Contact is allowed only when the defensive player is completely in front of the offensive player; i.e., between the offensive player and the goal.

Method:

A total of 30 National Handball players (Out of which 15 are experimental group and 15 are controlled group) who were aged above 16 years were considered as participated in nationals. All these subjects are receiving regular and systematic training from qualified coaches and proper Nutritional diet at National camps. The subjects were made to do medicine ball exercises training daily for six weeks for experimental group and control group was doing the general training of Hand Ball.

The following Medicine ball exercises as made to do for the hand ball Players.

Straddle Ball Roll, Hip Circle, Ski Bends, Total Body Stretch, Corecrunches, Curl-Up, Oblique Twist, V-Sits
Shoulder Press And Catch, Bicep Curl, Triceps Extension, Push-Up

Jump Shot

Material Required: Hand Ball, Scorer and Score Sheet

Test Administration

The subjects stand at the central line of the court with holding the ball on the signal the subject dribbled the ball towards the goal post and take of the jump shot at 9 meters line, if ball gone into inside the goal post this scorer will be given one point for one shot. The same procedure follows for all the subjects. Each subject takes 5 trails.

Scoring: The scorer is must concentrate on the procedure each goal is given one point

Testing Personnel

One starter and one scorer are needed to administrate this test. Only one scorer was used, the scorer can record score. But tester was facilitate subjects during the test.

Standing Shot

Material Required : Hand ball, Scorer and Score sheet

Test Administration

The subjects stand at the central line of the court with holding the ball on the signal the subject dribbled the ball towards the goal post and shoot the ball at 9 meters line with standing position at that time three steps is compulsory "Left, Right and Left" the last step should be in word, if ball gone into inside the goal post this scorer will be given one point for one shot. The same procedure follows for all the subjects. Each subject takes 5 trails.

Scoring: The scorer is must concentrate on the procedure each goal is given one point

Testing Personnel

One starter and one scorer are needed to administrate this test. Only one scorer was used, the scorer can record score. But tester was facilitating subjects during the test

To assess the shooting efficiency the five Jump shot and five Standing Shot were taken in Pre Test and Post Test.

Results and Discussion:

There is a significance difference among Handball Players in related the Medicine Ball Training to improve their Strength ability and Shooting Efficiency.

Table showing the Mean, Standard Deviation, Standard Error of the Mean and T-

Ratio of Medicine Ball Exercises Pre-Test and Post Test of Control Group and Experimental Group of Handball Players

Group	Test	Mean	STD. Deviation	Std. Deviation Error	T- Ratio
Control Group	Pre-Test	4.60	1.110	0.28659	0.0397
	Post-Test	4.86	1.1266	0.29088	
Experimental Group	Pre-Test	6.00	1.071	0.2765	0.0812
	Post-Test	6.73	1.0998	0.2839	

The Mean of Control Group in Pre Test is 4.60 and Mean of Experimental Group is 6.00. The Mean of Control Group is 4.86 in Post Test and Experimental Group is 6.73. There is a improvement of Experimental Group from 6.00 to 6.73 from Pre Test to Post. Due to Medicine Ball Training the Experimental Group has improved a lot. There is a significance difference among Handball Players in related the Medicine Ball Training to improve their Strength ability and Shooting Efficiency.

Conclusions:

It is concluded that due to medicine ball exercises there is a improvement of shooting efficiency among hand ball Players.

Recommendations:

It is Recommended that medicine ball exercises training will be included in the training Program for Ball Games like Hand Ball, Basket ball, Net Ball, Korf ball etc. Similar Studies can be conducted on other Sports and Games.

References:

Wikipaedia, Hand Ball

“Structure of sports performance”

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Abstract:

Sports training aims at improving sports performance. Therefore the nature and structure of sports performance determines to a great extent the means and method of training as well as the total planning, organization implementation and assessment of training. The process of identification and development of sports talent also has to be based on this knowledge. The nature and structure of performance in various sports, the limiting factors here is the multidimensional nature of sports well integrated of training systematic effort by a number of sports-psychology ,sports-science, disciplines -theory, and methods of training, sports-physiology, sports bio-mechanics, and so on sports performance like a product any other type of human performance is a highly complex process and is a product of several internal and external factor encompassing all the aspects of human personality several element and part processes of sports performance. Also play an equally important role in performance enhancement. During the process of training, in the training programs can definitely helps our athletes in overcoming their performance and hence proving them a better performance and better opportunity to prove their worth for the nation.

Key words: structure, sports, performance, sports-psychology, sports-science, disciplines -theory, methods of training, sports-physiology, sports bio-mechanics, methodology.

Introduction

Sports training aims at improving sports performance. Therefore the nature and structure of sports performance determines to a great extent the means and method of training as well as the total planning, organization implementation and assessment of training. The most important step towards to the successful preparation of sportsmen for higher performances. the process of identification and development of sports talent also has to be based on this knowledge.

The nature and structure of performance in various sports, the limiting factors here is the multidimensional nature of sports well integrated of training systematic effort by a number of sports-psychology ,sports-science, disciplines -theory, and methods of training, sports-physiology, sports bio-mechanics, and so on sports performance like a product any other type of human performance is a highly complex process and is a product of several internal and external factor encompassing all the aspects of human personality several element and part processes of sports performance eg. Psychic, neuro, physiological etc. still defy satisfactory analysis because of inadequately developed methodology.

Theme Of The Topic

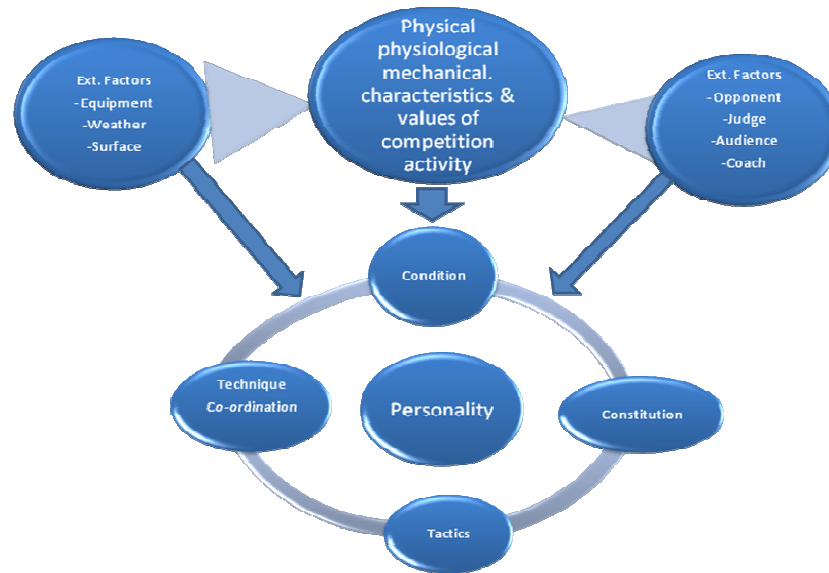
How the structure, physically, & mentally, factors are influence on performance of during the competition.

Sports performances are achieved in training or in competition.

A structure of sports performance must debit the following:

- The process of performance.
- Factors determining performance.
- The relative dominance/ weight age of these factors.
- The inter-relationship existing among the factors.

Structure of Performance Capacity



Structure of performance Capacity

The performance capacity along with external factors determines the sports performance.

- Personality: - It consists of beliefs, values interests. Attitudes temperament, mental, capabilities personality traits, habits etc.
- Condition: - It is also known as physical fitness; it consists of strength, speed, endurance and their complex forms.
- Technique / Co-ordination:- It is consist of technical skills, flexibility and co-ordination abilities.
- Tactics :- it is consist of tactical knowledge, tactical skill and tactical abilities,
- Constitution:- It is consist of physical body height and weight size with and length of body parts body fat lean body mass and stability of bone joints etc.

All the factors of performance have primarily two types of revelations with each other.

- Development relationship:-These factors are necessary prerequisites in determining the level of a factor as well as needed for further development or improvement.
- Functional relationship: - The extent of utilization of a factor is affected by other factors.

Conclusion

Sports have gained massive popularity all over the entire world and it has become a way of life. Sports serve a vital social and cultural function in the society and helps in all round development of human personality. It provides ample scope and healthy means for recreation and relaxation of human mind and society. A healthy body is always recognized as important as a healthy mind. It provides opportunities for social interaction fostering peace and understanding among different people, nations, race, religion . It is helps to performing and continue to serve all the those who are engaged in the promotion of sports and games and will continue to be of immense value to the students, sports performers and all the sports lovers. At finally structure having good physical fitness as well as good mental ability. **“A practice makes men prefect”** it's including all the sports persons.

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- Science of sports training.
- Hardayal Singh

Correlation between Ratings of Perceived Physical Exertion and Heart Rate of Male Judo Players

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Abstract

The purpose of the study was to correlate ratings of perceived physical exertion and heart rate of male judo players. Investigator randomly selected forty four (n=44) male judo players from University of Delhi. The age of male judo players ranged from 17 to 24 years (mean \pm SD), with mean age was 21.72 ± 2.44 . Various scientific equipments were used to collect the data such as 1/100 stop watch, Polar heart rate monitor and well marked 100 meters straight. Each selected subject was oriented with Borg 20 scale tests to response their perceived exertion, at regular interval of 200m. The results showed that there was a significant relationship between heart rate and Rate of perceived exertion.

Key Words: Borg, Heart Rate, Judo, Polar Monitor, RPE.

Introduction

Interest in physical conditioning for preventative and rehabilitative purposes has prompted an increased interest in understanding the physiological stresses of prolonged work. Concurrent with this has been an increased awareness of the psychological factors and the perceptions associated with prolonged work. Perceived exertion has been defined as the subjective rating of the intensity of physical work and has been the subject of increasing attention in the literature since the late 1950s.¹ The processing of sensory cues related to physical performance enables an individual to perceive general feelings of exertion and more specific sensations of physiological performance such as shortness of breath, muscular effort, and joint pain. Borg suggests that the overall perception of exertion is a "gestalt" of many feelings and sensations related to the performance of work.

The RPE-HR relationship can be altered under certain conditions. When subjects are administered properly, a beta-adrenergic receptor blocking agent, the HR remains low while the RPE increases similarly to the results of control studies. When environmental heat is introduced into the test environment, HR is significantly increased while the RPE remains proportional to the levels of work intensity.²

Borg's scale for rating perceived exertion (RPE)³ and 10-point category-ratio (CR-10)⁴ scale are the most widely used. The 15-point RPE scale values range from 6 to 20 and can be used to denote heart rates ranging from 60 to 200 beats/min. This was intended to make the scale easier to use because a certain value on the scale, e.g. 13, would match approximately a heart rate of 130 beats/min for 30-50 year-old subjects. The advantage of not having to refer to a table to interpret the meaning of a rating value has overshadowed the disadvantages of the scale. Of course, this close relationship was not intended to be taken too literally given that the meaning of a certain heart rate value as an indicator of strain depends on a variety of factors such as the subject's age, type of exercise, environment and anxiety level. The RPE scale was developed to increase linearly with power output. Thus, any physiological variable that is linearly related to exercise load tends to parallel the perceptual ratings. On the other hand, lactic acid and excessive ventilation increase according to non-linear power functions. To reflect more precisely these physiological changes during exercise a 10-point category scale with ratio properties was developed. The 10-point scale is a simple category scale for differential use that has all the advantages of a general-ratio scale. Numbers are accompanied by readily understood verbal expressions to provide more accurate descriptions of peripheral effort sensations such as aches and pains. The ratio category scale was developed so that the verbal expressions and perceptual intensity would increase according to a power

function⁵. The use of verbal expressions makes it possible to quantify the curvilinear variables such as lactate production, especially during intense exercise. The linear RPE scale, especially at the high end ratings of 16 to 20, is unable to accurately reflect its type of curvilinear function. When using the 10-point scale subjects are permitted to use decimals and also to go above 10 and below 0.5. However, as Borg suggests, there may not be one perfect scale for all kinds of subjective perception and so different scales should be used depending on the purpose of the test. The 10-point scale has been extensively used to measure subjective symptoms of fatigue, such as breathlessness and pain. Although the 10-point scale is especially suitable for determining differential effort, it has also been used to determine overall body effort sensation⁶.

The purposes of the study was to Correlate exercise heart rate and Ratings of perceived physical exertion at various distance.

Hence considered most appropriate parametric application for the purpose of the undertaken study. Thus obtained score for Rating of Perceived exertion and Heart rate were computed for the selected variables, at the end of 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 2200 and 2400 meters of distance. The data were recorded at the end of each 200 meters distance (RPE and HR at 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 2200 and 2400) respectively.

Methodology

Keeping in view the purpose and delimitations of the study, forty four (n=44) male judo players were randomly selected from University of Delhi with at least one year of judo training experience (minimum inter college level). The age of male judo players ranged from 17 to 24 years (mean \pm SD), and with mean age was 21.72 ± 2.44 . Keeping the feasibility variables like (i) Age (in years), (iii) Distance covered in 12 minute (meters), (iv) Exercise Heart Rate (beats/minute), and (v) Rating of Perceived Exertion were selected to meet the purpose of the study. Various scientific equipments were used to collect the data such as 1/100 stop watch, and Polar heart rate monitor and well marked 100 meters straight.

Borg's Perceived Exertion Test

Each selected subject was oriented with 20 scales Borg tests to response their perceived exertion, at regular interval of 200m.

Statistical Analysis

Keeping in view the objective of the study, nature of the variables and drawn hypothesis Mean, Standard deviation and Product moment correlation statistics were applied.

To test the drawn hypothesis, the level of significance chosen was 0.05.

Discussion

To test the drawn hypothesis product moment correlation was calculated among the selected variables recorded at selected distance of 12 minute run/walk test. Thereafter the correlation matrix of the selected variables recorded at 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 2200 and 2400 meters of distance (**example from 200 meter: V200, HR200, ST200 and RPE200**) have been prepared and documented in table-3. The drawn hypotheses were tested at 0.05 level of significance.

Table
Correlation Matrix of RPE and Heart Rate Recorded at Various Distance

Variables	Correlation
200	-.199
400	.075
600	.460*
800	.479**
1000	.456*
1200	.459*
1400	.460*
1600	.448*
1800	.566*
2000	.229
2200	.079
2400	.938*

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

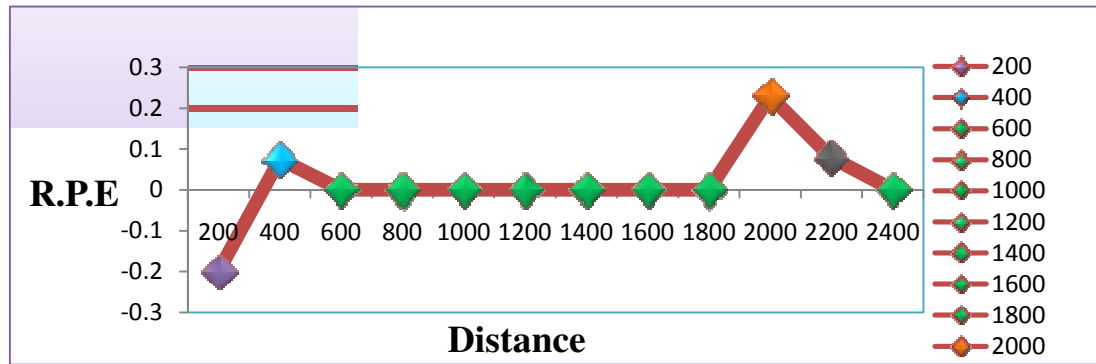


Figure :Correlation between RPE and Heart Rate

The analysis in table, demonstrated the correlation matrix of selected variables recorded at different intervals. It was found that from 600 meters of distance, RPE 600 was significantly related to HR 600 ($r=0.460$), RPE 800 is significantly related to HR 800 ($r=0.479$), RPE 1000 was significantly related to HR 1000 ($r=0.456$), RPE 1200 was significantly related to HR 1200 ($r=0.459$), at 1400 meters of distance where RPE1400 found to be significantly related to HR1400 ($r=0.460$), RPE 1600 was significantly related to HR 1600 ($r=0.448$), RPE 1800 was significantly related to HR 1800 ($r=0.566$), RPE2400 was significantly related to HR 2400 ($r=0.938$). Findings are illustrated in the figure.

Conclusion

It was conclude that the Rate of perceived exertion and Heart rate had a strong linear relationship from the distance of 600 to 1800 meters, which was clearly observed in the graph 1. The research scholar believed that is because our probably the result of other hemodynamic factors such as cardiac output, stroke volume, or blood pressure and the time it took to come into its full functional state. There are other studies by Robertson, BJ Noble, G. Borg, I. Jacobs, R. Cecil, P. Kaiser, in which relationship between RPE and HR was investigated and many of them supports with the same results found.

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A Personality Assessment Of Top Eight Interuniversity Male Recurve Archers In India

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Abstract:

The main purpose of the study was to assess the personality traits of top eight Interuniversity male Recurve archers in India. For the study 8 archers were selected from Interuniversity tournament. The age of the subjects were ranging from 17-30 years. Eysenck's personality inventory was used to assess the respective personality traits. The data was analyzed by applying descriptive statistics such as Mean, Standard Deviation and coefficient of variation were applied to the data. The finding of the study showed that there was Neuroticism and Extraversion stability in the behaviour of archers.

Introduction

Archery is one of the oldest sports that are still being practiced today. The bow and arrow can be traced back as far as the Paleolithic era (35,000 to 8000 B.C.), and is the most widely used weapon in human history. Archery is a sport that dates back years and years before the modern day version that we have today with all sorts of high-tech equipment and different techniques of shooting and competing with other archers. The history of archery can be traced back to the ancient civilization, when bows and arrows were used as a weapon to hunt wild animals and used at the warfare. The heroic efforts of the archers at the battlefield helped gain triumph over several kingdoms. Studies suggest pines serves as the arrows in the ancient times, because they consisted of a long fore shaft and a flint point. According to the history of archery, bows were first developed in either early years of the Mesolithic age or the late Paleolithic age. The oldest bow used by archers is native to Denmark. Archaeologists have discovered arrow shafts in many countries where archery was prevalent, which includes Egypt, Sweden, and Denmark. Archery was also developed in **Asia and Islamic** kingdoms. Archery is also known as a **mental sport**, which requires high levels of attention. In Competitions, archers should repeat shooting for a long time, and every shot requires high attention. For good performance, i.e., high score, stable position and posture, consistent movement, and precise shooting skills are also required. These physical and physiological factors can be effectively trained with experienced coaches. Many biomechanical apparatus can provide precise information on the posture, body movement, and other skills of shooting. Still there are many factors that affect an archer's performance. External factors include wind, noise and other environmental conditions. Internal factors include mental and emotional conditions, physiological health and muscle fatigue. Eventually, these factors affect mental attention and feeling of comfort.

Personality is highly complex construct that has various meanings and interpretation. One of the more seemingly simple ways of identifying personality however is by describing it in the term of a person's personality traits. A personality trait is generally considered representing the characteristic tendency a person has for acting or behaving in certain way. If person is aggressive for example, he is set to possess the personality traits of aggressiveness to a great or lesser degree depending on the frequency and intensity of his behaviour. Thus, one can accurately identify which traits exists within a person, and to what degree he possess each of them. It is thought that one can proceed to predict how the person will act in the future, or at least be able to explain his current behaviour. If the means for accurately identifying these traits are valid and reliable then the observer possesses a powerful instrument for analyzing human behaviour. Unfortunately, though too little thought has understood what is being measured when we evaluated the personality traits of the people.

Too often, intuitive jumps are made between very ordinary information and high complex behavioural explanation without realizing the limitations or restrictions that many of our personality inventories possess. To partially alleviate this problem, it is suggested that some basic understanding of "trait psychology" is necessary.

Personality is usually broken into components which are openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism (or emotionality). These components are generally stable over time and appear to be attributable to a person's genetics rather than the effects of one's environment

Procedure And Methodology

Subjects:

For the purpose of the study the top eight elite Interuniversity male Recurve Archers for the year 2012-13 were selected. The age of the subjects were ranging from 17-30 years.

Tools:

Eysenck's Personality Inventory (E.P.I) was used to assess the personality traits.

Statistical procedure:

The data attained from inventory were statistically treated using Mean, Standard Deviation and Coefficient of Variation.

Results

TABLE-1
Mean value, Standard deviation and coefficient of variance of Standard score of Male Recurve Archers on Neuroticism (N) and Extraversion (E)

No. of Subjects	Trait	Minimum	Maximum	Mean	Std. Deviation	Coefficient of Variation
08	N	42	63	53.37	7.83	0.28
08	E	31	62	49.37	9.10	0.47

As shown in the table 2, the mean value of Standard score for Recurve archers was found to be 53.37 and Standard deviation was found to be 7.83 whereas the coefficient of variation was found to be 0.28 for Neuroticism and for Extraversion the mean value of Standard score was found to be 49.37 and Standard deviation was found to be 9.10 whereas the coefficient of variation was found to be 0.47.

Discussion and conclusion

The obtained result from Recurve Archers shows the Neuroticism and Extraversion stability in their behaviour. Archery is a sport in which concentration is prerequisite. Sport like archery requires concentration also needs emotional stability of the sportsperson in order to excel in sports.

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Philosophical Thought behing Games and Sports

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Introduction

Games and sports keep one physically and mentally fit. They keep one away from diseases relating to heart, obesity, mental stress an sleeplessness. They instil in the player a spirit of self-confidence, self-reliance, discipline, justice, fair play and patriotism. games provide us with recreation and enjoyment. Games are very essential for students but they are neglected in schools. Even parents do not have high opinion about games and they want their children to devote more time to studies. India lacks funds, and proper training facilities are not provided to the players. Sports bring rich dividends to sportsmen. The government has formulated a New National Sports Policy. Effective measures should be taken to popularize, and encourage participation in games and sports.

We all are familiar with the maxim 'Health is wealth'. According to the World Health Organization, 'Health is a state of complete physical, the absence of disease.' Academics serve the purpose of nourishing the mind. But a healthy mind resides in a healthy body. One can develop and maintain a healthy body by actively participating in games and sports. Games keep our body alert, active, youthful and energetic. They instil in us a spirit of adventure. Games increase the circulation of blood, boost metabolism, burn calories and improve the respiration and digestive system. A healthy person can work hard cheerfully for a long period of time, and can face dangers boldly. Games also instil in the players the spirit of self-reliance, self-confidence, justice, and fair play. They enable him to follow other virtues like discipline, honesty, integrity, loyalty and patriotism.

While playing games various exercises are performed automatically and one need not join a gymnasium to exercise. Brisk walking, running, cycling, skipping, swimming and yoga are common activities to keep fit.

They also tone up the body of both the young and the old. Mild exercises are beneficial for patients recovering from heart attacks and those who suffer from obesity, diabetes, blood pressure etc. Exercise invigorates the mind and the body and helps to keep fit. Games provide us with recreation and enjoyment. Soccer, cricket, lawn tennis or wrestling are watched by millions of fans all over the world. When we watch and play games, we forget all our worries and anxieties. They enable us to divert our mind fro the nasty thinking.

A player develops team spirit; he learns to adjust with other person's shortcomings. A player respects and follows the rules of the game he plays. He, thus, becomes a man of principles. Sportspersons display punctuality, diplomacy and self-discipline. Sports help us to face the challenges in life bravely. One would not be deterred by failures as they are the stepping stones to success. Such an approach would help one reorganize one's skills and work harder with renewed vigor, to achieve one's goal.

Games generate a feeling of sportsmanship and broaden one's outlook. They are very essential for the students. In our schools, however, games and sports are not given much importance. A period of half an hour or forty five minutes is dedicated to games every day in schools. Some schools dedicate this timing for games only once a week. Children find it difficult to pursue a game in the specified period. Some schools cannot afford funds for sports equipments while most schools do not have a playground. Many schools do not employ any physical instructor to guide the children in various games. Even parents want their children to complete their home assignments after school hours rather than play games. They fail to realize that games make children strong both mentally and physically. Many school children become obese due to lack of participation in games. Obesity puts them in the high risk category of contracting diseases like diabetes, heart ailments etc. The education system needs to be reformed, and equal importance needs to be given to sports and games.

Lack of concern of the general public and authorities is evident from our country's poor performance in international sports events. In Beijing Olympics, India's best-ever performance by winning one gold and two bronze medals is a 'historic breakthrough' for the country. It is very disappointing that our players win

few medals at the Olympic Games. Even players from small countries like South Korea, Romania etc. are able to win a large number of medals. We are far behind other countries in a number of games. Moreover, in the absence of funds and facilities, the players are unable to use their talent and energy in an organized way. For example, hockey is mostly played on grass courts in India. There is also a lack of training of international standards. The players lack motivation. They are unaware of the diet they should follow to keep it. Cricket is the only game which is given some importance. But accusations of match-fixing and faulty selection procedures have harmed the image of cricket in India.

Conclusion

Sports bring rich dividends to sportsmen. Whether it is the matter of getting admission in institutions or getting jobs, sportsmen receive preference everywhere. Sports also bring fame and reputation. No doubt sports have plenty of advantages but they also have drawbacks. Some sportsmen lose their limbs, fracture their legs or get permanently disabled while playing games. Many students take more interest in games and ignore their studies. The government has formulated a new national Sports Policy. It promotes a liking for sports among public at large. It aims at development of infrastructure and provision of better coaching facilities. Seventy percent of our population lives in villages. To popularize games and tap hidden talent in rural areas, Rural Sports Programme was launched in 1970-71. The scheme has been revised recently. Grants to sports have been increased. Sports scholarships are given to talented boys and girls.

Effective measures should be taken to ensure people's active participation in games. The government should evolve a long-term national sports policy. Children should be informed about the advantages of games. They should be made to play games regularly. Training facilities for various games should be introduced. The existing training facilities should be upgraded and expanded. Selection of players for national and international games should be fair. Participation in sports and games will improve the overall health of the nation and its citizens.

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Spiritual thought behind the Games and Sports

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Introduction

Games and sports keep one physically and mentally fit. They keep one away from diseases relating to heart, obesity, mental stress and sleeplessness. They instil in the player a spirit of self-confidence, self-reliance, discipline, justice, fair play and patriotism. Games provide us with recreation and enjoyment. Games are very essential for students but they are neglected in schools. Even parents do not have high opinion about games and they want their children to devote more time to studies. India lacks funds, and proper training facilities are not provided to the players. Sports bring rich dividends to sportsmen. The government has formulated a New National Sports Policy. Effective measures should be taken to popularize, and encourage participation in games and sports. We all are familiar with the maxim 'Health is wealth'. According to the World Health Organization, 'Health is a state of complete physical, the absence of disease.' Academics serve the purpose of nourishing the mind. But a healthy mind resides in a healthy body. One can develop and maintain a healthy body by actively participating in games and sports. Games keep our body alert, active, youthful and energetic. They instil in us a spirit of adventure. Games increase the circulation of blood, boost metabolism, burn calories and improve the respiration and digestive system. A healthy person can work hard cheerfully for a long period of time, and can face dangers boldly. Games also instil in the players the spirit of self-reliance, self-confidence, justice, and fair play. They enable him to follow other virtues like discipline, honesty, integrity, loyalty and patriotism. While playing games various exercises are performed automatically and one need not join a gymnasium to exercise. Brisk walking, running, cycling, skipping, swimming and yoga are common activities to keep fit.

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Hawk-Eye Technology

Bhanu Prakash

Abstract

In modern day sports, people are very keen on using technology. Technology plays a key role in making sports very attractive, it spreads the game to each and every corner of the country, making the game more popular and desired. People who participate directly or indirectly in sports use technology in their own way. In this article I would like to emphasize on one such technology called “HAWK-EYE” which made modern sports more attractive and errors free.

“Hawk-Eye” is one of the most popular technologies used in modern day sports. Hawk-Eye is a term which originally means Bird’s view. It is a combination of two terms ‘Hawk’ and ‘Eye’. This technology is being used in many sports like Cricket, Tennis and Golf etc. This technology helps the Umpires, Match Referees in taking the correct decision. Ultra Motion, Hot-Spot are other technologies which are equally used in modern sports, but my article is about “HAWK-EYE” technology.

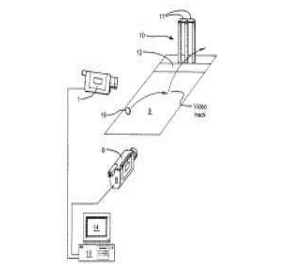
Keywords: _ Hawk-Eye, Technology in Modern Sports.

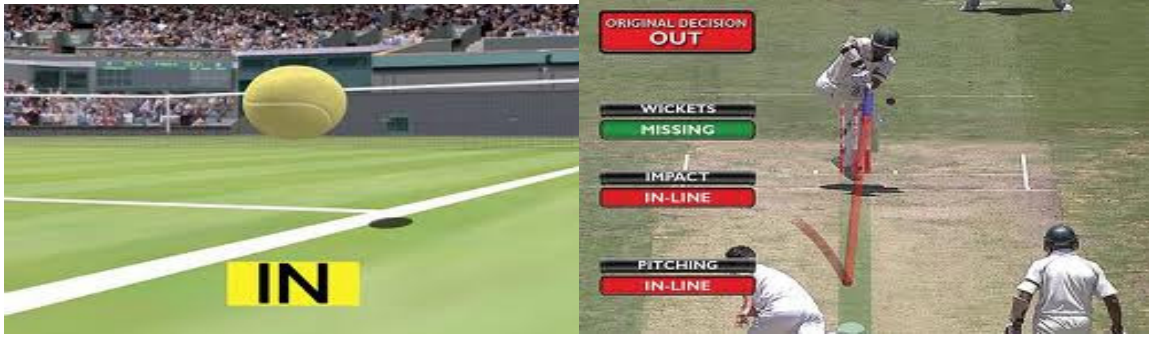
History Of Hawk-Eye Technology:

The origin of Hawk-Eye technology was done in a series of steps; Initially Dr Paul Hawkins and David Sherry submitted a patent on Hawk-Eye technology but they withdrew their request. Later Hawk-Eye Innovations and Sunset + Vine a television production company jointly started a venture. This was bought by Sony Corporation in March 2011.

Method Of Operation:

A video processing system for use in ball games played within a predetermined area on a pitch or the like such as cricket, comprising at least four video cameras arranged in spaced apart relationship at fixed positions around the said area, a video processor and ball tracker to which signals from the cameras are fed, a data store for data which models the said area and includes data representative of characteristic features positioned thereon for use in performance of the game, and a store for data appertaining to rules and/or key events of the ball game played, the video processor being operative to; (a) identify in each frame, from each camera, groups of pixels corresponding to the image of a ball; (b) compute for each frame the 3D position of an image thus identified using ball image data from at least two different cameras; (c) predict a ball flight-path from the said 3D ball position as computed in successive frames; and, (d) map the predicted flight-path on the modelled area so as to identify any interaction with one or more of the said characteristic features, which interaction signifies the occurrence of a key event or a rule infringement.





Reliability Of Hawk-Eye Technology:

Hawk-Eye is not always reliable; here are some cases which prove it:

- **Wimbledon 2007** Making its debut at Wimbledon, during the final Hawk-Eye called a shot by Rafael Nadal marginally 'in'. Roger Federer subsequently asked for the system to be switched off, firmly believing the shot was out, but his request was denied.
- **Dubai 2007** Rafael Nadal was furious when he believed a ball to be 'out' that Hawk-Eye had called 'in'. He referred to a mark on the court that seemed to prove his point, but the call stood. The makers of Hawk-Eye later explained that Nadal could not see the full stretched impact of the ball on the surface, whereas Hawk-Eye could.
- **Indian Wells 2009** At a quarterfinal between Ivan Ljubicic and Andy Murray, Hawk-Eye incorrectly called a shot by Murray 'in'. Later, it transpired it had accidentally taken an image of a second bounce, a rare occurrence.

Conclusion:

With some appreciations and with some rejections Hawk-Eye technology is still in use in many sports. I would like to conclude this article by saying that Hawk-Eye technology has made job of Umpires and Match officials very easy and made the game free from controversies.

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Reforms on Indian women situation since medieval to Contemporary period, including sports

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Introduction

Medieval India was considered the "Dark Ages" for Indian women. Medieval India saw many foreign conquests, which resulted in the decline in women's status. When foreign conquerors like the Mughals and the British invaded India they brought with them their own culture, which in some cases adversely affected the condition of women and in some cases emancipated them. Over the ages in India women have been treated as the sole property of her father, brother or husband, not been given any choice or freedom of her own. One more reason for the decline in the status of women and their freedom was that original Indians wanted to shield their women folk from the barbarous Muslim invaders.

Sati:

The ritual of dying on the funeral pyre of the husband is known as "Sati" or "Sahagaman". According to some of the Hindu scriptures women dying on the funeral pyre of her husband go straight to heaven so it's good to practice this ritual. Initially it was not obligatory for the women but if she practiced such a custom she was highly respected by the society. Sati was considered to be the better option than living as a widow as the plight of widows in Hindu society was even worse.

Child Marriage:

It was a norm in medieval India to get girls married at the age of 8-10. They were not allowed access to education and were trained in house work instead. Child marriage had its own share of problems such as increased birth rate, poor health of women due to repeated child bearing and high mortality rate of women and children.

Restriction on Widow Remarriage:

The condition of widows in medieval India was very poor. They were not treated as equals and were subjected to a lot of restrictions. They were supposed to live pious life after their husband died and were not allowed entry in any celebration. Their presence in any good work was considered to be a bad omen. Many widows also had to have their hair shaved off as a mark of mourning. They were not allowed to remarry. Any woman remarrying was looked down by the society. This cruelty on widows was one of the main reasons for the large number of women committing Sati. In medieval India living as a Hindu widow was no short of a curse.

Purdah System:

The veil or the 'Purdah' system was widely prevalent in medieval Indian society. It was used to protect the women folk from the eyes of foreign rulers who invaded India in medieval period. But this system curtailed the freedom of women.

Female Education:

The girls of medieval India and especially Hindu society were not given formal education. They were given education related to household chores. But a famous Indian philosopher 'Vatsyayana' wrote that women were supposed to be perfect in sixty four arts which included cooking, spinning, grinding, knowledge of medicine, recitation and many more. Though these evils were present in medieval Indian society but they were mainly confined to Hindu society. As compared to Hindu society other societies such as Buddhism, Jainism and Christians were a bit lenient. Women in those societies enjoyed far more freedom. They had easy access to education and were more liberal in their approach. According to these religions gender was not the issue in attaining salvation. Any person whether a man or a woman is entitled to get the grace of god. During the time of king Ashoka, women took part in religious preaching.

Devadasis :

It was a custom prevalent in Southern India. In this system girls were dedicated to temples in the name of gods and goddesses. The girls were then onwards known as 'Devadasis' meaning servant of god. These Devadasis were supposed to live the life of celibacy. All the requirements of Devadasis were fulfilled by the grants given to the temples. In temple they used to spend their time in worship of god and by singing and dancing for the god. Some kings used to invite temple dancers to perform at their court for the pleasure of courtiers and thus some Devadasis converted to Rajadasis (palace dancers) prevalent in some tribes of South India like the Yellamma cult. During the colonial times, social reformers started working towards removal of the Devdasi practice on the grounds that it supported prostitution. The plight of women in medieval India and at the starting of modern India can be summed up in the words of great poet Rabindranath Tagore: "O Lord Why have you not given woman the right to conquer her destiny? Why does she have to wait head bowed, By the roadside, Waiting with tired patience, Hoping for a miracle in the morrow?" The status of women in modern India is a sort of a paradox. If on one hand she is at the peak of ladder of success, on the other hand she is mutely suffering the violence afflicted on her by her own family members.

Malnutrition:

One of the major causes of mal nutrition among Indian women is gender inequality. In many parts of India, especially rural India, women are the ones who eat last and least in the whole family. This means they eat whatever is left after the men folk are satiated. As a result most of the times their food intake does not contain the nutritional value required in maintaining the healthy body. In villages, sometimes women do not get to eat a whole meal due to poverty.

Poor Health:

Malnutrition results in poor health of women. The women of India are prejudiced from birth itself. They are not breastfed for long. In the want of a son get pregnant as soon as possible which decreases the caring period to the girl child, whereas male members get adequate care and nutrition.

Maternal Mortality:

The maternal mortality rate in India is among highest in the world. As females are not given proper attention, which results in the malnutrition and then they are married at an early age which leads to pregnancies at younger age when the body is not ready to bear the burden of a child. All this results in complications, which may lead to gynecological problems, which may become serious with time and may ultimately, lead to death.

Lack of education:

In India women's education never got its due share of attention. From medieval India women were debarred from the educational field. According to medieval perception women need just household education and this perception of medieval India still persists in villages of India even today. Girls are supposed to fulfill domestic duties and education becomes secondary for them whereas it is considered to be important for boys. Although scenario in urban areas has changed a lot and women are opting for higher education but majority of Indian population residing in villages still live in medieval times. The people of villages consider girls to be curse and they do not want to waste money and time on them as they think that women should be wedded off as soon as possible.

Mistreatment:

In India violence against women is a common evil. Not just in remote parts but even in cities women bear the brunt. They are subjected to physical and mental violence. They are the one who work most but are not given their due. Every hour a woman is raped in India and every 93 minutes a woman is burnt to death due to dowry problem. There are many laws such as The Hindu Marriage Act of 1955, The Hindu Succession Act of 1956, The Hindu Widow Remarriage Act of 1856, The Hindu Women Right to Property Act of 1937, The Dowry Prohibition Act of 1961, to protect women and punishment is severe but the conviction rate of crime against women is very low in India.

Overworked:

Indian women work more than men of India but their work is hardly recognized as they mainly do unskilled work. Their household chores is never counted as a work, if a woman is working in a field to help her husband it will also be not counted as a work. A study conducted by Mies in 1986 states that in Andhra Pradesh a woman works around 15 hours a day during the agricultural season whereas a male on an average works for around 7-8 hours.

Lack of power:

In India a large percentage of women do not have power. They cannot take decisions independently not even related to their own life. They have to take permission of male members for each and every issue. They don't have any say in important household matters and not in matter of their own marriage.

Marriage:

The family mainly fixes the marriages in India. The scenario in villages is very bad. The girl is not consulted but is told to marry a groom whom her family has chosen for him. They are taught to abide by the whims and fancies of their husbands. Going against the wishes of husband is considered to be a sin. In marriage husband always has the upper hand. The groom and his parents show as if they are obliging the girl by marrying her and in return they demand hefty dowry.

Dowry:

Another serious issue in modern India. Courts are flooded with cases related to death due to dowry harassment by husband and in laws. In ancient times women were given 'Stridhan' when they departed from the house of their parents. This amount of money was given to her as a gift which she can use on her and her children but her in-laws did not have any right on that amount. This amount was supposed to help the girl in time of need. Slowly this tradition became obligatory and took the form of dowry.

Divorce:

The divorce rate in India is not so high compared to western countries but that does not mean that marriages are more successful here. The reason behind low level of divorce rate is that it is looked down by the society. It is regarded as the sign of failure of marriage, especially of women. She is treated as if she has committed some crime by divorcing her husband. In some communities like Muslims women did not have the right to divorce their husband they were divorced at just the pronouncement of "I divorce you" by their husband thrice and they could not do anything except to be the mute spectator. Recently Muslim Law Board has given right of divorce to women. After divorce women is entitled to get her "Mehr" for herself and her children's sustenance. In Hindu society women get maintenance for themselves and their children after divorce.

Attire:

In ancient India, both men and women used to wear clothes which did not need stitching. This custom resulted in women wearing the unstitched long cloth to cover the lower part of body this clothe came to be known as 'Sari' and the upper half of the body was covered with "Stanpatta", modern day 'choli' or blouse which was tied at the back. This attire of the past along with certain modifications continues till today. It is the major attire in rural India. In northern India and especially in cities women also wear 'Salwar kameez', which is comfortable in workplace. Nowadays some women in urban India also wear westernized dresses like trousers and shirts but still a lot of women prefer wearing Indian attire.

Conclusion

Traditionally Indian women would spend their free time with their husband's family and indulging in activities like needle work or knitting. The modern Indian career woman on the other hand spends most of her day at work and may spend her free time such as weekends shopping or going out with her friends for movies or lunch/dinner. Most women also prefer doing their own grocery shopping these days and free time may also be spent buying house hold essentials. Though women of India are not at par with her counterpart in the Western world but she is getting there. India has examples of commendable women from history who set an example of extraordinary bravery, which even men might not be able to show. Rani Lakshmi Bai of Jhansi was the one such woman.

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A Comparative Study On Motor Fitness Between College Level Volleyballers And Handballers

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Abstract

Fitness is one of the most important component of individual performance capacity. But demand of different sports is somewhat different from one another. The demand of physical fitness may not be equal for Volleyball players and Handball players, due to the size of play field, duration and nature of these ball games. Keeping on view in the present study the researcher has intended to observe the difference in motor fitness and its component between two group of players. 24 College level players from 21 to 25 years of age group from Volleyball and Handball were selected as the subject of the present study. Each group consist of 12 numbers of subjects. To measure the Motor fitness of the players Barrow Motor ability test (short form) were conducted through standard procedure. After collecting the data to observe the difference between the groups T test was conducted. On the basis of the results following conclusion were drawn. In agility Handball players were better than Volleyball players. In case of leg explosive strength Volleyball players were better than handball players. In arm and shoulder strength Volleyball players and Handball players were more or less equal. In total fitness Volleyball players were better than Handball players.

Key words : Physical Fitness, Motor Fitness, Motor Ability.

Introduction :

Fitness is a condition of the entire organism, characterized by energy and efficiency but also guided by attitudes and habit patterns that contribute to mental and emotional poise. It is the ability to perform muscular work satisfactorily and ability to carry out our daily tasks without undue fatigue. Physical Fitness is one of most important aspects in the field of physical education. Physical Fitness may be defined as the ability to carry out daily tasks with alertness without undue fatigue and having ample energy to enjoy leisure time pursuit and meet unforeseen emergencies. Motor fitness is a limited phase of physical fitness and It concerns the capacity to move the body efficiently with force over a reasonable length of time. It refers an efficient performance of an individual in such basic requirement as jumping, running, falling in a variety of situation. It is the limited phase of general motor ability. Motor ability has been defined as the present acquired and innate ability to perform motor skills of a general and fundamental nature exclusive of highly specialized sports and gymnastic techniques.

Handball game was invented in Germany, back in the late 19th century, as an outdoor sport to keep soccer players fit during the summer months. Indoor Handball was invented in the 1940s in Denmark. This is a 7.0-side game, played on a court slightly larger than a basketball court with smaller goals than its outdoor counterpart. Now it is as competition as any other highly competitive sport and requires motor fitness for its successful performer.

The history of the game of volleyball is approximately 115 years old. In 1947, the Federation International de Volleyball Board (FIVB) was formed in Paris. In 1964, Volleyball was introduced in the Olympic games. Initially, the game was created for the persons who were less fit and had been desired of less physical contact than basketball. But at present it is a competitive as any other highly competitive sport. Today any sport at its top level, requires motor fitness for its successful performer, volleyball is no exception to that.

Fitness is one of the important component of individual performance. But demand of different sports is somewhat different from one another. The demand of physical fitness may not be equal for Volleyball players and Handball players, due to the size of play field, duration and nature of this games.

Methodology :

24 university level 22 to 25 years age group players from different two ball game, i.e. Volleyball and Handball were selected as the subject of the present study, each group consists of equal number of subjects. For the present study all the subjects were gone through a Motor Fitness Test. The Motor Fitness of the subjects were measures using the 'Barrow Motor Ability Test' (shot form) which consist of three test items, zigzag run, Standing Broad Jump and 6 Pound Medicine Ball Put for distance. Zigzag Run was conducted to measure agility, SBJ for leg explosive strength and 6 PMP for Arm and Shoulder strength. All the tests were conducted through standard procedure. After collecting the data, mean, SD, T value were calculated to observe the differences between group.

Results and discussion :

Personal Data :

Table—1: Mean and SD of Height and Weight of the two groups-Volleyball and Handball

Group		Volleyball	Handball
Height	Mean	178	169
	SD	2.4	1.63
Weight	Mean	69.24	59.42
	SD	1.21	4.85

The mean value of Height of Volleyball and Handball groups were 178, 169 and SD were ± 2.4 and ± 1.63 respectively. The Mean value of weight of Volleyball and Handball groups were 69.24, 59.42 and SD were 1.21 and 4.85 respectively.

Table—2 : Mean, SD, 't' value of agility of two groups

Group	Volleyball	Handball	T. Value	Table value(0.05)	Remarks
Mean	27.02	25.54	2.74	2.07	significant
SD	1.72	0.69			

The Mean agility of Volleyball and Handball groups were 27.02 and 25.54 and SD were ± 1.72 and ± 0.69 respectively. To observe the significant difference between two groups T value was calculated and found to be 2.74 which is significant at 22df at 0.05 level. So it is seen from the table that Handball group was better than Volleyball group in agility run. Incase of agility lowest time shows better performance. In zigzag run Handball group was better than Volleyball group.

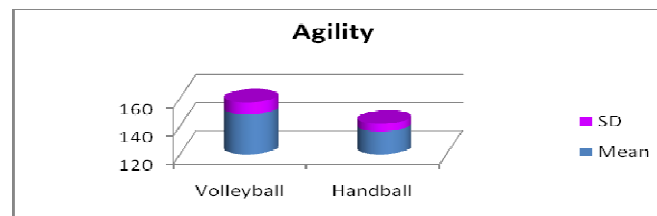


Fig. 1- The difference in mean values and SD of two groups in agility

Table—3: Mean, SD, T value of Leg Explosive strength of two groups

Group	Volleyball	Handball	T. Value	df	Table value(0.05)	Remarks
Mean	102.17	84.58	10.60	2	2.07	significant
SD	3.64	4.42		2		

The mean value of Leg Explosive Strength of Volleyball and Hand ball group were 102.17, 84.58 and SD were ± 3.64 and ± 4.42 respectively. To observe the significant difference in Leg Explosive Strength between two groups T. Value was calculated and found to be 10.60 which is significant at 22 df at 0.05 level. So it is seen from the table that Volleyball group was better than Handball group in Leg Explosive strength. Incase of Leg Explosive Strength highest distance shows better performance. In standing broad jump Volleyball group was better than Handball group.

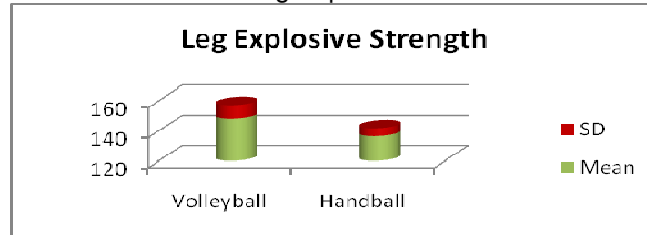


Fig. 2- The difference in mean values and SD of two groups in Leg Explosive Strength

Table—4: Mean, SD, T value of Arm and shoulder strength of two groups

Group	Volleyball	Handball	T. Value	df	Table value(0.05)	Remarks
Mean	36.33	36.67	0.33	22	2.07	Not significant
SD	1.97	2.96				

The mean value of Arm and shoulder Strength of Volleyball and Hand ball group were 36.33, 36.67 and SD were ± 1.97 and ± 2.96 respectively. To observe the significant difference in Arm and shoulder Strength between two groups T. Value was calculated and found to be 0.33 which is Not significant at 22 df at 0.05 level. So it is seen from the table that Volleyball group and Handball group were more or less equal in Arm and shoulder strength. In case of Arm and shoulder Strength highest distance shows better performance. In 6 Pound Medicine Ball Put Volleyball group and Handball group were more or less equal.

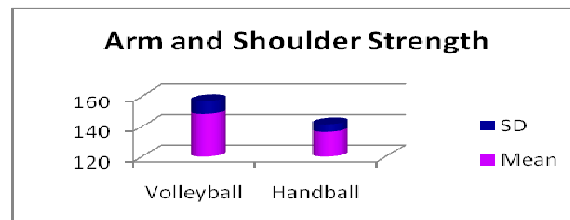


Fig. 3- The difference in mean values and SD of two groups in Arm and Shoulder Strength

Table—5: Mean, SD, T value of Total Fitness of two groups

Group	Volleyball	Handball	T. Value	df	Table value(0.05)	Remarks
Mean	148.33	136.25	3.42	22	2.07	significant
SD	8.62	5.37				

The mean value of Total Fitness of Volleyball group and Hand ball group were 148.33, 136.25 and SD were 8.62 and 5.37 respectively. To observe the significant difference in Total Fitness between two groups T. Value was calculated and found to be 3.42 which is significant at 22 df at 0.05 level. So it is seen from the table that Volleyball group was significantly better than Handball Group in Total Fitness.

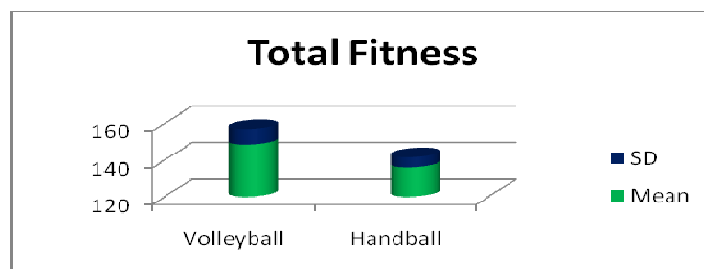


Fig. – 4: The difference in mean values and SD of two groups in Total Fitness

Conclusion :

On the basis of results obtained following conclusion was drawn.

- i. In agility Handball players were better than Volleyball players.
- ii. In leg explosive strength Volleyball players were better than handball players.
- iii. In arm and shoulder strength Volleyball players and Handball players were more or less equal.
- iv. In total fitness Volleyball players were better than Handball players.

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Exercises Proposed Program for the Rehabilitation of ACL Injuries in the knee Joint of Athletes in Republic of Yemen

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Abstract:

Purpose: To design exercises program for rehabilitation of the knee joint by partial rupture in anterior cruciate ligament, and identify the impact of the program of exercise rehabilitation on some of the variables under study, such as the femoral and knee Circumferences, Femoral muscular strength and range of motion of the knee joint, and also identify to effectiveness of a program of exercises rehabilitation through which the comparison between the injured knee and the Intact knee in variables may study. The experimental method was used of achieve the study objectives. The study sample included 10 cases from injured athletes that come to Yemeni Center for Sports Medicine in Sana's city. Exercises program for rehabilitation consist 4 stages; it applied through 9 weeks, included 5 units in a week. The study showed that there are statistically significant differences between pre and post measurement of the variables under study, which included femoral and knee circumferences, femoral muscular strength and range of motion of the knee joint, excepted femoral flexion strength variable didn't show any statistically significant differences while comparing the injured knee with intact knee, thus all the hypotheses of the study were achieved.

Key words: Sports Injury, Exercises Rehabilitation program, Knee joint, ACL.

Introduction

The sports injuries during practice sports are a phenomenon requiring the attention of all workers in the field of sports, they are of the most important factors in forcing the player to stay away from sports competition, in spite of the tremendous progress in various medical sciences and sports, but sports injuries is still widespread and threatening the level of performance, The need for continued and increased to high levels of sports brought with it the risk of increased injury, thus the enormous pressure of training and competition to improve efficiency and the ability of the player in the sports high levels resulting in higher rates of injuries. **(Mahmoud, Y. M., 1992)**

With the high increase in the number of stressed sports competitions, the number of injuries among athletes' increases as well, this is due to the fact that practicing sports skills under huge strain and pressure on muscles, joints, ligaments and muscles tendons. This would possibly cause lots of chronic injuries, however is considered one of the serious disabling handicaps that causes a decline in the player's level of fitness and skill performance that hinders him from training for long periods of time, Injuries of the joints are serious for human movements in general and sportsmen's in particular, apparently depends on the basic movements performed by the joints and any injury in such joints would undoubtedly hinder the athletes from achieving their motor tasks successfully. **(Ahmed, O. R., 1998)**

The knee is one of the complex and most vulnerable joints in the human body, because it connects femoral muscles to the ankle joints, also it carries the body weight, there are several other possible sports related factors that would cause the knee to be vulnerable such as the sudden stops or rapid starts that require the players to move forwards or backwards, or take side movements in a time span less than a second, also the position of the knee joint represents a real challenge to those treating its injuries since it is, anatomically a weak joint because it is located in the middle position between the femoral and the ankle joints, therefore it plays two different functions, it performs wide range of motions together with carrying the heavy bodyweight, despite its strength and tightness of structure, the knee joint can be vulnerable to various types of injuries when experiencing various violent sports movements.

Statistics refers to the fact that the injury of the knee joint is common among athletes; it constitutes about 40.7% out of the total number of injuries in the musculoskeletal system. **(Galal Elden, A .H. 2005)**

Consequently, injury of the knee ligament is one of the commonest injuries during various sports competitions and it may be one possible cause to keep players totally away from sports championships as a result of the movements' problems it causes to knee injured players. (Ahmed, O. R., 1998) Hence, the role of rehabilitation for restoring the full function of this damaged body part becomes a must; this however depends basically on a precise assessment of the causes of the injury and possible methods of treatment with the aim of having the injured person capable of performing motor functions and training tasks without or at least with minimum troubles. So, the significance of studying such a case of injury becomes clear, as it is a widespread state of injury in numerous sports, such as Gymnastics, basketball, football, fighting games and many other sports fields.

Hypotheses:

There are statistically significant differences between the pre and post measurements means in Femoral and knee Circumferences in favor of the post measurement. There are statistically significant differences between the pre and post measurements means in the working muscular on the knee joint in favor of the post measurement. There are statistically significant differences between the pre and post measurements in range of motion the knee joint in favor of the post measurement. No statistically significant differences between the injured knee joint and the intact knee joint in the variables under study.

Objective of study: The present study seeks to design a rehabilitation program that includes exercises for the rehabilitation of partial rupture for anterior cruciate ligament in the knee joint of athletes in republic of Yemen, effect of rehabilitation program on some femoral and knee variables.

Methodology: The study used the experimental method because it is appropriate for achieving the objectives.

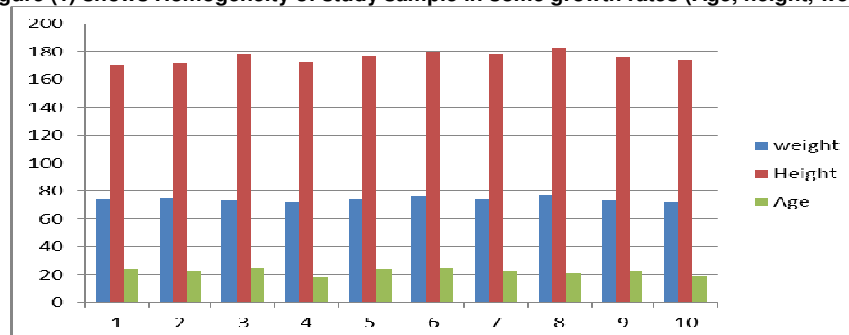
Sample of Study: The study sample was selected intentional from injured athletes, that come to Yemeni Center for Sports Medicine in Sana'a city, It included 10 cases, They injured by partial rupture for anterior cruciate ligament in the knee joint

Table (1): Homogeneity of study sample in some growth rates (Age, height, weight)

Variables	Unit	Mean	S.D	Skewness
Age	Year	22.50	2.415	0.976-
height	Cm	176.10	3.929	0.154
weight	Kg	74.00	1.633	0.574

The table no.(1) shows there are not statistically significant differences in mean and skewness between the sample of study in (age, height, weight) they were limited to the value of skewness between (-3,3+) which indicates the homogeneity of the sample of study.

Figure (1) shows Homogeneity of study sample in some growth rates (Age, height, weight)



Exercises Proposed Program: The Exercises Proposed Program for rehabilitation has been designed through review the previous scientific studies and research, has been show on a group of experts in the field of orthopedic surgery, physiotherapy and physical rehabilitation. The Exercises Proposed Program consists from 4 stages, 5 units in a week, they were apply during 9 weeks from on 12 August till 18 October 2013 in the Yemeni Center of Sports Medicine in sana'a city, sample study included on 10 injured athletes from different team games.

Tools of Measurements for Data Collection:

Stadiometer apparatus for measuring height (cm).,Electronic weighing machine for measuring the weight (kg). Measuring tape for measuring femoral and knee circumferences (cm).Dynamometer apparatus for measuring the muscular strength to muscles working on the knee joint (kg).Goniometer apparatus for measuring the range of motion of the knee joint (degree).

Results Discussion:

Table (2): Femoral and knee circumferences in Pre and Post measurement for injured knee (N =10)

Variables	Pre		Post		Mean Difference	T.test	Significance
	Mean	S.D	Mean	S.D			
Knee Circumference	40.16	1.73	38.62	1.44	44.92	-21.419	0.000
Femoral Circumference	49.69	2.17	51.90	2.03	45.26	21.41	0.000

The table no.(2) shows that the level of significance at **0.05**, this confirms the first hypothesis of there are differences between the Pre and Post measurement in femoral and knee circumferences in favor of post measurement, is accepted. This result is due to the swelling of knee joint as a result of fluid that has collect in the knee capsule, because that there is a trauma inside the knee joint that leads to excessive fluid production, that leads to weakness in the muscles working on the knee joint and thus adversely affect the strength and flexibility of working muscles and extent of the motor in either the numerator or arrested. This is consistent with what referred to (**Harrelson G. L., 1991**) that the occurrence of a knee injury with loss of movement leads to atrophy of the muscle fibers and loss of muscle strength operating on the knee joint. It is imperative to strengthen the muscles working on the knee joint through exercise drills muscle work.

Figure (2) Mean difference between pre and post measurements of femoral and knee circumferences

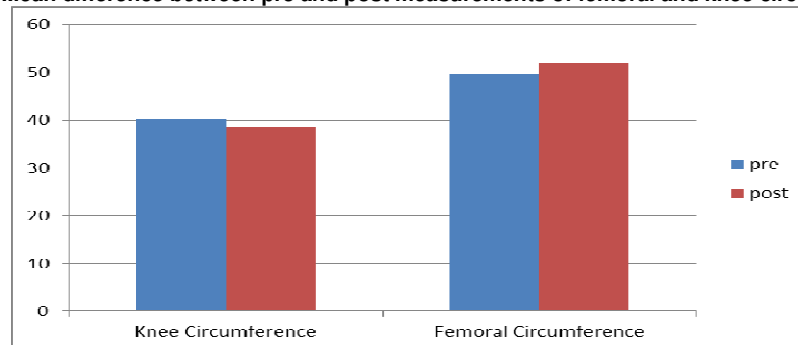


Table (3): Femoral strength in Pre and Post measurement for injured knee (N =10)

Variables	Pre		Post		Mean Difference	T.test	Significance
	Mean	S.D	Mean	S.D			
Femoral flexion strength	18.11	2.08	39.78	3.49	28.95	5.156	0.001
Femoral extension strength	15.04	2.15	43.14	2.13	29.09	-6.292	0.000

The table no.(3) shows that the significance level at **0.05**, this confirms the second hypothesis there are differences between the Pre and Post measurements in femoral strength in favor of post measurement, is accepted.

The weakness in the muscle strength in the Pre measurement due to loss of motion in the knee joint, either superiority in muscle strength in Post measurement indicates the effectiveness of the exercise program, which included the proposed exercises to develop muscle strength of the muscles working on the knee joint, This finding corroborates study of (**Moataz, M. H., 1992**) the range of motion of the knee joint is limited muscle strength and movement as well as the corresponding muscles and flexibility , in order to develop the range of motion in the joint must develop muscles strength and muscle movement that execute by corresponding muscles.

Improve muscle strength flexion and extension for the injury knee joint due to the upgrading in training the muscle work isometric and isotonic through the various stages of rehabilitation and progressive in terms of intensity and volume.

This is consistent with the stated (Davis, J. M., 1990) that must start performing motor exercises provided the use of proper resistors, as well as consistent with what he referred to (Fisher, A. G. and Tensen, C. R., 1990), (Harrelson, G. L., 1991) that training according to the working muscle isometric and isotonic happens a significant increase in muscle strength by using different amounts of exercise intensity, duration and number of iterations, and the use of advanced resistance training leads to increase muscle strength and endurance.

Figure (3): Mean difference between pre and post measurements of Femoral strength

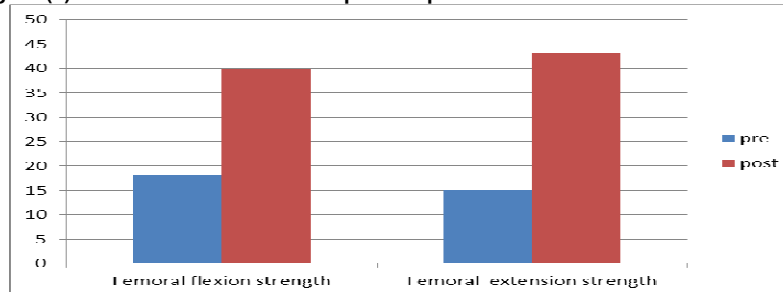


Table (4): Range of motion in Pre and Post measurements for injured knee (N =10)

Variables	Pre		Post		Mean Difference	T.test	Significance
	Mean	S.D	Mean	S.D			
Range of motion flexion	49.10	1.203	92.04	2.80	70.570	150.60	0.000
Range of motion extension	141.91	2.391	170.84	2.75	156.38	175.22	0.000

The table no.(4) shows that the significance level at **0.05**, this confirms the third hypothesis there are differences between the Pre and Post measurements in range of motion in favor of post measurement, is accepted. The improvement in range of motion of the injured knee closest thing to a natural state is a result of proposed program exercise for rehabilitation, this is consistent with (Davis, J. M., 1990) that the aim of rehabilitation is to restore the full functionality of the natural injured knee in terms of the range of motion full and muscle strength natural without the presence of swelling or pain when practice of physical activity, so you must be designed rehabilitation programs on these criteria according to the method of treatment used and the length of the installation period and appropriate physiotherapy.

Figure (4): Mean difference between pre and post measurements of (ROM)

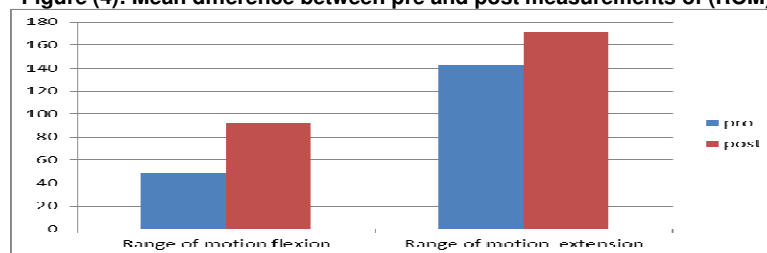


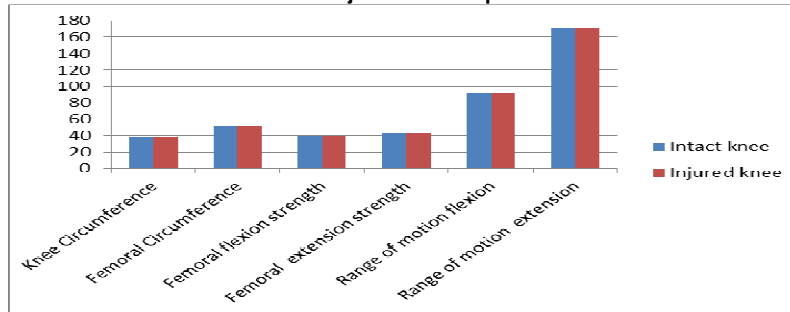
Table (5): Comparison between intact knee and injured knee in post measurements of variables under study (N =10)

Variables	Intact knee		Injured knee		Mean Difference	T.test	Significance
	Mean	S.D	Mean	S.D			
Knee Circumference	38.73	1.41	38.62	1.44	38.67	-0.177	0.864
Femoral Circumference	51.97	1.66	51.90	2.03	57.94	-0.072	0.994
Femoral flexion strength	39.79	1.71	39.78	3.49	39.88	-5.924	0.000
Femoral extension strength	43.02	3.17	43.14	2.13	43.08	1.279	0.233
Range of motion flexion	92.12	2.67	92.04	2.80	92.08	-0.013	0.999
Range of motion extension	170.84	2.41	170.84	2.75	86.27	-0.083	0.936

The table no.(5) shows that the significance level at **0.05**, this confirms the fourth hypothesis there are not differences between the intact knee and injured knee in post measurements.

The proposed exercises program for rehabilitation led to improved range of motion and muscle strength of the injured limb, as well as the development of a clear result in quadriceps exercises use isometric and isotonic, so there were no statistically significant differences between the intact knee and the injured knee in post measurement.

Figure (5): Mean difference between intact knee and injured knee in post measurements of variables under study (N =10)



Conclusions:

The exercises Proposed Program for the Rehabilitation of ACL Injuries in the knee Joint led to:Disappearance the swelling of injured knee joint caused by leaching of fluid that has collect in the knee capsule, therefore reduction of knee joint circumference.Improve muscle strength flexor and extensor that working on the injured knee joint, as well as increased femoral circumference.Improve the range of motion of the injured knee joint as close as possible to the natural state.

Recommendations:

Inference by exercises proposed program when rehabilitation of the injured knee joint by partial rupture of anterior cruciate ligament.Necessity to inference by the intact knee measurements in all of the knee measurements such as knee and femoral circumferences, femoral muscles strength, and range of motion measurements when rehabilitation of the injured knee joint by partial rupture of anterior cruciate ligament.Attention to specialty exercises (return to competition) after the final stage of the exercises proposed program for the rehabilitation of the injured knee joint by partial rupture of anterior cruciate ligament.Introduce of some modern devices physiotherapy within the proposed program at the rehabilitation of the injured knee joint by partial rupture of the anterior cruciate ligament.

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The Reliability Of A Run To Exhaustion : Sprint Performance

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Abstract

This investigation was conducted and designed to determine the reliability of a run to exhaustion treadmill protocol; the Robinson protocol which are useful for the improvement of sprint performance. Male subjects from M.P.Ed students, Department of Physical Education and Sports, Sri Krishnadevaraya University, Anantapuramu, Andhra Pradesh, India ($n = 5$) participated in three trial runs on the treadmill. The first trial was a modified McConnell maximum oxygen consumption test to determine the aerobic capacity of each subject. The second and third trials were identical run to exhaustion protocols where the subject warmed-up for 15 min at 75% of VO_2 max, rested 5 min, and then ran to exhaustion at 100% VO_2 max ($58.97 \text{ ml/kg/min} \pm 5.25$). No significant difference was found ($p > 0.05$) between the two run to exhaustion trials, and the paired samples correlation ($p = 0.001$) was 0.993. Finding that there was no significant difference between trials enables future researchers to utilize the Robinson protocol with confidence that the trials will consistently be the same.

Key Words: Running, Treadmill, Anaerobic Capacity, Sprint Performance

Introduction

The ability to endure throughout an endurance event requires an enormous amount of perseverance, fitness and determination. However, the ability to sprint to the finish line at the end of an endurance event requires available substrates for energy, and the cognitive focus to myopically force the human body into a zone of high demand. Researchers have concentrated on the influence of carbohydrate ingestion on sprint performance during short duration ($< 1\text{-hr}$) high intensity activity ($> 75\% \text{VO}_2\text{max}$). The studies Daniel Christian et al., (2011), Edwards et al., (2012), Clark et al. (2013) all utilized cycling as their method of exercise. Dernman et al. was the partial exception to the rule, and compared cycling to running. Pizza et al., and Willmore and Castle et al., utilized running as their mode of exercise. The imbalance of cycling and running research shows that testing subjects on a cycle ergometer is easier than that of a runner on a treadmill. However, it has not been determined if a similar relationship between the metabolism of carbohydrates of cyclists and runners exists. Sprint performance tests that have been conducted recently include Pizza et al. who tested trained runners, during two trials, in a short term, high-intensity 15-min run at 75% VO_2max , immediately followed by an exhaustive run to failure at 100% VO_2max . The two trials were separated one-week apart and followed identical training regimes for the prior week. The 100% VO_2max effort at the end of a high-intensity run would closely mimic the environment in which the runner would exist during competitive racing conditions. Wilber and Moffatt tested 10 male runners who participated in two randomly ordered experimental trials separated by one week. The runners were supplemented with a carbohydrate-electrolyte (CE) and placebo solution, and the subjects ran on a treadmill at an intensity of 80% VO_2max until exhaustion was reached. The researchers used a treadmill protocol of straight high intensity running, instead of intermittent sprinting or switching protocols, to determine the effectiveness of CE supplementation. The protocol used by Wilber and Moffatt was used to simulate consistent high-intensity running, as found in competitive racing environments. Many performance tests are used in laboratory settings, and the reliability and validity of these tests are unclear, or even unknown. The subsequent variable assessed and measured during the Robinson run to exhaustion was the time to exhaustion. It was hypothesized that the sprint capacity of runners was well measured using a timed run to exhaustion at 100% VO_2max , and the Robinson run to exhaustion would be a reliable measurement.

Methodology

This independent project was proposed to ascertain the reliability of a run to exhaustion sprint performance treadmill test.

Participants

The subjects in this study were 5 trained male runners. The subjects were between 12 and 25 years of age, and were the students of M.P.Ed course in the Department of Physical Education and Sports, Sri Krsihnadevaraya University, Anantapuramu, Andhra Pradesh, India. Subjects were required to adhere to the guidelines set in the testing procedures.

Testing Apparatus

Body weight (kg) and height (cm) were measured with a Detecto™ scale. Heart rate was measured with a Polar™ Vantage XL Heart Rate Monitor (Model # 45900, Stamford, CT). Respiratory values of oxygen consumed and expired carbon dioxide were measured with a Sensor Medics metabolic cart (2900 System, Yorba Linda, CA). Substrate utilization and oxygen consumption (VO_2) were estimated from the gas exchange. The dependent variable time to exhaustion was measured with a stopwatch.

Procedures

Subjects were required to participate in three test days. Prior to testing, subjects were given an informed consent document to complete, as well as a medical history questionnaire. Subjects were also asked to record detailed training and diet journals for the week prior to each of the testing sessions. The subjects were then asked to maintain similar dietary and training regimes prior to each trial. Diet analyses were calculated with YMCA's NutriTrac (Positive Input, Corp, and Bangalore).

The first test day consisted of a modified McConnell Protocol maximum oxygen consumption test (10) to assess the maximum oxygen consumption ($\text{VO}_{2\text{max}}$) of the participant via indirect calorimetry. The McConnell Protocol consisted of a starting pace of 4.0 m/h at 0% grade. Treadmill speed was increased 1 km/h/min to min 6 (9 km/h), and thereafter %grade was increased 1%/min. The establishment of $\text{VO}_{2\text{max}}$ was met when at least two of the following criteria were met: a plateau, or a decrease in oxygen uptake relative to an increasing workload; an RER value of greater than 1.15; or a heart rate within 10 beats of the age predicted maximum value. The speed and grade that corresponded to $\text{VO}_{2\text{max}}$ were the values used for setting the speed and grade for the two run to exhaustion trials.

Testing Procedures

Prior to the running time, the treadmill was set at the predetermined and individual maximum speed and grade, which was established during the first trial. The second and third trials were both sub-maximal 15-min runs at 75% $\text{VO}_{2\text{max}}$ followed by a 5-min rest period. These two identical trials were used to compare for reliability. Immediately after the rest, the subjects ran to exhaustion at 100% $\text{VO}_{2\text{max}}$. Time recorded to exhaustion was the time from when the subject removed his hands from the handrails of the treadmill until he placed them back on the handrails. Both sprint-running trials were spaced at least one week apart.

Statistical Analysis

The results obtained during the two high-intensity running trials were analyzed using the Repeated Measures t-test for the dependent variable time to exhaustion to determine the reliability coefficient and the t-value. The Repeated Measures t-test was statistically analyzed using the Statistical Package for Social Sciences for Windows (SPSS) for Windows.

Table 1
Descriptive Characteristic Of Male Subjects

Variables	Mean	S.D
Age (Years)	24.20	6.91
Vo2 Max (ml/Kg/Min)	58.97	5.25
Weight (Kg)	74.36	14.40
Height (Cm)	180.85	1.10
Time To Exhaustion (1)(S)	258.92	93.25
Time To Exhaustion (2)(S)	268.70	79.20

Five male runners were studied to determine the reliability of the Robinson run to exhaustion protocol. The characteristics for subjects are presented in Table 1. No significant ($p>0.05$) difference was found in the mean time to exhaustion between the two trials, ($p=0.279$, $t = -1.251$). The trials were highly correlated ($p<0.05$) with each other ($r=0.993$, $p=0.001$).

Discussion

This research was conducted to determine the reliability of the Robinson run to exhaustion protocol utilizing 100% $\text{VO}_{2\text{max}}$. The variable that was examined was time to exhaustion. The major finding of this investigation was that the Robinson run to exhaustion protocol is a statistically reliable testing measurement in an exercise physiology laboratory.

Subjects in the present study were adult competitive runners who were very familiar with high intensity running and racing conditions. Using athletes who were accustomed to high intensity running and racing conditions allowed the researcher to investigate the testing instrument while not coaching the runners in treadmill running and high intensity work. A racing environment requires the runner to start immediately at a high intensity and run to the finish at their maximum speed. The Robinson protocol used in this research employed a similar style, where the time to exhaustion was recorded from the time when the runner removed his hands from the handrails until he placed them back on the handrails. This protocol was preferred because no time was lost in setting the treadmill speed or grade at the beginning of the run.

The findings are consistent with those from previous studies that utilized a similar running protocol of high intensity. Pizza et al. found that high intensity short duration running is enhanced following a carbohydrate loading protocol. Tsintzas et al. found that during a run to exhaustion running time was longer in the carbohydrate-supplemented trial than in the placebo. However, the reliability of such running protocols was not reported. Measurements that utilize cycling protocols such as the Wingate Anaerobic Test, report the corresponding reliability coefficients, however, no such data has been reported for treadmill running. Therefore, the purpose of this study was to determine the reliability of a high-intensity running protocol to further validate future research studies conducted with the same running protocol. This allows for further investigation with other various physiological variables, such as glucose, lactate and ammonia, thus researchers will be able to determine with greater confidence and reliability whether a significant difference exists from a protocol of supplementation, and not from variability in the testing protocol itself. In conclusion, running time to exhaustion is not statistically different from trial to trial when conducting and utilizing the Robinson protocol of 15 minute warm-up at 75% $\text{VO}_{2\text{max}}$, followed by a run to exhaustion at 100% $\text{VO}_{2\text{max}}$. Thus, the Robinson run to exhaustion protocol is a reliable protocol to use when comparing trial to trial results of various physiological measurements.

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Advanced Badminton Training Methods in Global Perspectives

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Introduction:

In the present research article, it has been tried to point out that globalization has affected as well as changed the training methods of the advanced badminton. Badminton is a very fitness demanding sports. There is a great deal of attributes a person needs in order to become successful. The sport of badminton is considered to be the fastest racket sports across the globe. When it first started, the sport was played by elite class of people. However, these days, this sport is played by a large population, in countries like Indonesia, India, Malaysia, and china. The game is pursued as a hobby, recreation and profession. The popularity of badminton has grown to a great extent in the last decade. A study conducted in this regard in the year 1993 has proved that around 1.2 million American plays once in a year. The main fitness components are agility, speed, muscular endurance, muscular power and cardio respiratory endurance. Good hand eye coordination is must in this sport, in order to become successful.

Global Perspectives on Advanced Badminton Training Methods: There is a vast difference in the methods of talent spotting of players at grass root level in different countries. In India where we emphasis mainly on strokes and style of play in the initial stage while selecting players to take up badminton seriously. In china the norms and tests give last place to strokes and style while selection is done. They select young players by seeing and evaluating them on the basis of **1) Thinking ability:** where the child has aggressiveness, whether he loves the game and is motivated or not, whether he or she is eager to learn and self confident or not and also whether it has an independent thinking ability or not. **2) Attitude:** whether the player dares to fight and win, is he or she ready to pay for effort, ready to set top or elite players as role model to copy and by studying or watching their game is ready to look more think more and learn more or not. **3) Skill:** whether the player to be selected has the basic and comprehensive skills and then comes the question of long term goals for training programs. Factors such as correct grip, foot work along with coordinating leg movement, execution of basic strokes such as clears, net shots are included in basic skills. **4) Physical fitness:** since this is an acquired quality, it has been given the last place in the norms for selection. This includes factors such as endurance, speed, agility, and strength and body coordination. It will be clear from the above that the methods adopted in countries such as china, Indonesia Malaysia and Korea give the factors such as attitude and thinking i.e. approach of young players towards the game as most important criteria for selecting them and grooming further to pursue their badminton careers, and then follows the factors such as skills and fitness. The message here is quite clear and it is major difference in the method that we adopt in India and the countries that have produced a series of world champion in the last two decades.

The methods of advanced training are broadly subdivided into:

1. Basic skill training 2. Improvement of weak points 3. Enhancement of strong points or weapons 4. Techniques and tactics development

1. Basic skill training: This training includes 60-70% of total session. It is to make sure that the players can handle all the basic skill well and accurately. This involves development of accuracy of attack, defense and counter attack abilities through mastery over basic drills of executing clears, drops, smashes, chop smashes, net shots, defense drive, push and such transitional strokes played within the rally. Making a variety of strokes from various position and different angles and teaching and practicing them with combination of 1:1 or 1:2 Or 1:3 players is an effective method with a lot of permutations and combination. This can be broadly divided into multi shuttles, defense and counter attack and basic skill training of executing any single stroke at one time.

2. Improvement of weak points: weak points usually appear when the rally is being controlled by opponent and defense. When it appears the opponent will naturally exploit it to beat you. Under the circumstances you won't be able to execute your best strokes and may lose. Improvement of weak points includes skill, tactics, physical fitness, and mental toughness. Locating the exact weak points is very important to correct it. If there is more than one weak point, concentration is done to improve upon the most vital first and then others in order.

3. Enhance of strong points: weapons strong points means special killing shots. These can many times help as match winners. For example, sudden attack from rear court within the rally mixed with other strokes. These drills can be specifically designed to develop such weapons.

4. Techniques and tactics development: deceptive technique development is usually good for players who can manage all the basic skills well. The aim of deception development is to further promote the skills and tactics of players as the opponent is kept guessing and it is difficult for him to predict his strokes. For this the coach should guide the players for developing an identical preparation action for a clear, drop shot and smash or same preparation action at the net to play slice, push, dribble or crosscourt turn. A sudden change of power, speed and direction should be emphasized. Use of body action in making straight court stroke with cross action etc is useful assets of players.

Tactics training includes training for development of offensive tactics such as open and sudden attack, change speed and attack, clear and attack, play downwards and attack, serve and attack etc. A player must be able to employ different players and in the same game against the same play also. A player who can play only one tactic will hardly stand for a high level match. A player must have his own killing shots along with speed being the most vital point without which one can't play modern badminton at top level. Any Badminton training program should concentrate on both the physical and mental aspects of Badminton.

The physical training part in badminton training program is very important for the following reasons:

1. Of all the racket sports, badminton is the fastest.
2. Being a fast paced sport, it involves fleet of foot, lightening reflexes, tremendous body balance, excellent reach, quick recovery time and boundless stamina to excel, all of which are attainable only with proper badminton physical training programme.
3. There are no rest intervals between prolonged rallies. So a player needs to be in supreme fitness to withstand the physical strain, otherwise he is liable to lose long rallies due to fatigue. The mental component of badminton training program is also equally important because basically you are what you think. In general, having a liking for the game, thinking positively, ability to assess your opponent and playing for pure enjoyment enhances your performance rather than playing for the sake of playing. Also, playing the game with a fit body enhances your self-confidence.

Physical training programme should include the following:

1. Aerobic training
2. Plyometric exercises
3. Retrieving the shuttle
4. Sprinting for the birdie
5. Ball throws involving the partner
6. Directional
7. Strength training.

Conclusion:

Thus it can be seen that advanced training or elite training is very broad based technique and if coaches have to master the same to give the best results they have to be constantly alert, active, thinking and studying the player game, its changing trends analytical and very active involved in their work in order to succeed. It is an extremely challenging and demanding job and only a thorough professional approach can make you a very successful coach.

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Effect Of Aerobic Exercises, Pranayama And The Combination Of Aerobic Exercises And Pranayama On Selected Physiological Variables Among Men Athletes

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Introduction

Today's world is a world of competitions and this is very true of sports and games. In fact it has become a prestigious issue to win medals at the international level. This has resulted sparing no effort to achieve the goal. Multimillions are spent on research projects to invent new techniques and technology to achieve excellence. Aerobic exercise is a physical exercise of relatively low intensity that depends primarily on the aerobic energy-generating process. Pranayama means control of life force through the art of breathing.

Statement Of The Problem

The purpose of this study was to find out the effect of Aerobic exercise, Pranayama and the combination of both these activities on Physiological variables – VO_{2max} and Mean Arterial Pressure.

Delimitations

The subject was selected randomly from K L University, Vaddeswaram, Guntur, (A.P). The study was delimited to the age group from 19 to 24 years. The study was conducted on forty men athletes only. Treatments were limited to three months. The following Physiological variable only were selected.

Physiological variables

VO_{2max} and Mean Arterial Pressure variables

Methodology

Selection Of Subjects Forty male students of age group between Nineteen to Twenty Four years, enrolled in K.L. University, Guntur (A.P) who had no previous experience in Aerobic exercise or Pranayama were chosen as subjects. These subjects were divided randomly into four equal groups that is control group, Aerobic exercises group, Pranayama group and combined activity group (Pranayama cum Aerobic exercise group).

Selection Of Variables

The research scholar, after reviewing the available scientific literatures on Aerobic exercise and Pranayama had selected the following variables for the study. Haematological Variables – Red Blood Corpuscles Count and Hemoglobin Content.

Aerobic Exercise Group To train the Aerobic Exercise group the services of a Gymnast, well versed in Aerobic Exercise was taken and the research scholar supervised the classes. Jane Fonda's Aerobic Exercise training video cassette was used as audio visual aid to motivate the students in the Aerobic Exercise group. During the first month, the students were made to perform each movement pattern three times with thirty seconds rest in between, before they started new movement. The total duration is twenty minutes. After getting mastery over each movement, the movements were combined to form Aerobic Exercises sequence. In the second month, five minutes warm up and stretching exercises five minutes, followed by continuous Aerobic Exercises to music for twenty minutes. The session concluded with five minutes of cool down exercises. The total duration is thirty five minutes. During the third month, five minutes warm up and stretching exercises five minutes, followed by continuous Aerobic Exercises to music for thirty minutes. The session concluded with five minutes of cool down exercises. The total duration is forty five minutes

Pranayama Group A yoga instructor was employed to teach the technique of Pranayama and the researcher had supervised the sessions. Pranayama was practiced in the following manner as prescribed by James Hewitt. Close the Pingala (the right nostril), with the right thumb, inspire air through the Ida (the left nostril), and withhold breathing as long as you can. Then breathe out slowly but not forcibly through the right nostril. Again breathe in through the right nostril and stop breathing as long as the strength permits, then expel the air through the left nostril, not forcibly but slowly and gently.

Pranayama Cum Aerobic Exercise Group :The combined Aerobic Exercises and Pranayama group consisting of ten members were given both the Pranayama and Aerobic Exercises. The duration of treatment for this group was also fixed for first month thirty minutes. But the treatment was ten minutes of Pranayama followed by fifteen minutes of Aerobic Exercises with an interval of five minutes. In the second month the Pranayama fifteen minutes, Aerobic Exercises twenty minutes with an interval of five minutes. In the third month the Pranayama twenty minutes, Aerobic Exercises twenty five minutes with an interval of five minutes.

Statistical Procedure :The analysis of covariance was used to find out the difference among the groups after treatment. Scheffe's Post Hoc test was used to find out the significant differences between the groups.

Results AND DISCUSSIONS :In this chapter the data collected are analyzed statistically and the results are discussed. The pre and post treatment data of control group, Pranayama group, Aerobic exercises group and combined activity group (Pranayama cum aerobic exercises) were obtained on the two Haematological parameters. **Results Of VO_{2max}**

Table -1
Computation Of Analysis Of Covariance Of Pre And Post Test Results Of VO_{2max}

	Mean value (ml/min/kg)								
	Control group	Pranayama Group	Aerobic Exercises group	Combined activity group	Source of variance	Sum of squares	Df	Mean squares	Obtained F-ratio
Pre test means (ANOVA)	36.26	37.41	35.26	35.02	BGM	36.40	3	12.13	0.82*
					WGM	532.07	36	14.78	
Post- test means (ANOVA)	36.76	38.36	41.64	39.34	BGM	125.29	3	41.76	2.74*
					WGM	549.39	36	15.26	
Adjusted post-Test means (ANCOVA)	36.51	37.04	42.33	40.25	BGM	219.66	3	12.13	34.05**
					WGM	75.27	35	2.15	

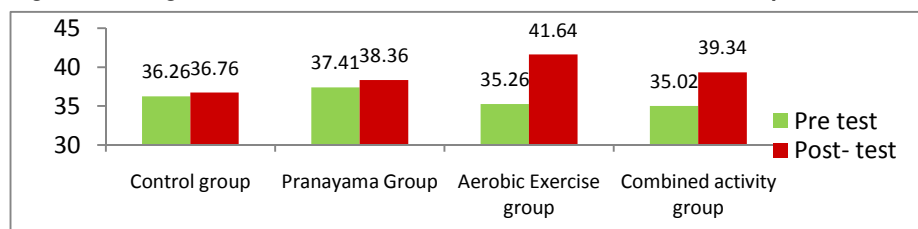
F-ratio required for significance of

* (P<0.05) ANOVA .05 = 2.86 ANCOVA .05 = 2.87 ** (P<0.01) .01 = 4.38.01 = 4.40

Table -I shows the analyzed data of VO_{2max} . The pre test means of Control group was 36.26 ml/min/kg, Pranayama group was 37.41 ml/min/kg, Aerobic Exercise group was 35.26 ml/min/kg, and combined activity group was 35.02 ml/min/kg. The result F-ratio of pre test results was 0.82 and it was less than the table value. It indicated that there was not significant difference among the groups during the pre test.

The post test means of Control group was 36.76 ml/min/kg, Pranayama group was 38.36 ml/min/kg, Aerobic Exercise group was 41.64 ml/min/kg, and combined activity group was 39.34 ml/min/kg. Bar diagram I show the pre and post test means of VO_{2max} of all the four groups. The obtained F-ratio of post test results, 2.74 was less than the required table value. However, this calculated F-ratio was not significant, which might be due to the difference among the initial means. Hence the statistical process was extended further to compute the analysis of covariance. The computed F-ratio with adjusted sum of squares 34.05 was significant at both .05 and .01 levels. The significant F-ratio indicated that there was a significant difference among the groups due to treatments. Hence Scheffe's post hoc test was employed. Adjusted final mean of each group was computed. Table- I shows the final adjusted mean of 36.51 ml/min/kg, for Control group, 37.04 ml/min/kg, for Pranayama group, 42.33 ml/min/kg, for Aerobic Exercise group and 40.25ml/min/kg, for combined activity group. The study indicated that the Aerobic Exercises and the combined activity of Pranayama and Aerobic Exercise had improved the cardiovascular efficiency where as Pranayama did not improve the cardiovascular efficiency significantly.

Graph - I Bar Diagram Showing The Pre And Post Test Means Of VO_{2max} Of Control And Experimental Groups. MI/Min/Kg



Results Of Mean Arterial Pressuretable –II

Table - II
Computation Of Analysis Of Covariance Of Pre And Post Test Results Of Mean Arterial Pressure

	Mean Value Mm.Hg				Source Of Variance	Sum Of Squares	Df	Mean Squares	Obtained F-Ratio
	Control Group	Pranayama Group	Aerobic Exercises Group	Combined Activity Group					
Pre Test Means (Anova)	93.13	93.66	93.79	94.06	Bgm	4.60	3	1.53	1.04*
					Wgm	52.94	36	1.47	
Post Test Means (Anova)	93.06	93.45	92.32	92.98	Bgm	6.63	3	2.21	1.55*
					Wgm	51.63	36	1.43	
Adjusted Post Test Means (Ancova)	93.50	93.45	92.21	92.65	Bgm	9.47	3	3.16	7.90**
					Wgm	14.01	35	0.04	

F-ratio required for significance of

ANOVA
.05 = 2.86
.01 = 4.38

ANCOVA

.05 = 2.87
.01 = 4.40

** (P<0.01)

*(P<0.05)

Table II shows the analyzed data of Mean Arterial Pressure. The pre tests mean of, Control group was 93.13mm.Hg, Pranayama group was 93.66mm.Hg, Aerobic Exercise group was 93.79mm.Hg and combined activity group was 94.06mm.Hg.

The resultant F-ratio of pre test was 1.04, not significant at .05 levels which indicated that there was no significant difference among the groups.

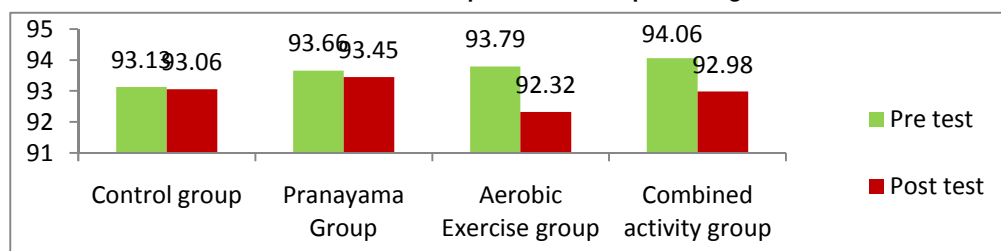
The post test result indicated the mean values of Control, Pranayama, Aerobic Exercise and combined activity groups were 93.06, 93.45, 92.32 and 92.98mm.Hg respectively. Bar diagram II shows the pre and post test means of Mean Arterial Pressure of all the four groups.

The resultant F-ratio of post test 1.55 was also not significant. However this calculated F-ratio might be due to the covariance that is, the difference among the initial means. Hence the statistical process was extended further to compute the analysis of covariance.

The obtained F-ratio 7.90 for covariance was significant at both .05 and .01 levels. This indicated that there was significant difference among the groups due to treatment. Scheffe's post hoc test was computed to find out the difference between the groups.

The study indicated that the Aerobic Exercise and combined activity groups had significant reduction in the Mean Arterial Pressure.

GRAPH - II
Bar Diagram Showing the Pre and Post test means of Mean Arterial Pressure of Control and Experimental Groups. mm.Hg



Discussion Of Results

In this study it was hypothesized that there might be significant improvement in VO_{2max} , Red Blood Corpuscles count and Hemoglobin content and decrease in Mean Arterial Pressure due to Pranayama. The result indicated that the Pranayama did not affect either VO_{2max} or Mean Arterial Pressure significantly. Hence the hypothesis (i) was rejected in the case of Physiological variables. In the case of

Haematological variables that is, Red Blood Corpuscles count and Hemoglobin content, there were significant improvement. Hence the hypothesis was accepted in the case of hematological variables. Several studies have shown that Pranayama leads to improved cardiovascular efficiency. In this study, the failure of Pranayama to improve the cardiovascular efficiency could be attributed to the fact that the big muscular activities had not involved in Pranayama.

The improvement in Red Blood Corpuscles count and Hemoglobin content could be due to the rise in PCO_2 that might have caused the secretion of Erythropoietin that stimulate Erythropoiesis.

The second hypotheses was that there might be significant improvement in VO_{2max} , Red Blood Corpuscles count, Hemoglobin content and decrease in Mean Arterial Pressure due to Aerobic Exercises. The present study indicated that the Aerobic Exercises improved significantly the VO_{2max} , Red Blood Corpuscles count, Hemoglobin content and had reduced Mean Arterial Pressure significantly. Hence hypotheses (ii) were accepted.

The Aerobic Exercises involving continuous rhythmic movements could improve the cardiovascular efficiency because of the involvement of major muscular groups..

The result showed that when compared with Control group, the combined activity group had improved significantly in VO_{2max} , Red Blood Corpuscles count and Hemoglobin content and reduced the Mean Arterial Pressure. However, when it was compared with Pranayama group, the combined activity had shown a significant improvement in all the four variables.

When compared with Aerobic Exercises group the combined activity group could not improve VO_{2max} and could not decrease the Mean Arterial Pressure. Hence the hypothesis was rejected.

This could be explained that during the Pranayama treatment the Kumbhaka phase, a complicated act might not be effective due to the short period of treatment. However, the hypoxia caused due to Pranayama could improve the Red Blood Corpuscles count and Hemoglobin content.

Conclusions

Within the limitations of the present study, following conclusions were made.

Pranayama caused significant increase in Red blood corpuscles count and Hemoglobin content.

Aerobic Exercise improved the VO_{2max} , Red blood corpuscle count, Hemoglobin content and decreased Mean Arterial Pressure.

The combined activity improved the cardiovascular efficiency, Red blood corpuscles count, Hemoglobin content and decreased the Mean Arterial Pressure.

The combined activity brought more influence on Red blood corpuscles count and Hemoglobin content, where as Aerobic Exercise activity had more influence on VO_{2max} and Mean Arterial Pressure. Pranayama had no significant influence on either VO_{2max} or on the Mean Arterial Pressure.

On the basis of the findings of the study it could be concluded that Aerobic Exercise or the combination of both Pranayama and Aerobic Exercise could be very useful in improving the physical fitness.

A Comparative Study Of Physical Fitness Among Shuttle Badminton and Table Tennis Players In SRTM University, Nanded

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Abstract

The aim of the present study was to study the difference in Physical Fitness among Table Tennis and Shuttle Badminton Players in SRTM, UNIVERSITY, NANDED. 15 Male Shuttle Badminton Players and 15 Table Tennis Players between the age group of 19 Years to 25 Years were taken for the Study. The AAPHER Youth Fitness Test consisting of 6 Items were used for the Study. It was found that Shuttle Badminton Players have good Physical Fitness compare to the Table Tennis. This study shows that the Shuttle Badminton Players are good because they do good Physical Training compare to Table Tennis Players... The Shuttle Badminton Players are having very good speed, strength agility and endurance.

Key words: Physical fitness, speed, strength, endurance.

Introduction:

AAHPER contends "Fitness is that state which characterizes the degree to which a person is able to function efficiently. Fitness is an individual matter. It implies the ability of each person to live most effectively with physical, mental, emotional, moral and spiritual components of fitness; all of which are related to one and other and are mutually inter-dependable."(AAHPER Youth Fitness Test Manual)

Physical fitness is general state of good physical health. Physical fitness is the ability to endure, beat with stand stress and carry on in circumstances where an unfit person could not continue. In order for one to be considered physically fit, heart, Lungs and muscles have to perform at a normal level for the Individual to continue feeling capable of performing an activity. Physical fitness is often divided into the following categories in order for people to be able examine its components or parts. Particularly, Physical fitness is judged by:

- 1. Cardio vascular Endurance:** This is the ability of the body to deliver oxygen and nutrients to tissues and to remove wastes over sustained periods of time.
- 2. Muscular strength and Endurance:** Strength deals with the ability of the muscle to exert force for a brief time period, while endurance is the ability of a muscle, or group of muscles, to sustain repeated contractions or to continue to apply force against an inert object.
- 3. Flexibility:** This denotes the ability to move joints and use muscles through their full range of motion.
- 4. Body composition:** Considered as one of the components of fitness, composition refers to the body in terms of lean mass (muscle, bone, vital tissue, and organs) and fat mass. Actually, the optimal ratio of fat to lean mass is an indication of fitness. Performing the right set of exercise can help people get rid off body fat and increase or maintain muscle mass. Physical fitness provides capacity for activity. Modern competitive performance demands severe training every day through out the year.
- 5. Agility:** It is the ability to change the direction of the body at speed

Performing the right set of exercise can help people get rid off body fat and increase or maintain muscle mass. Physical fitness provides capacity for activity. Modern competitive performance demands severe training every day through out the year.

Methodology:

Aim: To find out the Physical Fitness among the Table Tennis and Shuttle Badminton Players in SRTM, UNIVERSITY, NANDED. Sample: 15 Table Tennis and 15 Shuttle Badminton Players of SRTM, UNIVERSITY, NANDED have taken for study.

Test Administration:

To find out the Physical Fitness the AAPHER Youth Fitness Test consisting of the following Items are used in the study.

1. Pull Ups
2. Sit Ups
3. 10*4 Shuttle Run
4. Standing Broad Jump
5. 50 Yard Dash

The above Tests are conducted among Shuttle Badminton and Table Tennis Players.

Results And Discusssion:

Table 1 showing the performance of Physical Fitness among Shuttle Badminton Players and Table Tennis Players. It is found that Shuttle Badminton Players are having good performance then Table Tennis Players in 50 Yard Dash, Standing Broad Jump, Pull ups, Shuttle run and Table Tennis Players are found well in Sit Ups. The differences in Physical Fitness between shuttle Badminton Players and Table Tennis Players are due to Badminton Players are playing on Bigger Court as compare to Table Tennis court.

Table: 1

	Group	N	Mean	Std.	Std. Deviation	t	df	Error Mean
50 Y	Badminton Players	15	6.78	0.45	0.10	-3.34	28	
	Table tennis Players	15	7.31	0.49	0.13			
SBJ	Badminton Players	15	2.43	0.16	0.03	4.53	28	
	Table tennis Players	15	2.26	0.08	0.02			
Pull Ups	Badminton Players	15	14.33	1.31	0.27	5.62	28	
	Table tennis Players	15	11.57	1.15	0.24			
Shuttle Run	Badminton Players	15	15.09	0.90	0.23	3.87	28	
	Table tennis Players	15	14.15	0.30	0.08			
Sit Ups	Badminton Players	15	27.80	2.87	0.64	5.67	28	
	Table tennis Players	15	24.87	1.56	0.39			

Recomendations:

It is recommended that Badminton Players requires Physical Fitness Training for enhancing the performance. It is advised to Coaches include the Physical Fitness programs in their Schedules.

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Sports & Holistic Health

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Introduction

Sports is a term broadly applicable in all areas, more so in Living styles. However it is an integral part of everybody's life whether it is Personal, Career, Profession, Business, or Service. It is a situation where one has to take the best decisions or actions among the worst alternatives available. Every minute each one of us is making decisions to act. Or we will be just duplicating decisions made earlier, called Habits in a personal level and Systems in a hyped business level. Sports is a new era Management. It is a Mind Body Management. Management becomes necessary where the situations are not conducive to get the desired results. Management is redundant where things work like a clock work or computer or mathematics. This equally applies to the very life we are living. The best may not be happening every day in our office, relations or personal life. If yes, are we going to resign the job or divorce the relations or commit suicide? No. We just manage the situation in the best possible manner.

Therefore Management is a continuous process of "Resources to Results" Results are those we want, desire, retain and achieve. Resources are the— Man (Mind), Machine (Body) and Materials (Nature). While the Nature belongs entirely to the unknown Almighty Force (many country leaders claim it as their own; look at the way they exploit and pollute it) the Mind and Body belongs partly to the individuals. Now, the individuals (people like us) have the responsibility to make the best use of Resources (Mind Body) to achieve the desired Results (Health, Prosperity and Peace).

This very life is a gift of God – not our wish or work. Though it is free, we cannot give it up so easily. We learn, think, work, experience and face challenges for satisfaction till we meet the end. The whole process is Sports Management – Mind Body Management, whether it is Personal, Career, Profession, Business, or even service.

1. ABOUT BODY

Body is the front end. Mind is the Operating System. Universe is the Back end. Results are delivered by the body. The same is also enjoyed by it. Without Body, living is meaningless, as there are no deliverables, as joy and happiness. Therefore Body is precious – let us Value it, Respect it & Exercise it. In between are the 3 elements, which are the Circulation bodies effectively Transferring the Life force to Body mass they are Element Air circulation – Respiratory system Element Heat circulation – Nervous system Element Water circulation – Blood Circulation system Therefore Human Body is a system networked with the Universe. It is a Universe by itself, but in a micro scale.

Elasticity – The Body Strength Body is always in motion – within & without. Body in motion needs energy. Energy flow gives motion. Stagnant energy decays the body. (Like stagnant water) Physical Exercise is a systematic way of ensuring proper flow of energy. Exercises are proved to be one of the best in the world. Because it is simple; No strain and no pain is its principle. Anybody from the age of 8 to 80 can easily practice. It encompasses the best of all systems in the world. It takes less than 30 minutes a day. It covers the entire body system. Body is fundamentally elastic; Ageing makes it plastic & rigid, susceptible for failure and fracture. Therefore Body exercises assure better elasticity and motion. Healthy availability of body, is one of the important resource for achieving results.

Life force Inadequacy – Cause for disease Life force is a vibratory vital force, caused by the Bio Magnetism, Electrical impulses & Chemical ions. These are responsible for Body Molecules, matter & Life Problems in Life are due to - Disease in Body & Devil in Mind. These are results of violations of Natural Laws in Thinking, breathing, eating, dressing, working, and resting as well as in conduct of moral, sexual & social behaviors.

Primary causes for Diseases are: Lowered Vitality (due to excess indulgence) Blood abnormalities (due to Food & Pharma, Accumulation of Morbid matter (due to Life styles & Habits)

Remedial measures are: Return to Nature Economies on vital force and Eliminate Toxins from Body.

Body Health - Youthfulness

These are some of the ways to check your youthfulness

1. Aerobic (Oxygen intake) capacity
2. Anti oxidant levels
3. Stamina levels
4. Hormone levels
5. Immune functions
6. Metabolic activity
7. Temperature regulation
8. Blood pressure
9. Blood sugar
10. Body Elasticity,
11. Bone density
12. Cholesterol / lipids
13. Skin thickness
14. Muscle mass,

2. About Mind

Mind first, Body next. Body exists because of Mind. Mind decides Body performs. Mind is the Master & Body is a Slave. Mind has the power of universe; Body is a speck of dust in the universe. Mind is what really matters, Matter doesn't really matter. Mind is the greatest of greatest and tiniest of tiniest. Speed of Mind surpasses speed of light. Therefore Mind is a powerful converter of energy into mass and vice versa. Do you have the mind to understand mind?

Mind – Speed & Frequency

Mind interacts with the subatomic particles of Body cells. Cellular malfunction is the start of any disease. While the modern science pursues the secrets of diseases, our ancient wisdom gives us the secrets of health practices. What sciences cannot accomplish, your mind will. Mind is a Miracle machine. In Chemistry, Elements table show all heavier elements at the bottom and lighter elements at the Top. Mind at high speeds capture heavier elements, but misses all lighter elements.

Mind – Energy

It progressively transforms into Mind energy, Nuclear energy, Atomic energy, Molecular energy, Matter energy, Bio energy, Sensuous energy, Intelligence energy, Emotional energy, Intellectual energy and back to Mind energy to the Source of energy. Mind, thus is closer to the Almighty – the source of all energies.

Mind – Suffer or Joy

Body has taken the beatings of the past. They create experiences. Mind is interpreting the past experiences to the present state as perceptions. The Universe holds the future based on your needs / expectations. Thus the past (if negative) is drag on our future.

Mind – Thoughts

Mind in totality is Almighty. Mind in fractions are called in many ways as Thoughts, Ideas, Feelings, Emotions, Creative, Critical, foolish, Analytical, Abstract, Positive, Negative, Constructive, Jumping, Monkey etc. the following 10 steps that form one set of Mind.

- | | | | | |
|------------|---------------|--------------|----------------|-----------------|
| 1. Feeling | 2. Need | 3. Zeal | 4. Action | 5. Result |
| 6. Enjoy | 7. Experience | 8. Research; | 9. Realisation | 10. Conclusion. |

Mind is built up with past / present experiences & future expectations . Thoughts are a major part of mind..

Summary

Body is an extension of Mind. Mind is an extension of Almighty. Almighty is you. Almighty has blessed us with energies of Body & Mind, for Happy, Purposeful & Satisfactory life. Fix your expected Results for achievement in Life. Make the best of your Body Mind Resources. Banish your bad habits Strengthen your Body Mind thro' Learning, Loving & Serving. Realise the Greatness in you and become ONE with it.

Conclusion:

A Sound body with sound mind is essential for sportsmen to achieve the goal physical and psychological preparation of sportsmen essential for better performance. Asana & excises are more useful for holistic healh. Sportsmen are willing to reduce, aggression, anxiety, emotion, tension, stress for holistic health.

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The effect of 8 Weeks Resistance Training on Plasma Lipocalin-2 in Overweight and Obese Men

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Abstract:

Lipocalin2 has been known as neutrophil gelatinase associated lipocalin and 24p3, was reported to be associated with obesity and insulin resistance (IR), cardiovascular disease, type2 diabetes.

The reactions of this protein in progressive exercise have not yet been evaluated. Therefore the purpose of this study was to examine the effects of 8 weeks resistance training on plasma lipocalin2 in overweight and obese young men. Sixty healthy young men (aged 28.93 ± 1.65 years, height 1.71 ± 5.37 cm, BMI 28.49 ± 1.49 kg/m², mean \pm SD) participated as subjects in this study. The subjects were randomly assigned to resistance training group (n=30) or control group (n= 30). Resistance training performed 3 d/wk at an intensity corresponding to 60–75 percent of one-repetition maximum, 8-12 repetitions and 2-4 sets for 8 weeks. The results showed that body fat percent, WHR, BMI, Lcn2 were decreased ((P<0.05), the experimental group compared with control group. Maximum oxygen consumption, on the other hand, increases significant (P<0.05) in the experimental group compared with the control group. Plasma lipocalin-2, LDL-c, TG, TC and HOMA-IR decreased (P<0.05) and HDL-c increased (P<0.05) after 8 weeks resistance training. Conclusion: It seems that 8 weeks resistance training induced change in adipose tissue, decrease of plasma lipocalin2 in overweight and obese men. In the other word exercise training with weight loss induced significant reduction in circulation lcn2 levels in overweight and obese young men.

Key words: Resistance training, Plasma Lipocalin-2, Overweight and Obese men.

Introduction:

In the developed world obesity and associated metabolic and cardiovascular complication is a major public health problem and one of the major contributors to premature death. Obesity also is the most common risk factor for insulin resistance, Type2 diabetes mellitus and cardiovascular disorders. Studies have demonstrated close associations between obesity and increased circulating levels of proinflammatory molecules including cytokines, adipokines, and hemokines (Tataranni & Ortega, 2005 . Weisberg et. al 2003). In obese state this proinflammatory factors are produced predominantly from in enlarged adipocytes and activated macrophages in adipose tissue and liver. Many of this inflammatory factors such as interleukin-6 (IL-6) tumor necrosis factor- α (TNF- α) and hs-CRP can directly induce glucose intolerance and insulin resistance by antagonizing insulin's metabolic actions at peripheral tissues, especially in liver and skeletal muscle. (Fantuzzi, 2005). Lipocalin2 also known as neutrophil gelatinase associated lipocalin, sidrocalin and 24p3, is another member of the lipocalin family recently reported to have possible metabolic roles. (Harba–Renevey et al 1982). Lipocalin 2 is expressed in many tissue, including neutrophils , macrophage, kidney, liver , lung, thymus, small intestine mammary tissue as well as adipocytes and is known to play a role in inflammation. Lcn2 has been recognized as an adipocyte drive acute phase protein that is positively correlated with potential effect in obesity inflammation and insulin resistance in mice and humans (choi et al 2009 wang et al 2007). It also has been showing that circulating levels of this adipokine has a strong direct correlation with hs-CRP as an acute phase protein (Van Dam & Hu, 2007). One of the best strategies for preventing obesity and its associated inflammation is participation in regular physical activity (Peterson & Pedersen, 2005) .On the other hand, exercise has been shown to have beneficial effects on obesity, type2 diabetes and the metabolic syndrome. Although the change in adipokine levels might be an important clue for understanding the beneficial effects of exercise, data on exercise-induced changes of Lcn2 is still unclear.

Recently, Damirchi et al(2011) reported that Lcn2 increased after single bout graded exercise in obese and normal weight men. Choi et al .(2009), in the only available study, isn't reported that any change in Lcn2 level in obese women after 12 weeks moderate exercise training(Choi et al ,2009). The magnitude of the changes in plasma adipokin levels depends on the type, duration and intensity of exercise (Peterson & Pederson 2005). The physiological and biochemical responses to resistance exercise are different from those exhibited in response to endurance training (Kraemer, 1994). There was no previous investigation on the effects of resistance exercise on Lcn2 concentration, and no previous studies have attempted to compare the responses of Lcn2 to both resistance and endurance exercise in overweight and obese men. Therefore the present study was designed to determine the effects of resistance training on Lcn2.

Methods

Sixty healthy and university students aged(aged 28.93 ± 1.65 years, mean \pm SD) enrolled in this study .The inclusion criteria were men who had body mass index (BMI) ≥ 26 kg/m² did not engage in regular exercise training at the time of their enrolment. Students who were afflicted with heart diseases, hypertension, pulmonary diseases and diabetes, who needed orthopedic treatment, and who had neurological limitations to physical exercise were excluded. All the subjects were asked to complete a personal health and medical history questionnaire, which served as a screening tool. The subjects were given both verbal and written instruction outlining the experimental procedure, and written informed consent was obtained. All the subjects completed the 3-day diet recall forms and were instructed to maintain their normal physical activity and dietary habits throughout the study. The subjects were randomly assigned to one of the resistance training group (n=30) and control group (n=30).

Exercise training

The participant's of resistance training group underwent three exercise training sessions per week for 8 weeks. The training exercise consisted of a 10-minute warm-up period, as well as muscle stretches. Subjects executed eight resistance exercise selected to stress the major muscle groups in the following order: chest press, leg extension, shoulder press, leg curls, latissimus pull down, leg press, arm curls, and triceps extension. Resistance training consisted of 50-60 min of circuit weight training per day, 3 days a week for 8 weeks. This training was circularly performed in 8 stations and included 2-4 sets with 8-12 maximal repetitions at 65-80 percent of 1-RM in each station. Each training session finished with a cool down. The exercise intensity was controlled by the authors, using a hear rate monitor, who ensured that it was between 65 and 80 percent of HR_{max} throughout the trial.

Measurements:

(Anthropometric and body composition measurements)

Height and body weight were measured, and body mass index (BMI; kg/m²) was calculated from height and weight of each subject. Waist circumference was determined by obtaining the minimum circumference (narrowest part of the torso, above the umbilicus) and the maximum hip circumference while standing with their heels together. The waist to hip ratio (WHR) was calculated by dividing waist by hip circumference (cm) (ACSM, 2005). Subcutaneous body fat was measured at three sites (chest, abdominal, and thigh) with a Lafayette caliper. Body fat percent was calculated from the formula developed by Jackson and Pollock (JACKSON and POLLOCK, 1985). VO_{2max} was determined by Rockport One-Mile Fitness Walking Test.

All subjects fasted at least for 12 hours and a fasting blood sample was obtained by venipuncture. The plasma Lipocalin2 level was measured in duplicate using an enzyme-linked immunosorbent assay (ELISA) kits (Uscn Life Science Inc, Wuhan, China). Serum cholesterol triglycerides, HDL-c and LDL-c were assayed with automated techniques. Plasma glucose was determined by the enzymatic colorimetric method(Pars Azmon, Tehran, Iran) the serum insulin level was measured by a radioimmunoassay (RIA) and the insulin resistance index was calculated according to the homeostasis model assessment (HOMA-IR) which correlates well with the euglycemic hyperinsulinemic clamp in people with diabetes (Emoto et al .1999).

Statistical Analysis

Statistical analyses were performed with SPSS program (version 13, SPSS, Inc., Chicago, IL). Values were expressed as mean \pm standard deviation (SD). Independent t-test and paired t-test were used to evaluate changes in variables. General linear regression analysis and Pearson's correlation were performed to calculate a correlation between variables in response to training. P-values less than 0.05 were considered statistically significant.

Results

Anthropometric, physiological and metabolic characteristics of subjects are shown in Table 1. The results showed that body weight, body mass index (BMI), body fat percent and WHR were decreased ($P < 0.05$) after resistance training. Maximum oxygen consumption, on the other hand, increases significantly ($P < 0.05$) in the training group compared with the control group. Plasma lipocalin-2, LDL-c, TG, TC and HOMA-IR decreased ($P < 0.05$) and HDL-c increased ($P < 0.05$) after 8 weeks resistance training (Table 1). Pearson's correlation demonstrated a positive relationship between plasma lipocalin-2 levels at baseline ($P < 0.05$) with body fat percent, WHR and BMI. No significant relationship between plasma Lcn2 with biochemical variables were found in the resistance group after 8 weeks intervention.

Table 1. Shows the calculation of mean \pm SD on the Anthropometric and metabolic characteristics of subjects

Variables	Control group		Training (Resistance group)	
	Pre-test	Post-test	Pre-test	Post-test
Body weight (kg)	81.30 \pm 6.76	81.29 \pm 6.40	80.75 \pm 5.10	80.90 \pm 6.77
BMI (kg/m ²)	28.49 \pm 10.45	28.50 \pm 10.43	27.62 \pm 1.40	27.67 \pm 1.41
%Body fat	23.56 \pm 1.53	23.36 \pm 1.65	21.71 \pm 2.39	22.48 \pm 2.00
WHR	.90 \pm .03	.90 \pm .03	.9 \pm .02	.89 \pm .03
VO _{2max} (ml.kg ⁻¹ .min ⁻¹)	35.76 \pm 3.37	35.96 \pm 3.23	39.35 \pm 2.74	43.68 \pm 2.39
Triglyceride (mg/dl)	1.61 \pm 2.03	1.58 \pm 2.03	1.73 \pm 4.22	1.55 \pm 4.05
Cholesterol (mg/dl)	1.89 \pm 2.7	1.88 \pm 2.6	1.86 \pm 2.38	1.74 \pm 2.13
LDL-c	1.27 \pm 2.57	1.27 \pm 2.39	1.19 \pm 2.09	1.21 \pm 1.54
HDL-c	38.01 \pm 4.98	38.23 \pm 5.27	30.40 \pm 5.61	39.0 \pm 4.89
Lipocalin2 (ng/ml)	23.56 \pm 2.26	23.02 \pm 2.8	27.96 \pm 4.53	23.58 \pm 5.61
HOMA-IR	52.56 \pm 12.54	50.41 \pm 11.93	64.3 \pm 13.6	46.53 \pm 16.94

* $P < 0.05$ for between-group differences.

† $P < 0.05$, pretraining vs. posttraining values.

Discussion

Lcn2 has been identified as a novel adipokine associated with obesity, type 2 diabetes and the metabolic syndrome. The effects of resistance training on plasma Lcn2 are still unclear, thus this study aimed to investigate and compare the effects of resistance training (RT) and control group (CG). The results showed that Plasma Lipocalin-2 decreased ($P < 0.05$, 11.2 percent) in response to 8 weeks resistance training compared to the control group. Although no previous study has investigated the effects of resistance exercise on Lcn2 concentration, Choi et al. (2009) indicated that there was no significant change in the Lcn2 in obese women after 12 weeks moderate exercise training. This discrepant result may be attributed to variation in the exercise protocols and differences in subject populations. The results showed that body weight; body mass index (BMI), body fat percent and WHR were decreased after

resistance training, thus exercise-induced changes in body fat, especially visceral adipose tissue, may attribute to plasma Lipocalin2 decrease. On the other hand, there was the positive relationship between plasma lipocalin2 and body fat percent at baseline and after the training. In another study of Berndt et al found a positive correlation between plasma lipocalin2 concentration and body fat percent measured by DXA. Body fat percent decreased 8.8percent after 8 weeks resistance training, thus it seems that the resistance training could offer a sufficient stimulus for plasma Lcn2 decreases. Sommer et al (2009) and Yan et al (2007) indicated that a positive relationship between Lcn2 concentration and insulin resistance .However there is a significant relation between Lcn2 and insulin resistance determined by HOMA-IR. Choi et al. (2009) reported that HOMA-IR is not a very sophisticated measure of insulin resistance, although it has been used widely in clinical and epidemiological studies.

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The Effect of Aerobic (Strand) and Anaerobic (Wingate) Tests on the Alternation of Heat Shock Proteins (HSP70) levels on Young female.

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Abstract

Heat shock proteins (HSP) are from proteins family playing crucial role in maintaining cellular hemostats and protecting cells in an acute and chronic stressful conditions. The object of this study is to investigate the alternation of heat shock proteins (HSP70) levels after Wingate and Strand tests in female students. 40 female (20 athletics and 20 non-athletics) with the mean age 22.3 ± 3 & 23.2 ± 2 , Height 159.2 ± 5 & 161.2 ± 4 cm and mean weight of 59.3 ± 3 & 65.4 ± 2 kg (respectively) were selected randomly and underwent training protocols of Wingate and Strand tests with 3 days intervals. 5 cc brachial vein blood samples were taken immediately before and after performing tests in order to analyze the data using repeated measure method. The findings showed significant increase after aerobic Strand test between athletics and non-athletics Female ($p < 0.01$). But, after aerobic Wingate test, a significant increased was observed only in Athletes' group ($p > 0.05$). But there was an insignificant reduction in non-athlete group. The results showed that exercise duration is more important than exercise intensity in HSP70 production.

Key words: Heat shock protein, Strand test, Wingate test, Young female

Introduction:

All living organisms, be they animals, plants or microbes, react to an increase in temperature as a stress [1]. Various internal courses are involved when encountering stress to maintain cellular homeostasis. One of the most noticeable cellular responses to stress is the production of a protein group known as heat shock proteins or HSP [2]. The aim of producing these proteins is to return homeostasis, cellular restoration and protection against further damage [3]. This type of proteins was discovered by Ferruccio Ritossa et al. in 1962. They found out that a heat shock brought about an abnormal emergence of genes in salivary glands' chromosomes. However, in 1974, the first products of those genes were identified and the abbreviation HSP came into use [1]. HSP's are a family of proteins playing a vital part in maintaining cellular homeostasis and protecting cells in chronic and acute stress- generating conditions [4]. HSP's were mainly identified by their fragility against higher temperatures at the beginning, but the effect of other stresses than heat led to the selection of the more general term "stress proteins" for them[5]. Stress proteins belong to a multi- gene family that fall within a range of 10 to 15 kd in molecular terms[4]. Heat shock proteins are classified into smaller HSP's of 110,90,70,60 and 40 kd based on their molecular weight and performance [6]. HSP's constitute a large part of protective proteins inside prokaryote and eukaryote cells. They are also similar structurally [5,6]. These proteins are naturally located inside the nucleus and cytoplasm but can move out of the cell and perform their tasks of protecting the cell [3]. HSP's play a part in many processes (under stressful conditions) including the collection and transfer of proteins, peptides' traffic and antigen processing [7]. These proteins are made due to the type of diet, mechanical stresses, protein destruction, and limitation of access to glucose or free radicals [8]. Each HSP reacts to a certain group of molecules. For example, the members of the family HSP70 synthesize with the heavy chins of immunoglobulin and complexes in the process of DNA replication and participate in the protection of their structure or in their analysis after use. The accumulation of HSP70 levels in caused by many stimuli in normal conditions including, among others, overheating, ischemia, hypoxia, energy discharge, acidosis and formation of reactive types of oxygen [9]. All members of the HSP70 family attach to ATP, have a strong tendency to react, and probably undergo structural changes using the

energy released from ATP hydrolysis [10]. Some research studies show physical exercise to be a possibly strong stimulus for the emergence of HSP [3,4]. Some researchers have studied the chronic and acute effects of athletic stress on such proteins. In one study, HSP70 changes were measured in 14 male athletes with three exercise types- introverted test, extroverted test, and repeated extroverted text. The results showed the highest level of HSP70 to be in the program where the most damage was done to the muscles- by measuring keratin phosphokinase; repeated extroverted test [11]. On the other hand, the induction of HSP70 depends on the intensity of exercise [2] although some researchers have obtained different results [3,7]. (one such researcher suggested in his study that standard athletic tests be used for a more precise evaluation so that the results of the studies can be relied upon with higher confidence [3]). Harder exercise is more effective on heat shock reactions. The results of studies in this area show exercise intensity to be an important factor in producing HSP70 [12]. Peake et al. [2005] compared two exercise programs, i.e. one hour's running on a level treadmill with an intensity of 60 and 85 percent Vo_{2Max} . the results showed that HSP70 concentration increases immediately after exercise in both groups; however, as exercise becomes harder, the rate of such an increase goes up- 30% in medium- intensity and 310% in high- intensity exercises [12]. In another research, scientists found out that the highest amount of HSP72 is produced in a marathon compared to some other sports [13]. Conversely, another study suggested that no increase in this HSP is caused by doing short- term exercises [14]. The results of the above studies show that the factors of exercise intensity and duration have been studied in relation to HSP70 changes in athletic activities but that the more effective factor- intensity or duration- has not been determined in a standardized athletic test. Likewise, no attention has been paid to a simultaneous study of both athletes and non- athletes and a review of their bodily responses to standard athletic tests. In the present study, the researchers attempt to review the simultaneous effects of duration and intensity of physical exercise plus a comparison of the bodily responses of an athlete and a non- athlete to HSP70 changes in Stand (aerobic) and Wingate (anaerobic) tests Therefore, the general aim of this study is to compare the effects of two types of standard athletic tests on HSP70 level changes in young female athletes and non- athletes.

Materials And Methods

This research is a semi- experimented one conducted at Gachsaran Azad University in 2011. 40 women including 20 athletes and 20 non- athletes were selected voluntarily. The physiological specifications of the examinees- height, weight, bodily fat percentage, BMI- in the two groups of athletes and non- athletes are shown in Table 1. Letters of consent were filled in by the subjects upon a briefing on the process of the study- study aims and method, its applications and possible complications. The examinees first did the Wingate anaerobic test, and then, with an interval of 3 days, the Strand aerobic test. The Wingate test program included an all- out 30 second pedaling on Monark bicycle in which an automatic test with a resistance equal to 7.5% body weight of each subject started when test was given 72 hours after the Wingate test. The athletes attached a polar pulsimeter to their chest, and did the Strand test for 6 minutes. The intensity of the Strand aerobic test was based on the number of pedal strokes per minute (i.e. intensity: 75 to 80 rpm). Care should be taken, in this test, that the heartbeat will not reach its maximum rate: the subject knows the pedaling speed by checking the display across from her and tries to keep the speed within the desirable limits. Blood samples were taken from all examinees before and after each test. Serum collection was done by centrifuge machine at a speed of 4000 rpm at the test place in order to prevent any change in blood compounds. The tools used included a kit to measure HSP70- SPA812 & SPA810 Stressgen- Canada- Monark bicycle- Model E829 made in Sweden. The Jackson & Pollack formula of Skifold (thigh, abdomen, and chest) and a Lafayette model caliper made in USA were used to measure body fat percentage. The statistical analysis of data was done using SPSS.16, and the descriptive statistics method was employed to determine mean, standard deviation and the minimum and maximum amounts of data distribution. The results of the Kolmogorov- Smirnov test showed that the data were distributed normally; therefore, parametric statistics were employed. To study HSP70 changes at various stages, the repeated measurement variance test was used. The dependant T was used to study post- test changes VS pretest in each group. The significance level of the statistics analysis of the present study is $P < 0.05$.

Results:

The HSP's in the two groups of athletes and non- athletes did not significantly differ (pre- test). At the end of the study, it was revealed that the amounts of HSP70 after the Strand test was significant in both the athletic ($P < 0.01$) and non- athletic ($P < 0.05$) groups; however, after the Wingate test, it was only significant in the athletic group ($P < 0.01$). the findings of the study also showed that a significant difference

in the HSP70 changes is observed in the non-athletic group between the anaerobic Wingate and Strand tests ($P < 0.05$) but that no difference was observed in the athletic group [Fig. 1 a & b]. The study also showed that, in the athletic group, after the Strand test, the highest and lowest levels of HSP70 were 11.7 ng/ml and 6.9 ng/ml respectively, and that, after the Wingate test, these are 8.1 ng/ml and 5.2 ng/ml respectively. On the other hand, in the non-athletic group, after the Strand test, the highest and lowest levels of HSP70 were 7.2 ng/ml and 5.4 ng/ml respectively, and that, after the Wingate test, these are 5.1 ng/ml and 3.7 ng/ml respectively.

Discussion and conclusion

The findings of the present study showed that there is a significant difference between HSP70 changes after the two types of athletic tests the aerobic a strand test and the anaerobic Wingate test. The results from some research studies show that physical exercise will result in metabolic changes and HSP70 production like other stimuli do. In fact, the amount of HSP rises in various body parts after long, hard exercise [13, 12, 15] although some studies reported no change [14]. One of the common points in the findings of various studies is the effect of the duration and intensity of physical exercise over HSP70 amounts. For instance, it was revealed in a study that the higher the temperature, the larger the amount of this protein [12]. In another study, an increase in the distance and duration of exercise was shown to result in higher amounts of HSP70 [13]. Diagram 1 (a & b) shows that the intensity and duration of physical exercise in athletes result in significant changes in HSP70 amounts so that it increases after either test, but that, in athletes, it reaches 9.2 ng/ml and 6.5 ng/ml after the Strand and Wingate tests respectively. The results of the present study affirm the results of the research by Marshall et al. (2006) reporting a 1 to 16 time increase of this protein in aerobic exercise with a maximum oxygen consumption of between 40 to 90 percent and an exercise duration of 45 to 180 minutes [16]. Although, in the present study, the Strand test has a smaller intensity compared to the Wingate test, the cells in the bodies of athletes produced a larger amount of HSP70 to protect themselves. Therefore, since both these tests were done by the same persons, this difference may be explained as a result of the time difference- i.e. 6 min. for the Strand test and 30 sec. for the Wingate test- in athletic tests. It could possibly be said that the time used for physical exercise is a factor giving one's cells the opportunity to protect themselves better by producing HSP70 and that the cells will have enough time in order to confront physical stress. Similarly, the changes of this protein can be addressed in non-athletes. Following the Strand test, HSP70 grows from 4.1 ng/ml to 5.9 ng/ml which is a significant rise whereas in the Wingate test, it decreases insignificantly from 4.2 ng/ml to 4.1 ng/ml. This shows that, even in non-athletes- the duration of exercise intensity, and that the time consumed to do the Strand test gave the non-athletes the opportunity has a significant HSP 70 rise in their body cells.

The results of this research, on the other hand make it possible for the bodies of athletes and non-athletes to be compared. After the Strand athletic test, HSP70 significantly increased in both groups- Diagram in Fig. 1.a. This increase was by 54.34% and 30% in the athletic and non-athletic groups respectively. It seems that exercise habits and people's adaptation to exercise can explain the higher rates of HSP70 in the athletic group. HSP's play various roles, such as harmonizing proteins, displacing and transferring proteins, attaching to destroyed proteins, helping them reactivate, and omitting unstable proteins in the body [17]. In addition, they have the potential to be employed as symptoms of cellular damage and, as a result, for diagnostic and therapeutic purposes [18]. The results of this study, then, show that an athlete's body makes higher amounts of HSP70 to protect itself- taking into account the functions of HSP70. The Strand aerobic test brings about conditions in both groups where the body feels a need to produce HSP, but the body's ability is the main factor to respond to this need. For example, Tupling et al. (2007) studied the reaction of the bodies of non-athletes to inflammation by measuring HSP70. In that study, 10 non-athlete males were selected who did a weight-resistant exercise- knee opener with isometric contraction. The results showed that the amount of keratin phosphokinase would rise- indicating muscular exhaustion but that the amount of HSP70 would remain unchanged immediately after the exercise [19]. The present study shows that more stress is received by non-athletes taking into account the identical conditions- 75 to 80 pedal rounds per minute- for both groups in the Strand test so that the body cells of a non-athlete must produce a larger amount of HSP70 compared to an athlete's in order to confront such stress. Therefore, there comes again the question of the ability to produce HSP70. Although HSP70 is produced when the person encounters with stress, and the higher this stress, the more HSP70 has to be produced by body cells, the important point here is the ability to make that protein. Also, as relates to Wingate test, it should be noted that although the athletic and non-athletic groups were almost the same weight, and the bicycle burden was the same- 7.5% the person's weight- for both

groups, HSP70 changes had a decrease of about 2.4% and an increase of about 40% in the non-athletes and athletes respectively. In the Wingate test, the anaerobic ability was measured with the results showing the relative ability to be 12.3 w and 5.8 w/kg body weight in athletes and non-athletes respectively which indicates a greater anaerobic ability in athletes compared to non-athletes. This study showed that there is a significant, direct relationship between anaerobic ability in a given activity and the amount of HSP70 ($r=0.83$). It could then be said that a few points, such as the duration of physical activity and threshold intensity must be considered to produce heat shock proteins in athletes as well as non-athletes because body cells must undergo enough physical stress to start producing HSP to protect themselves. It could also be deducted from the results of this study that duration of physical exercise is more effective than its intensity on the production of HSP70 and that the body of an athlete can defend itself better against physical exercise stress than the body of a non-athlete can - an increase in producing HSP70.

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Compare Anthropometric Measurements Of Adolescent Girls And Boys (13, 14 Year) With Z–Score (Who 2007) Hyderabad India 2013

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Abstract:

Objective: Adolescence, a period of transition between childhood and adulthood, occupy a crucial position in the life of human beings. This period is characterized by an exceptionally rapid rate of growth. Recognizing the importance of anthropometric measurements among adolescent girls and boys, this study was undertaken to view the anthropometric measurements and compare to Z-score (WHO 2007) references of the selected adolescent girls and boys.

Material and Method: A cross-sectional study was carried out targeting 470 government schools going girls and boys select by stratified random sampling. Using the body mass index as an index of measurements of the selected girls and boys were lower when compared with Z–score (WHO 2007) a reference population.

Result: A significant difference was observed between BMI-for-age, boy 13 years {32 (27.4%)}, <-2 Z–score and others were normal {85 (72.6%)}, girls 13 years {18 (15.4%)}, <-2 Z–score and others were normal 100 (84.6%), boy 14 years {20 (16.9%)} <- 2Z–score and others were normal {79 (79.8%)}, Girls 14 years {22 (18.6%)}, <-2 Z–score and others were normal {100 (81.4%)}, total boy and girls years (470) this study {86 (18.3%)} <-2Z–score and others were normal 384 (81.7%). Height-for-age selected girls and boys Hyderabad adolescent in Z–score (WHO 2007), boy 13 years {12 (10.3%)} <-2 Z–score and others were normal {105 (89.7%)}, girls 13 years {17 (14.5%)} <-2 Z–score and others were normal 100 (85.5%), boy 14 years {9 (6.6%)} <-2 Z–score and others were normal {109 (93.4%)}, girls 14 years 16 (13.5%) <-2 Z–score and others were normal 102 (86.5%), total boy and girls years (470) this study 54 (11.7%) <-2 Z–score and others were normal 416 (88.3%). The comparison of mean of BMI-for-age (kg/m^2) in girls and boys with mean of BMI WHO (2007, Z-scores) (t-test).

Conclusion: Overall average dietary variety is associated with an increased and decreased BMI in adolescents ages 13.14 years. Increased dietary frequency among food groups is associated with an increased BMI in adolescents ages 13,14 years and prevalence malnutrition .

Key Word: Boys; Girls; BMI; Height; Hyderabad; Indiation

Introduction

Adolescence is a vulnerable period in human life cycle when nutritional requirements increase due to the adolescent growth spurt. This period is characterized by a rapid increase in height, weight and hormonal changes resulting in sexual maturation.¹ Adolescence, one of the nutritional stress periods of life with profound growth, comes with increased demands for energy, protein, minerals and vitamins.² Adolescence may be divided into three developmental stages based on physical, psychological and social changes (WHO/UNICEF).³

- Early adolescence, 10/13-14/15 years; Mid adolescence, 14/15-17;
- Late adolescence, between 17 and 21, but variable.

Adolescents make up roughly 20% of the total world population. Their number is expected to reach 1.13 billion by the year 2025.³

Considerable evidence suggests that malnutrition affects human performance, health and survival, physical growth, morbidity, mortality,⁶ cognitive development, reproduction, physical capacity and risks for several adult-onset chronic diseases.^{7,8} Growth references are used to sentinel malnutrition, and the Body-Mass-Index-for-age (BMI-for-age) reference is the tool of choice to screen and monitor nutritional status of adolescents. According to World Health Organization, the ultimate intention of nutritional assessment is to improve human health.¹¹ Malnutrition which refers to an impairment of health either from a deficiency or excess or imbalance of nutrients, is of public health significance among adolescents all

over the world. It has now been well established that the body mass index (BMI) is the most appropriate variable for determining nutritional status among adolescents.¹² Several recent studies have investigated the nutritional status of adolescents from different parts of India.¹³ The present investigation was attempted to evaluate the overall prevalence of undernutrition and to assess age-sex trends in the level of undernutrition among 13,14 year old Hyderabad adolescents.

Methods And Materials: The study was carried out in the year June to November 2013. Government schools in Hyderabad were randomly selected. The target population was adolescent girls and boys who studied in the selected by stratified random sampling in government schools. A total of 470 (235 girls and 235 boys) Government in the age groups. The selected adolescent girls and boys were briefed on the objectives of the study and all of them gave consent to take part in the study. The anthropometric measurements included height and body weight. Data was collected by personal interview and a pre-planned questionnaire. The anthropometric measurements. Height was measured was standing without footwear, to the nearest 0.1 cm, using a portable Stadiometer. Weight was measured standing and wearing light clothes to the nearest 0.1 kg using an electronic scale. Body Mass Index (BMI) is a widely used parameter associated with height among adolescents. BMI reflects the positive association between height and weight.¹⁴ The formula weight (kg)/height (m²) was used to calculate Body Mass Index (BMI). The results were compared with WHO Z-score standards (2007).¹⁵

Results: There were significant differences in mean BMI values between the two groups for ages 13, 14 (table 1), when comparing the converted BMI values to SD scores using the BMI WHO (2007, Z-scores) reference data. The comparison of the four references for adolescent boys (table 1) show only statistical difference between Hyderabad and BMI WHO (2007, Z-scores) estimates in the classification of thinness ($p < 0.000$). At both genders, mean BMI among Hyderabad adolescence significantly exceeds the 50th percentile of the BMI WHO (2007, Z-scores) reference population ($p < 0.000$). The mean age of the Hyderabad youth with height and weight measurements is 13, 14 years. Mean, SD and percentile of by gender and age, are summarized in height (Table 2), Mean and SD weight (Table 3), Mean and SD and body mass index (Table 1). Height stature is plotted this study of Hyderabad relative to WHO (2007) reference values in table 2. Mean height for 13,14 years age and for both sexes and age was lower to the 50th percentile of the WHO (2007) reference population, girls and boys at age 13, 14 years are significantly shorter ($p < 0.000$). Men of weights of Hyderabad boys and girls compared with those of the relative to NCHS reference are shown in (table 3), Mean weights of both boys and girls age for both sexes and age was lower to the 50th percentile of the reference population, girls and boys at age 13, 14 years are significantly shorter ($p < 0.000$).

Table 1: The comparison of mean of BMI-for-age (kg/m²) in girls and boys with mean of BMI WHO (2007) (Z-scores) (t-test)

Comparison of mean of BMI boys and girls	Mean of BMI WHO	Mean of BMI study	SD	t	df	Sig. (2-tailed)	Mean Difference
Boys 13 years 117)	18.2	16.6	2.2	-7.5	116	.000	-1.5
Boys 14 years 118)	19.0	17.6	2.6	-5.6	117	.000	-1.3
Girls 13 years 117)	18.8	16.8	1.9	-11.0	116	.000	-2.0
Girls 14 years 118)	19.6	18.1	2.5	-6.5	117	.000	-1.4

Correlation is significant at level of 0.01

Table 2: The comparison of mean of height-for-age (cm) in girls and boys with mean of height in WHO (2007) (Z-scores)

Comparison of mean of height of boys and girls	Mean of height WHO	Mean of height study	SD	t	df	Sig. (2-tailed)	Mean Difference
Boys 13 years 117)	156	149.2	6.0	-12.1	116	.000	6.8
Boys 14 years 118)	163.2	158.0	6.7	-8.1	117	.000	-5.0
Girls 13 years 117)	156.4	148.6	6.3	13.2	116	.000	-7.7
Girls 14 years 118)	159.8	153.2	6.4	11.0	117	.000	-6.5

Correlation is significant at level of 0.01

Table 3: The comparison of mean of weight (kg) in girls and boys with mean of weight in NCHS reference (t-test)

Comparison of mean of height of boys and girls	Mean of Weight NCHS	Mean of Weight study	SD	t	df	Sig. (2-tailed)	Mean Difference
Boys 13 years (117)	45	37.1	6.6	-12.7	116	.000	-7.8
Boys 14 years (118)	50	44	7.1	-10.2	117	.000	-6.8
Girls 13 years (117)	46	37.1	5.1	-18.5	116	.000	-8.9
Girls 14 years (118)	50.3	42.5	6.5	12.8	117	.000	7.7

Correlation is significant at level of 0.01

Discussion

The present study was carried out among school going adolescents revealed that the proportion of undernourished students varied from 48.8% in boys 13 years and 17.1% -2z, in other hands, about 42.5% were less than median, in girls 13 years 53.8%, 45.7% boys 14 years, 36.6% girls 14 years for assessment of thinness (BMI-for-age) were used (table 2). The use of anthropometry is more difficult in adolescents than in any other groups because anthropometric indices in normally nourished adolescents change with age and sexual development. Various studies carried out in different parts of the country have shown variation in the degree of under nutrition. Deshmukh et al. reported 54% as thin (<5th percentile) in the rural area of Wardha.¹⁶ Mean of BMI study in all students 13 and 14 years were conducted less than mean of WHO 2007 reference $p < 0.000$ (table 1), Chowdhary et al reported BMI less than 19 kg/m² to be as high as 69% in rural Varanasi.¹⁷ In Bangladesh, Shahabuddin et al, found the prevalence of thinness to be 67%.¹⁸ In South Bengal rate malnutrition similar¹⁹ and with study in Bolivia²⁰ and with study in Italian more.²¹ All these studies show a higher degree of undernutrition than the present study. In the present study undernutrition was significantly more pre-more violent in boys than girls. Similar findings were reported by Anand et al. among school students in a village of the Taridabad district in Haryana.²² Venkaiah et al. also reported the pre-valence of higher undernutrition in boys (53%) than girls (40%).²⁰ Sahabuddin et al.⁸ also reported that the boys were affected more (75%) than girls (59%). Stunting was observed in 45.9% of the study population and significantly higher proportion of boys were stunted compared with girls. Venkaiah et al.²³ reported stunting to be 39% irrespective of gender from the National Nutritional Monitoring Bureau (NNMB) data. Deshmukh et al.¹⁶ found it to be 51% among adolescents in rural Wardah and Yadav and Singh²⁴ reported it to be 60% among the tribal children in Bihar. Saha-Budin et al.⁸ found stunting to be as high as 48%. Anand et al.²² reported the overall prevalence of the stunting to be 39% with a higher proportion of males (41%) than females (37%) among school children in Haryana. Based on the results of the study, it appears that adolescent had shown reduced growth in comparison to WHO 2007 median value.²⁵ There is paucity of data on adolescent nutrition in the SEA (South-East Asia) Region. Reports from India, Bangladesh, Nepal and Myanmar show that 32%, 48%, 47% and 39% adolescents respectively are stunted, and 53%, 67%, 36%, and 32% adolescents from these countries are thin.²⁶ And well-to-do Indian children. In the present study, the mean BMI of girls and boys were 45.9% and the mean heights were also 45.9% of those of the well-to-do Indian children. The study revealed that the mean BMI and height of girls and boys were less as compared to the WHO 2007 standards. The results of the present study are in Concurrent with the study of Gael who reported mean weight were 75-79% and height were 95-96% of the well-to-do Indian children of 10-15 years age school girls of Jaipur.²⁰

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Exploring The Relationship And Estimation Of Stress Vulnerability Based On The Thought Control Of Fast Bowlers In Cricket

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Abstract

The Purpose of the study: The primary main of the study was to explore the relationship and estimation of stress vulnerability based on the thought control of fast bowlers in cricket game. *Subjects of the study:* To explore the present study 25 Interuniversity fast bowlers in cricket game were selected. Their ages were ranged from 18 to 25 years. *The Questionnaire used as a tool:* i) stress vulnerability questionnaire developed by two psychologists (L.H. Miller and A.D. Smith), it was used to measure their stress vulnerability level of the cricketers, ii) The Thought Control Questionnaire (TCQ) is a 30-item instrument devised by Adrian Wells and Mark I. Davies (1994) was used to assess the effectiveness of strategies used for the control of unpleasant and unwanted thoughts. The TCQ measure five factors viz. Distraction; Social Control; Worry; Punishment and Re-appraisal. *The Result of the study:* to carry the purpose of the study descriptive statistics such mean, standard deviation was used and to see the correlation among all the factors Pearson correlation coefficient was used. Further to estimate the stress vulnerability, multiple regression analysis was performed. *Conclusion:* The result of the study didn't show an appropriate model to estimate stress vulnerability based on the thought control of the fast bowlers because the values of R^2 value .345 explain 34.5% of the variance. Which consider that this leaves more than 75% of the variance, so we can see that a very large amount of variance is unexplained. The *F-value* was also less than the tabulated value.

Keywords: stress vulnerability, thought control, reappraisal, multiple regression

Introduction

It has been seen that participation in games and sports can serve as a buffer to stress (Hudd et al., 2000; Kimball & Freysinger, 2003; Kudlacek, 1997; Shirka, 1997). Stress as the negative feeling that occurs when an individual feels unable to cope with the demands placed upon them by their environment (Lazarus and Folkman, 1996). Stress is the subjective experience by a person for an event or a course of action. Therefore, in order to perceive something to be stressful you must: a. Perceive an event as threatening (to your physical, mental or emotional well being) and, b. Perceive that you do not have the resources to cope with the event. Stress is always individual experience and individually interpreted, meaning, the event which may be stressful to one person and not on another person. If someone believes that, the event which he is perceived as too stressful and he knows that he has the ability or resources to cope with it; then it will not have as adverse effect on him. So, having and developing coping skills is essential in reducing the effects of stress. Athletes (or anyone) with high coping resources can mitigate the effects of the stressors. This does not mean they eliminate the effects though. Athletes experience unique stressors related to their athletic status, such as extensive time demands; a loss of the 'star status' that many had experienced as high school athletes; injuries; the possibility of being benched/red-shirted their freshman year and conflicts with their coaches, among other factors (Humphrey, Yow, & Bowden, 2000; Papanikolaou et al., 2003). Many research studies proved that that the college athletes who are prone to or have higher level of stress are more likely to involve in bad health habits and activities (Hudd et al., 2000), they have also undergone psychological imbalances (Shirka, 1997), and also it shows that because of the high stress level it takes down their self-esteem (Hudd et al., 2000; Papanikolaou et al., 2003). In addition to those psychological and physiological issues athletes may also be in particular need of counseling for a variety of additional stress-related concerns, including time management, burnout, fear of failure, anxiety, depression, and self-esteem issues (Murray, 1997) has learned that mentioned above.

In addition to mental health concerns, many athletes report physical health concerns as well, such as lack of sleep, continuous tension, fatigue, headaches, and digestive problems (*Humphrey et al., 2000*). In fact, 10% of college athletes suffer from psychological and physiological problems that are severe enough to require counseling intervention (*Hinkle, 1994*). Complicating the freshman transition for the student athlete are difficulties related to academic success (*Humphrey et al., 2000; Papanikolaou et al., 2003*). In fact, 95% of male athletes and 86% of female athletes were stressed by factors such as: tests and examinations, preparing papers for class, missing classes because of travel, and making up missed assignments (*Humphrey et al., 2000*), this same statement has given emphasis because the subjects for this same this are Intervarsity level cricketers meaning, they are student athletes, and have enrolled in an educational institution affiliated to the universities. In addition, many athletes find they are unprepared for academic life in college or falsely believe that they will be treated differently in the classroom because they are athletes (*Papanikolaou et al., 2003*). Recent research has supported the contention that time in particular is an important obstacle for many athletes (*Humphrey et al. 2000*) report that for more than 40 percent of male athletes and well over half of the female athletes, factors related to “time” were the most serious causes of stress. Most of the respondents in this study felt that there was simply not enough time to combine academics and athletics and to do their best in both areas (*Humphrey et al., 2000*). Though both life events and daily hassles have been correlated with a higher incidence of injuries, the best predictor of the effects of stress on psychological symptoms and illness is daily hassles. We also know that athletes with a high need to avoid failure or high trait anxiety (For trait anxiety, think like Type-A, nervous and on-edge type personalities.) generally appraise situations as more stressful and consequently experience an elevated stress response. However, key to know, is that one's coping resources (which are learnable) are more influential on the stress-injury relationship.

The Thought Control Questionnaire assesses the effectiveness of strategies used for the control of unpleasant and unwanted thoughts. The concept of controlling one's thoughts effectively is implicit in several treatment approaches for these problems such as thought stopping, controlled worry periods, cognitive re-appraisal and the use of distraction techniques. However, several studies have suggested that some strategies produce an increase in the frequency of suppressed thoughts which would play an important role in the maintenance of the disorders (*Wells et al., 1994*). Hence the need for an instrument capable of measuring which strategies produces effective control of intrusive thoughts. The TCQ was developed to provide a measure of the various techniques which individuals use to control unpleasant and unwanted thoughts. It also explores the relationship between the use of different strategies and measures of stress vulnerability and psychopathology. Recent studies indicate that the TCQ scales appear to be sensitive to changes associated with recovery (*Adrian Wells and Martina Reynolds, 2000*) which would suggest that it is a useful instrument for measuring the effectiveness of strategies for controlling unwanted thoughts. Therefore the purpose of the study was to see the level of stress vulnerability and thought control of cricketers and also to see the relationship between stress vulnerability and thought control. Further it was to predict the stress vulnerability based on the thought control. For the present it was hypothesized that there will be a positive relationship between the stress vulnerability and the thought control of the cricketers.

Methods

Participants: There were 25 Intervarsity level fast bowlers in cricket game were selected for this study. The players signed a consent form that assured them their response from the questionnaire will be remain confidential with the researcher and their response would be used only for research purpose and would not be seen by any other individual other than the investigator. None of the cricketers had played cricket professionally.

Instruments: This stress vulnerability questionnaire developed by two psychologists at Boston University Medical Center, (*L.H. Miller and A.D. Smith*) was used to measure their stress vulnerability level of the fast bowlers in cricket game. To complete the questionnaire, read each statement carefully and reflect upon your typical behaviors. Scores will range from 20 to 100. If your score is less than 50, you are not vulnerable to stress at this time. Any score over 50 indicates vulnerability to stress. A score between 70 and 95 indicates a serious vulnerability to stress. A score over 95 indicates extreme vulnerability to stress. The Thought Control Questionnaire (TCQ) is a 30-item instrument devised by Adrian Wells and Mark I. Davies (1994) was used to assess the effectiveness of strategies used for the control of unpleasant and unwanted thoughts. The TCQ measure five factors that correspond to different strategies for controlling unwanted thoughts: Distraction; Social Control; Worry; Punishment and Re-appraisal. Test-Retest

Reliability: At six-weeks apart the test-retest correlations ranged from .67 to .83 for the subscales. With the total score being .83, indicating that it is a stable measure.

Results

To carry out the statistical analysis and generated the result of the psychological variables Statistical Package for Social Science version 20.00 was used. The descriptive statistics were applied to find the mean and standard deviation of the variables. To find the relationship between the stress vulnerability and thought control of the cricketers Pearson correlation was applied. Further to predict the stress vulnerability based on the thought control multiple regression analyses was used.

Table 1: Descriptive statistics and correlations matrix between the stress vulnerability and Thought Control's

	Mean	SD	Stress	Distraction	Punishment	Reappraisal	Worry	Social control
Stress	32.4800	9.55737	1	.278	.484	-.012	.053	-.221
Distraction	15.8000	3.66288		1	.061	.074	.350	-.017
Punishment	14.0800	3.60463			1	-.085	.266	-.184
Reappraisal	14.1600	3.18434				1	-.193	.204
Worry	14.1200	4.63968					1	-.068
Social control	15.1600	3.48425						1

*. Correlation is significant at the 0.05 level (2-tailed).

Tabulated value $n = 25 - 2 = 23$ is .396

Graph 1: Graphical representation of the mean values of the factors

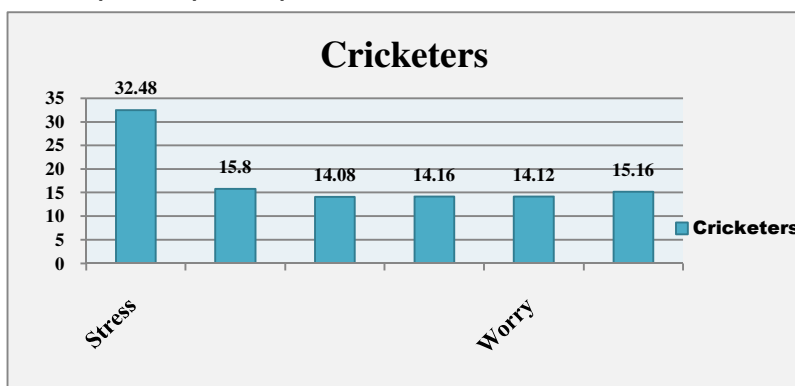


Table 3: Model Summary along with the values of R and R square

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df	df2	Sig. F Change
1	.588 ^a	.345	.173	8.69056	.345	2.005	5	19	.124

a. Predictors: (Constant), Social Control, Distraction, Punishment, Reappraisal, Worry

b. b. Dependent Variable: Stress

The regression model has been generated with the help of SPSS 20.00. Here we can see that we get a multiple coefficient (R value=.588), and it provides a measure of the correlation between the predictors combined and the dependent variable. It didn't show strong correlation with thought control. Next we get The R^2 statistics, is the measure of effect size in the multiple correlation. Here the R^2 value is .345 which means it explain 34.5% of the variance. When we consider that this leaves more than 75% of the variance, so we can see that a very large amount of variance is unexplained. Hence it would not be an appropriate model that shall be used to develop the regression equation. This is essentially the coefficient of determination for the combined predictor variables and the dependent variables, and it provides us a percentage of variance explained. The "Adjusted R Square" accounts for some of the errors associated with multiple predictor variables by taking the numbers of predictor variables and the sample size into account and thereby adjust R^2 value down a little bit.

Table 4: ANOVA Results

Model		Sum of Squares	df	Mean Square	F
1	Regression	757.250	5	151.450	2.005
	Residual	1434.990	19	75.526	
	Total	2192.240	24		

The ANOVA table helps determine whether the overall regression model is statistically significant. This section simply tells us whether our two predictor variables, combined, are able to explain a statistically significant portion of the variance in our dependent variable. The *F-value* 2.005 is less than the *tabulated value* of 2.74. Hence the regression model is statistically not significant.

Table 5: Multiple regressions predicting stress Vulnerability based on thought control

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Distraction	.821	.524	.315	1.569	.133
Punishment	1.303	.519	.491	2.513	.021
Reappraisal	-.012	.586	-.004	-.020	.984
Worry	-.408	.434	-.198	-.940	.359
Social Control	-.380	.528	-.139	-.720	.481

a. Dependent Variable: Stress

In table 5, the Beta weights of all the five subfactors of thought control were presented. Distraction and Punishment were related significantly to stress vulnerability ($p < 0.05$) whereas reappraisal, worry and social control were not ($p > 0.05$). It could be seen that distraction and reappraisal had the strongest and weakest relationship with stress vulnerability respectively (Distraction: Beta= .315, $t = 1.569$, $p < 0.05$; Reappraisal: Beta = -.004, $t = -.020$, $p > 0.05$).

Discussion and conclusion

The result of the study didn't show an appropriate model to estimate stress vulnerability based on the thought control of the fast bowlers because the values of R^2 value is .345 which means it explain 34.5% of the variance. When we consider that this leaves more than 75% of the variance, so we can say that a very large amount of variance is unexplained.

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A Comparative Study On Physical Fitness Among The Basket Ball And HandBallPlayers (Boys) Between Age Group Of 14-16 Years In Warangal District

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Abstract:

Physical fitness refers to organic capacity of an individual to perform the task of daily living without under tiredness and fatigue and still have reserve of strength and energy available to meet satisfactory sudden generic placed upon him. The aim of “physical fitness” must be immovable to the qualities of the educated person. The aim of physical education is the optimum development of physically, socially and mentally integrated and adjusted individual through participation in large muscle activities. The investigator administered the physical fitness test on these subjects to measure the physical fitness. Before conducting the test the subjects were explained the procedure involved. The test scores were recorded according to the instructions given by the researcher on the physical fitness and analyzed statistically to find out the significance. For the purpose of analyzing the data, Mean, Standard deviation and the investigation under report studied the difference between volley ball and hand ball players of ZPHS School, Zaffargadh mandal in Warangal district on selected physical fitness variables. To find out the different between the Basket ball and hand ball players and selected physical fitness variables means and stander deviation and finally t-test was completed The Present Article/Paper deals with this issue and attempts to focus on the difference between the performances of sportsmen.

Introduction: Early Greek and Chinese civilizations were concerned with the physical development of the individual. Each change in civilization through the ages brought about change in the need of physical fitness. Fit persons are the nations pride and they arc an asset to the country in all respects of progress and development. In fact countries like the USA, Germany, China, France etc., have insisted on military training for the people because of the importance of “Physical Fitness” to the people of the respective countries who can work hard for trade and business and also will extend a helping hand in protecting the country at the time of invasion by the enemies. Physical fitness is a capacity for sustained physical activities. It is the keu to success, in every walk of life, the progress of any country depends mainly on the degree of physical fitness of the people in order to make the people fitness conscious the government of India had introduced scheme of” National Physical efficiency Drive”. Physical fitness is the capacity for activity. It is a positive and dynamic quality and it is closely related to diet, exercise, rest and emotional outlook. Physical fitness is demonstrated through physical performance the greater the physical fitness, the grater the physical endurance and precision of movement.

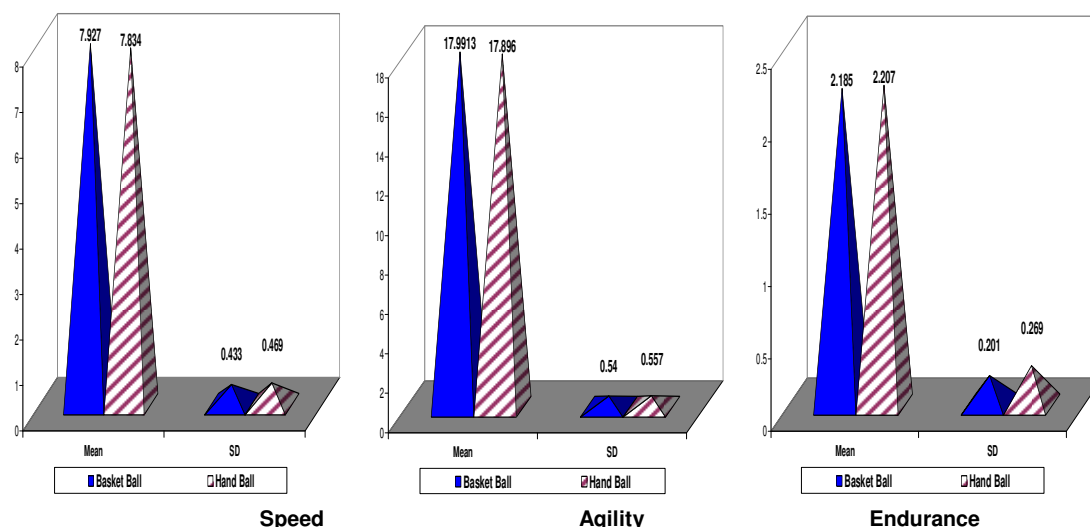
Methodology: The purpose of this study was to compare the physical fitness among the Basket ball players and Hand ball of Z.P.H.School of Zaffargadh Mondal in Warangal District. The investigator administered the physical fitness test on these subjects to measure the physical fitness. Before conducting the test the subjects were explained the procedure involved. The test scores were recorded according to the instructions given by the researcher on the physical fitness and analyzed statistically to find out the significance. The researcher has conducted the three physical fitness test 50 yards (speed), 10x6 shuttle run (Agility), 600mtrs (endurance) taken tow groups bascket ball and hand ball players mentioned in the tool for all twenty students selected the subjects were oriented about the test and even they were eager to know the results the data was collected during the ZPHS school Zaffargadh in Warangal district in 2013. The following apparatus were used in this study. 50 yard dash: Tape, Stop watch, Chunnam. 10 x 6 meter shuttle run: Tape, Stop watch, Chunnam. 600 meter run: Tape, Stop watch, Chunnam, 400 mtrs track.

Results: The raw scores of among the Basket ball players and Hand ball players of Z.P.H.School of ZaffargadhMandal in Warangal District were converted in to Mean, Standard deviation, Standard error and't'- ratio and comparison were to find out the significance at 0.05 level. Thecalculated't'-value is compared with the table value at 2.02 of degree freedom at 0.05 level of confidence which was given by "Clarke and Clarke".The competition of Mean, Standard deviation, Standard error of the Mean and't'-value of 50 yard dash, 10 x 6 meters shuttle run and 600 meters run of among the Basket ball players and Hand ball players of Z.P.H. School boys.

Table components of all parameters

S.NO	Variable	N	Mean	S.D	t-ratio	p-value
1	Basket Ball	20	7.927	0.433	0.562	0.578
	Hand Ball	20	7.8340	0.469		
2	Basket Ball	20	17.9913	.540	0.476	0.658
	Hand Ball	20	17.8960	.557		
3	Basket Ball	20	2.185	0.201	0.261	0.796
	Hand Ball	20	2.207	0.269		

Graphs components of all parameters



Discussions: A comprehensive discussion leading to final results clearly shows that a significant difference was found between ZPHS Zaffargadh Boys schools and in Warangal district, Andhra Pradesh. The obtained results yield a significant difference between the two selected groups wherein basket players scored higher than hand ball players with regard -to speed, agility and endurance. All the selected physical fitness variables were scientifically proved to be better for ZPHS Zaffargadh Boys schools and in Warangal district, Andhra Pradesh.

Conclusions: The following conclusion may be drawn from the results of the study. The results of the study shows the physical fitness of Basketball and Hand ball players are above the average. The Basketball players poses more physical fitness when compare with Hand ball Players. The Basketball players are superior to the Handball players in two components of physical fitness.

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A Study On “Leader Ship Styles Of The Teams” In Nayer Soft (Hyderabad)

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Abstract:

Understanding and applying appropriate techniques of management and leadership styles on subordinate's modern institutions is essential to the recent departments. There are many different leadership styles. Different styles work in different situations. A team will be a stronger with a variety of different leadership styles. The purpose of this study was the leadership styles of the teams in Near Soft Hyderabad. 44 subjects participated in this study. The instruments used were biographical, leadership styles and sources of power questionnaires. So validity and reliability of the instruments for population were confirmed. The relationship of leadership style with other variable was studied. Also, the relationship between leadership style and individual characteristics such as: academic degree, age, gender, management were studied.

By analyzing the whole team member's perceptions relating to their team leader behavior the following things were find out, Most of the team leaders were not considering the suggestions of team members. Some of the team leaders not allowing the team members to contribute their ides to the particular projects. For a major decision to pass in their team, it must have the approval of each individual or the majority. When someone makes the mistake the leaders asking them to note down it and not ever do it but most of the leaders not creating an environment where the team members take ownership of the project and allows us to participate in that decision making process but some were doing. Most of the team leaders were allowing team members to determining what has to be done and how to do it some team members are not allowing .Most of the team leaders were delegating tasks in order to implement a new procedure or project. Some team leaders were closely monitors the team members to ensure they are performing correctly some team leaders were not. All of the team leaders were working When there are differences in role expectations, with to resolve the differences .in most of team leaders view each individual is responsible for defining their job.

Keywords: Leadership Style, Near Soft Hyderabad

Introduction:

Teamwork is essential for competing in today's global arena, where individual perfection is not as desirable as a high level of collective performance. In knowledge based enterprises, teams are the norm rather than the exception (7). Team leadership plays a critical role in fostering commitment, accountability, and team success. The Team leader must ensure that the right mix and level of skills are resident on the team (2). They are also responsible for effectively managing relationships outside the team, overcoming obstacles to success, and creating leadership opportunities for others. Good leaders are made not born. If you have the desire and willpower, you can become an effective leader. Good leaders develop through a never ending process of self-study, education, training, and experience (1, 3). To inspire your workers into higher levels of teamwork, there are certain things you must be, know, and, do. These do not come naturally, but are acquired through continual work and study. Good leaders are continually working and studying to improve their leadership skills; they are not resting on their laurels. Before we get started, let's define leadership. Leadership is a process by which a person influences others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent. Leaders carry out this process by applying their leadership attributes, such as beliefs, values, ethics, character, knowledge, and skills (9). Although your position as a manager, supervisor, lead, etc. gives you the authority to accomplish certain tasks and objectives in the organization, this power does not

make you a leader...it simply makes you the boss. Leadership differs in that it makes the followers want to achieve high goals, rather than simply bossing people around.

It's essential that we keep in mind that any styles approach is just an arbitrary way to cut up our realities and experience and CATEGORIZE and LABEL people (8, 4, and 5). While they may be useful in increasing self-awareness of leadership approaches, care should be taken to realize that they are labels, and not real things. When leadership styles are used to improve understanding and communication about leadership they have value. When used to label people they often can be destructive. Leadership style concepts may be valuable in identifying strengths and weaknesses of current and future leaders, and leadership style inventories and assessments are available (6). They can also be used to identify what kind of leader is needed for a particular organization at a particular time and assist in choosing someone who has the desired leadership approach. Finally, they can be useful in increasing a leader's self-awareness of his or her own leadership preferences and approaches for the purpose of self-development. So in this study we examined the leadership style of the teams in Nayer Soft Hyderabad.

Methodology

Nature of this study is descriptive study. For the purpose of this study sample has been collected randomly from employees working in NAYERSOFT, total 44 of sample were collected among that 16 of female and 28 no of males there. Sample divided to 4 teams (11, 8, 10 and 15 members).Data has been collected through two sources among that, Primary source and Secondary source PRIMARY SOURCE: For the primary source data collected through structured questionnaire divided into three categories those are to measure the environmental, physiological and psychological factors stress. Totally twenty two questions and with four demographic questions SECONDARY SOURCE: For the secondary source I collected information from the company websites, company brochures, from journals and articles about the company. Data has been analyzed by using, cross tabulations from the total 44 members there are 4 teams .for the purpose of finding overall leadership styles we analyzed the teams as single team wise and we compared the all teams to know what leader ship styles are followed by the NAYER SOFT.

Results:

As analyzing the things the team (1) leader the most of the times following the AUTOCRATIC Leader ship style.

As analyzing the things the team (2) leader the sometimes following the AUTOCRATIC Leader ship style .and Sometimes DEMOCRATIC STYLE.

As analyzing the things we concluded that the team (3) leader the following the DEMOCRATIC Leader ship style.

As analyzing the things the team (4) leader the most of the times following the AUTOCRATIC Leader ship style .sometimes DEMOCRATIC leader ship style.

Discussion:

By analyzing the whole team member's perceptions relating to their team leader behavior the following things were find out, Most of the team leaders were not considering the suggestions of team members. Some of the team leaders not allowing the team members to contribute their ides to the particular projects. For a major decision to pass in their team, it must have the approval of each individual or the majority. When someone makes the mistake the leaders asking them to note down it and not ever do it but most of the leaders not creating an environment where the team members take ownership of the project and allows us to participate in that decision making process but some were doing. Most of the team leaders were allowing team members to determining what has to be done and how to do it some team members are not allowing .Most of the team leaders were delegating tasks in order to implement a new procedure or project. Some team leaders were closely monitors the team members to ensure they are performing correctly some team leaders were not. All of the team leaders were working When there are differences in role expectations, with to resolve the differences .in most of team leaders view each individual is responsible for defining their job. Some of the leaders using the leadership power to position hold over subordinates. "They are not sharing the data with Team members". So according this study recommended that the organization needs to put efforts on building a leadership style which is suitable for increasing productivity, reduces the abnormal attrition rate which is prevalent in software development industry and also the organization should promote a participatory culture in which every member in the organization should have a chance to express his suggestions. The members should be encouraged to give suggestions, as it would give a chance of generating new ideas for the existing problems. The leaders have to creates an feasible environment where the team members take ownership of the project and allow them to participate in that decision making process to contribute their ideas. The

team leader should give a chance to team members to determine what has to be done and how to do it. it will helps them to enhance the performance of the team members. The team leaders have to delegate's tasks to the team member by considering their particular domain of the knowledge in order to implement a new procedure or project. The team leaders need closely monitors. The team members to ensure they are performing correctly to or not and along with this the team leader has to give them proper feed back to enhance the performance of the employees. The team leaders did not use their leadership power to position holds over subordinates they have to create a feasible type environment where employees get a chance to prove themselves in their domain. These are the suggestions will help to the organization to achieve their goals.

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Use Of Internet In Physical Education

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Introduction :

Information about games, sports and other physical Education Activities to get students moving and to help teachers and coaches to plan new activities for their students. The practical use of internet is as a tool in the learning process of physical education.

Internet/world wide web :

The World Wide Web (WWW) is that part of the Internet supporting graphics, audio, video, and hypertext links (the ability to connect from one computer site to another), as well as standard text. Access to the Internet, combined with the development of commercial network providers (e.g., America Online (AOL), Prodigy) has allowed individuals, schools, and organization to communicate with each other and to share information through mechanisms such as e-mail, telnet, ftp (file transfer protocol), gopher, and WWW.

More recently, user-friendly navigator application software has become available for the WWW. Software such as NetWare, Netscape, and Mosaic had opened the Internet to a new and diverse market place. From the convenience of the classroom a student or teacher can, using a computer and a modem, log into a variety of sites throughout the world.

A number of WWW sites relate to sports, fitness, health, and recreation. A home page is a starting point for exploration into a given host site's resources and connections to other sites. ERIC maintains the Ask ERIC Virtual Library home page, which provides a gateway to ERIC information, including lesson plans and "info guides" on relevant topics. Health and recreation pages are very common. The whole Internet Catalog offers a section on health and includes such topics as substance abuse, safer sex, mental health, and nutrition. Yahoo, organized similarly to the whole Internet Catalog, is the source for numerous different starting points for investigation into health and recreation. The International Food Information Council Foundation is an excellent source for nutrition-related topics.

Online Software :

Online Coaching Software for Team Coaches Looking to Use the latest Coaching Technology Like Football Software, Basketball Software, Baseball Software, Softball Software, Rugby Software, Lacrosse Software, Soccer Software, Hockey Software, Field Hockey Software Volleyball Software, Tennis Software Squash Software, etc.

Above mentioned coaching software helps coaches use web-based software and online playbooks to improve their team by and use the latest technology to coach. Software that is web-based and online lets a coach distribute his plays, playbook and videos online quickly and easily, giving his team quick, easy, and secure access to their own sports.

Online lectures (audio/video)

Online lectures are available in the format of Audio and Video, which are very useful for players to understand the game/sports one plays. You will get Audio and Video lectures on subscription by paying specific amount.

Video conferencing :

Physical education teachers and coaches are easily communicated with other coaches, teachers and experts to take advice and action replays of any new techniques of sports were introduced. There is a limitation in video conferencing; it will be organized for specific activity/organization.

Discuss forums for sports (chat rooms)

Discuss forums are open for all means students, teachers, coaches, etc. for discussing various issues like plans and mistakes of games, etc.

Sports internet blogs :

Various sports person have their own blogs to express their views on games and sports techniques.

Sports Blog Websites :

1. www.blog.washingtonpost.com/dcsportsbog/
2. www.twitter.com/dcsportsbog.
3. sports.yahoo.com/blogs.
4. juicedsportsblog.com
5. indiansportsblog.com

Wikipedia for sports :

It is an encyclopedia for sports. You will get all basic terminologies about games and sports, even physical education curriculum.

You tube for sports :

All games/sports video are available online on Youtube.com You can see and enjoy any game/sport anytime anywhere.

Sports Portals (Websites) :

All Details about sports websites are explained in the tabular format below :

Table no. 1 sport Specific Web Sites :

Sr. no.	Address of Website	Game
1	http://www.degerstrom.com/bsketball	Basketball
2.	http://oak.cats.ohiou.edu/~sg113598/info_pub.htm	Basketball
3.	http://www.macroweb.com/ibrules .	Basketball
4.	http://www.kidsfirstsoccer.com	Soccer
5.	http://www.littletennis.com	Tennis
6.	http://www.nays.org/	All game
7.	http://www.swimmingworldmagazine.com	Swimming
8.	http://www.pacificcoastvolleyballcamps.com	Volleyball
4.	http://www.specialolympics.org	Handicaps game planning

Conclusion :

By Observing sports software, online lectures, video conferencing, discussion forums, sports portals, sports blogs Wikipedia and information on internet we will say that these are very useful tools for physical education and will give best future for sports/games or physical education.

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A Study On Mental Skills Level Of Different Event Athletes

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Abstract:

The purpose of the study was to compare selected mental skills in short distance, middle distance, long distance athletes and jumpers. 48 athletes (12 each in short distance, middle distance, long distance and jumpers) use to answer Ottawa Mental Skills Assessment Tools (version 3). This questionnaire assessed three categories of mental skills: foundation skills, psychosomatic skills and cognitive skills. The results of 4 X 12 MANOVA revealed no significant difference between different event athletes (short distance, middle distance, long distance athletes and jumpers) on any scale of OMSAT-3. According to the results of this study, it is recommended that athlete's coaches improved mental skill level of their athletes.

Key words: OMSAT-3 Questionnaire, Short Distance Athlete, Middle Distance Athlete, Long Distance Athlete and Jumpers.

Introduction

The domain of sport competition is developing every day so the athletes nearly have the same physical abilities and have different mental skills. Therefore, it is not possible to ignore the role of mental skills to achieve maximum performance (Van, Z., & J.). As it was observed in recent Olympic Games, some athletes who were considered probable to win medal, failed in the competitions and stated the lack of mental preparedness as one of the important reasons for their failure. Studies conducted in the field of sport psychology have made it evident that mental skills play an important role in achieving excellence in sport (Harris & Harris, 1984, Nideffer, 1985 and Morris, Koehn, & Morris, 2004). The skills such as stress management, concentration, arousal, mental preparation and self-confidence are important components of mental skills which make the psychological profile of elite athletes (Mahoney, Gabriel, & Perkins, 1987). Positive self-confidence is a privilege in sports and on the other hand excessive sensitivity to criticism can lessen a player's performance during the match. The relationship between stress, anxiety, self- confidence and performing motor skills has been mentioned in many researches. Some theories and experiences have strongly supported this positive relationship (Martens, 1977, Bandura, 1997). Athletes usually face a lack of arousal before or during a competition. In this case, energizing techniques would be effective to increase their level of arousal and to have a successful performance. Assessed mental readiness of 235 Canadian Olympic athletes through questionnaires and individual interviews. They found that among physical, technical and mental preparation, the mental preparation was the only variable that significantly differentiated the Olympic athletes (Orlick & Partington, 1988). By using OMSAT-3 questionnaire and Psychological Skill Inventory (PSI) to compare successful and unsuccessful college level hockey players and found that the successful group achieved better results in 67% of research variables which included four factors of 18 factors (i.e. achievement motivation, goal direction, goal setting and fear control). Moreover, there was a significant difference between athletes in six factors: achievement motivation, stress reactions, fear control, self-confidence, mental practice as well as imagery (Kruger, 2010).

Materials And Methods

Instrumentation: OMSAT-3 was used to evaluate the extent of selected mental skill application. The questionnaire examined 12 mental skills in three categories: 1) Foundation skills including goal setting, commitment and self-confidence, 2) psychosomatic skills including fear control, relaxation, activation and stress reaction, 3) cognitive skills including focus, refocus mental practice, imagery and game planning (Durand-Bush, 1995). The questionnaire reliability and validity was measured in Iran and approved by the researchers.

Statistical Method: In the present study, MANOVA was used to compare the Mean of the Four Group of 48 National level Athletes of Sports Authority of India, North Centre, Sonapat, Haryana. The main effects and intersection the four subject group (short distance, middle distance, long distance and jumpers) and their skills were measured on the OMSAT-3 scales, and measurements of Descriptive Statistics (mean and standard deviation) were employed for describing the groups.

Results Descriptive data including mean and standard deviation of each mental skill in different groups can be observed in Table 1. Show that the highest score relates to Commitment existing in jumpers and short distance athletes (24.08 ± 2.60), (24.08 ± 3.08) respectively and the lowest score is related to Refocus existing in jumpers athletes (10.50 ± 3.84). Descriptive data can be depicts values in Table no. 2 for test of between subject effect, which shows that there is no significant difference found between the different event athletes Short Distance Runners, Middle Distance Runners, long Distance Runners and Jumpers ($df=3/45$, $p=.432 > 0.05$) for the variables, Goal Setting, Confidence, Commitment, Stress Control, relaxation, Fear Control, Energizing, Focus, Imagery, Competition Planning, Mental Practice and Refocus as the value found to be. .432, .259, .418, .181, .254, .898, .119, .387, .516, .953, .178 and .183 respectively.

Table no. 1 Descriptive results of different event athletes

Variables	Short Distance		Middle Distance		Long Distance		Jumpers		Total	
	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD	MEAN	SD
Goal Setting	22.250	2.340	23.083	1.929	21.833	3.460	23.250	1.485	22.604	2.412
Confidence	22.750	1.913	23.250	2.800	22.833	2.038	21.333	2.902	22.541	2.484
Commitment	24.083	3.088	23.583	3.315	22.333	2.570	24.083	2.610	23.520	2.910
Stress Control	15.000	3.357	14.166	2.980	13.833	2.758	12.416	2.234	13.854	2.925
Relaxation	19.416	4.274	21.333	3.229	22.333	4.376	21.250	1.603	21.083	3.596
Fear Control	12.500	3.606	13.000	2.594	12.250	2.094	12.250	2.527	2.527	2.690
Energizing	2.689	2.768	20.916	1.881	23.083	3.204	23.166	2.125	22.479	2.634
Focus	14.333	3.892	12.500	3.371	14.916	3.825	13.000	4.221	13.687	3.844
Imagery	21.500	2.067	23.083	4.122	22.500	4.079	21.250	2.800	22.083	3.357
Competition Planning	22.750	2.667	23.083	2.843	22.333	4.141	22.833	3.040	22.750	3.132
Mental Practice	22.000	3.643	19.666	4.519	19.666	4.397	22.416	2.843	20.937	3.997
Refocus	11.250	4.070	11.083	3.728	13.833	3.881	10.583	3.848	11.687	3.969

Table no. 2 Concise 4 X 12Multivariate result of different event athletes

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
sd_md_ld_jm	goal_setting	16.396	3	5.465	.935	.432
	Confidence	25.083	3	8.361	1.389	.259
	Commitment	24.562	3	8.188	.965	.418
	stress_control	41.729	3	13.910	1.699	.181
	Relaxation	53.167	3	17.722	1.406	.254
	fear_control	4.500	3	1.500	.197	.898
	Energizing	40.229	3	13.410	2.065	.119
	Focus	45.729	3	15.243	1.034	.387
	Imagery	26.500	3	8.833	.772	.516
	competition_planning	3.500	3	1.167	.112	.953
	mental_practice	78.563	3	26.188	1.714	.178
	Refocus	76.563	3	25.521	1.692	.183

Discussion

This study aimed to explore the effect of athletes of different event (Short Distance Runners, Middle Distance Runners, long Distance and Jumpers) on selected mental skills. At the mental skill level of different event athletes the results of the study were predictable, except in four cases. Few studies are conducted on mental skills by users of OMSAT-3 (Durand-Bush, 1995) - (Stevenson, 1999) - (Kruger, 2010). As per the previous researches the result of mental skill scales is significantly effective on training programs, but as per result of this study no significant differences were found between short distance, middle distance, long distance and jumpers on the variable of mental skill. Short distance and Jumpers

athletes use mental skills more than jumpers and Middle distance athletes use too much less mental skills. Below, we will discuss the variables.

Goal Setting: The results reveal no significant difference between different event athletes by using goal setting skill. The descriptive statistics value of goal setting for different groups a study of mental skill level of different event athletes. Jumper athletes use more mental skills comparing to short distance, middle distance and long distance athletes. The aims to result in higher performance level are those which are specific and challenging. Also, the effects of difficult objectives are more useful than simple objectives. The elite athletes are motivated by personal objectives and success. The elite athletes believe in themselves a lot and this is the orientation of their life (Mallett & Hanrahan, 2004).

Self-confidence: The results revealed that middle distance athletes were significantly better than the long distance, short distance and jumpers in self-confidence factor. Psychological variables- self-confidence and commitment are the most important variables of an elite athlete's performance (Orlick, 1992). Self-confidence, commitment and goal setting are the most essential measures for distinction between elite athletes and non-elite ones (Bota, 1993).

Commitment: One of the skills in which the short distance athletes and jumpers uses more mental skill as commitment. These results of different event athletes are committed to their field of exercise in a way that this fact influences other wishes in their personal life and expert performers regularize their life according to their exercise which explains their commitment (Crcium, Dobosi, & Rusu, 2009)

Stress Reaction: Comparing the different event athletes showed that the short distance athletes acted better than the jumpers' ones in the stress reaction. Negative reaction to stress could be harmful to performance, while positive reactions could improve the performance. The factors that can create stress in players include selection for the team, confinement of financial supporters, attendance of high-ranking authorities in the matches, circumstantialities of the media and expectations of the individual to be the champion, experiences of previous injuries or fear of the previous defeats (Weinberg & Gould, 2007).

Relaxation: According to the results of this study, the long distance athletes also use relaxation more than short distance athletes. While we find that, elite taekwondo players could focus and plan efficiently, relaxation is a factor that has an important role in this matter (Durand-Bush, Salmela, & Green-Demers, 2001).

Energizing/Activation: According to the descriptive statistics value of four different group athletes shows that the mean & standard deviation ($M \pm SD$) of energizing jumpers are more significantly than other athletes. One of the possible reasons could be the role of the coach in regularizing mental preparedness programs and conducting the players to gain mental energy level (Murphy, Woolfolk, & Budney, 1988).

Imagery: There are many requirements in achieving the desired effect of mental imagery, but the first is the approach to teaching and learning the specific techniques. According to imagery mental skills of different event athletes, middle distance athlete's uses more mental skills in their training programs compare to other event athletes. The Visio-spatial and temporal components form the "procedural" knowledge required for effective mental imagery, while conceptual (ideas of movement) and symbolical (language representations) elements form the "declarative" knowledge of mental imagery (Annett, 1995).

Competition Planning: The results reveal no significant difference between different event athletes by using competition planning skill. The descriptive statistics value of competition planning for different groups' middle distance athletes uses more mental skills compare to long distance athletes. The past studies showed that the elite athletes usually prepared clear and distinct designs for the matches. These players used planning in order to reach mental preparedness, decrease consternation and deal with unpredicted situations (Gould, Eklund, & Jackson, 1992) - (Orlock & Partington, 1988).

Mental Practice: The descriptive statistics value of mental practice reveals jumpers uses more mental skills compare to short distance athletes, and long distance athletes and middle distance athletes uses too less mental skills for their performance. Cognitive-behavior therapy (CBT) has been used successfully in a wide range of applications, from developing social skills. The overall goal of CBT is to strategically plan and execute a definite approaches the given task in order to lay the foundation for specific performance enhancement techniques to occur, like mental rehearsal, mental imagery and VMBR. Thus, CBT concentrates more on the general aspirations and psychological profile of the athlete, rather than specific task affective actions (Curran, 1982).

Refocus: The results reveal no significant difference between different event athletes by using refocus skill. The descriptive statistics value of refocus of different groups a study on the mental skill level of different event athletes long distance athletes use more mental skills comparing to short distance athletes. Jumper athletes use less mental skill to compare to jumpers. In spite of being an important skill,

retrieval of concentration is exercised rarely by the players, which are more exposed to stimuli such as orders of the coach, shout and cheer of the fans, reporters and cameras and so on which all disturb their concentration (Orlick & Partington, 1988).

Conclusion

The objective of this study was to identify the requirement of mental skills and effectiveness on different levels of athlete's to enhance their performance and for the perception of their capacities to be psychologically prepared for competitions. The result of this study is shown by using OMSAT-3 and groups of different event athletes that there is no significance difference between short distance, middle distance, long distance and jumpers. Moreover, the results proved that the athlete's uses mental skills differently on different level or events and some mental skills components are effective to increase the performance. The majority of athletes were of the opinion that their ability to mentally prepare for competition was important. It was also shown that the different event athlete's perceived a no-significant difference between the 12 mental skills of the short distance, middle distance, long distance and jumpers during training and competition. The trainers must devote time necessary to acquire these fundamentals and thus to bring a minimum of the mental training to their athletes. This study would thus bring a new lighting in the direction where it would seem that the lack of the trainer qualification would not prevent them from determining the mental skills of their athletes, on the other hand that would pose indeed problems as for their development. It is recommended to the coaches in this field to use game planning, goal setting, activation, self-confidence, commitment, focus, mental imagery and relaxation for players, nurture these skills in these players and try to make them proceed towards upper levels.

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Comparison and Analysis of Fuzzy Control System Over a Painting

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Abstract:

Principles of visual art and visual languages that create understanding of the rules can be interpreted in the visual arts. By getting to know and experience the basics of language arts visual art which embodiment and Visual communication is better understood and better utilized. Our goal in this project is to appeal a way to help the faculty of arts in grading to an art work drawn by the students. By this project we will try to facilitate the work of judges, besides we will try to ask them to respect the rights of students in saving their efforts. In this paper, the fuzzy terms contained in a drawing toolbar, which are confirmed by an expert, are given to system. We combine these rules together and finally, we will achieve a classics number. Expert describes the survey taken on many rules for evaluating a work of art paintings and we classify them into its toolbar fuzzy have been helping facilitate. Expert surveys taken after the painting expressed many rules to evaluate a work of art the ease with which we have categorized them into the fuzzy toolbar.so in this project we used fuzzy logic as 100% of analysis work of art. After analysis of the image our finding represented the share of fuzzy system was 73.In which show as Defuzzification-Digit. A painting is full of uncertainty and ambiguous, Fuzzy logic was invented precisely for this reason that we think we are able to employ this logic in the proper position.

Keywords: Fuzzy Control System - Comparison & Analysis – Painting

Introduction:

Art always has a special place in human life. Perhaps the reason is that human nature is always looking for beauty and competencies And this ground for infrastructure and the development of a huge variety of the boundless ocean, As far as we see it today in the field of teaching in prestigious universities in the world And countries like France and Italy, the cradle of the sport know there We want to share as we share in maintaining the national capital Our heritage is one of the largest and style it as one of the countries in the world have introduced. We hope that this project is a combination of art and modern science, though a small step to be taken to achieve this great goal.Moreover, knowing the rules and the language associated with creativity and understanding of the visual arts helps, as you know the language and rules of grammar and sentence structure, proper understanding of the language and better understanding will help [5,6]. Arts an art generally refers to those who have the ability to directly visualize and ductility are perceived by the visual sense. No doubt the views, perceptions and interpretations, there are some flaws that the characteristics of modern art and variety of its myriad manifestations, is obvious. Several article have begun to examine its inception, Each of these papers were of a character, Our perspective has advantages and disadvantages of each were This research focuses on the use of intelligent algorithms in optimizing artwork is complete, what the research have been able to extract, At the end of this chapter we will focus on the analysis of these topics.With some of the paper [4,5,6], highlighted the important role of intelligent systems than we realize, Perhaps even though using these tools in science-related fields such as art something that may seem out of reach However, we saw that

not only extends the use of intelligent algorithms in this field, but also the implementation and the results obtained dramatic. That the development of this project in other scientific papers and has been used in other sciences. In this project we use an expert, a painting from the book "Painting Analysis" [1] have chosen. Then, with expert knowledge of the rules required for the effect of each of these laws are named and expanded. Then we create a set of rules for the state variable, we asked our experts to give a color of state variables. After our work rules and experts project that marks the state of each variable data into MATLAB software [3], we provide the three-dimensional diagram of the 18 was opened by the laws of a painting and then combining the results, Obtain a three-dimensional graph of the number of defuzzification has been considered as the final score. The other part of this project is, in section, from the Toolbar [2].

Material and Method:

In order to give practical figure for this project, Implementation of the project was assigned to MATLAB Software. Now is the time to describe the project, as mentioned in the preface and abstract, we have taken steps to their dear students and professors in the field of art. At first, the choice of "Analysis paintings" began its work. By choosing one of the book's analyses on the effect began. An interesting feature of this book is its dynamic because each work of art in this book is displayed. It is noteworthy, they are all great painters, and similar work has also been and similar works have been compared with the original painting and these paintings are drawn on the same Bugs. And even some of the best paintings drawn from the original, this painting are one of work that we have. As mentioned before Database based on images of style, such as: abstract, cubism, realism, surrealism, impressionism, pop art, is Pyvntlysm. [1]

In this study, we have two primary tools such as:

- 1-Expert Person
- 2-Fuzzy System

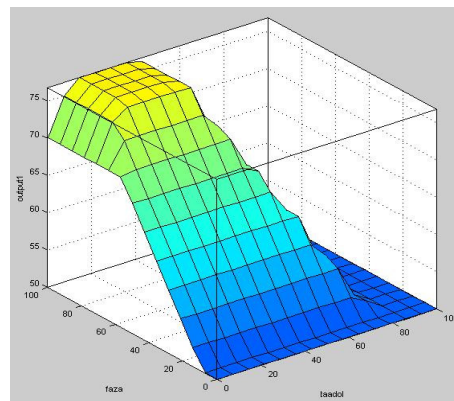
First, expert surveys taken after the painting expressed many rules to evaluate a work of art the ease with which we have categorized them into the fuzzy toolbar [2,3]. Then we import the analysis rules into fuzzy toolbar [2,3] and defined the some variables and then assign a language variable to each items, we took an output diagram for each items. Also we obtain a 3D-graph, thus for finally goal we needed to combining 18 items together for achieve the final result.

Fuzzy logic was used for two main reasons:

- 1 - A painting is full of uncertainty and ambiguous, Fuzzy logic was invented precisely for this reason that we think we are able to employ this logic in the proper position.
- 2 - In Fuzzy logic the expert was able to feel her emotions and painting and it helps the score in the same way that a painting is full of manse motions.

Results

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



Defuzzification-Digit = 76.8850

Conclusion

Now the time has come for the human using the tools at its disposal, in order to conquer the peaks of progress. We hope, along with the presentation of this project and other projects we have been able to be involved in human development. Provided this project with fuzzy logic, in particular, has many features and Able to cover various aspects of the art of science but perhaps in the future a combination of logic and other intelligent algorithms, also achieve more accurate results. In this research it was attempted using fuzzy logic system is design as it is main objective, the reduction of human errors, in scoring and assist teachers and students in the art to minimize the error in measurement in the art of painting. The study combined of fuzzy system and is suggested that future researchers combine this logic with other intelligent algorithm to achieve more accurate results. we are aware of incomplete base of knowledge and analyzed rules thus we will try to achieve better knowledge in the field of art and computer by the help of our professors. we also stand firmly on our belief that the position of fuzzy logic is chosen correctly and we hope that the better results will be attained in the near future.

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Effect of Circuit Training for development of Endurance among Judokas of Hyderabad

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Abstract:

Circuit Training are a vital component for Judokas for obtaining the maximal strength endurance and force during the Judo event and should be included in any conditioning program of Judokas. The circuit training is the most time efficient way to enhance cardiovascular fitness and muscle endurance. The purpose of the present study to find out the effect of Circuit Training for the development of Endurance among Judokas. The sample for the present study consists of 20 Male Judokas of Hyderabad out of which 10 are experimental group and 10 are controlled group.. The circuit training comprises of 6 to 10 strength exercises that are completed one exercise after another such as squat jumps, medicine ball throws, situps, steps ups, hopping shuttles, skipping, situpsm etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for six weeks. Pre Test and Post Test were conducted in 12 Min Run cooper test to measure the endurance among experimental group and controlled group. This study shows that due to the Circuit training there is a improvement of experimental group in endurance and controlled group is decreased in performance in endurance. Judo is all about muscular endurance for fight all rounds in the ring. It is concluded that due to circuit training there will be improvement in endurance among Judokas

Key Words:

Circuit training ,judo , medicine ball throws etc

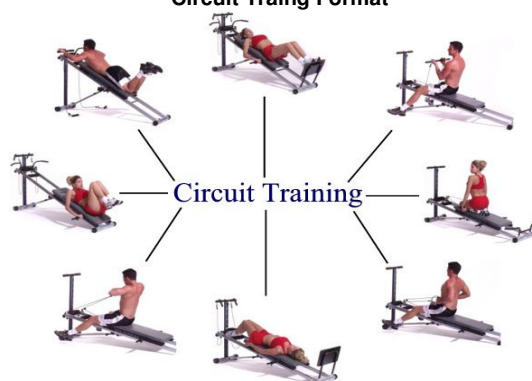
Introduction:

Circuit training is a form of body conditioning or resistance training using high-intensity aerobics. It targets strength building and muscular endurance. An exercise "circuit" is one completion of all prescribed exercises in the program. When one circuit is complete, one begins the first exercise again for the next circuit. Traditionally, the time between exercises in circuit training is short, often with rapid movement to the next exercise. The program was developed by R.E. Morgan and G.T. Anderson in 1953 at the University of Leeds in England. **Judo** is a modern martial art, combat and Olympic sport created in Japan in 1882 by Jigoro Kano. Its most prominent feature is its competitive element, where the objective is to either throw or takedown an opponent to the ground, immobilize or otherwise subdue an opponent with a pin, or force an opponent to submit with a joint lock or a choke. Strikes and thrusts by hands and feet as well as weapons defenses are a part of judo, but only in pre-arranged forms and are not allowed in judo competition or free practice. A judo practitioner is called a **judoka**.

Method:.

The purpose of the present study to find out the effect of circuit training for the development of endurance among Judokas of Hyderabad. The sample for the present study consists of 20 Male Judokas of Hyderabad out of which 10 are experimental group and 10 are controlled group. The circuit training comprises of 6 to 10 strength exercises that are completed one exercise after another such as squat jumps, medicine ball throws, sit-ups, steps ups, hopping shuttles, skipping, situps etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for six weeks. Pre Test and Post Test were conducted in 12 Min Run cooper test to measure the endurance among experimental group and controlled group .

Circuit Traing Format

**Result:**

This study shows that due to the Circuit training there is a improvement of experimental group in endurance and controlled group is decreased in performance in endurance to less levels due to the general training..

Table I: Showing the Mean values of Experimental Group Judokas and Control Group Judokas in 12 Min Run Cooper Test in Pre Test and Post Test

12 Min Run Cooper Test	N	Pre test	Post test	t	Sig.
Experimental group Judokas	10	2664.50	2805	3.35	0.004
Control group Judokas	10	2657.50	2640		

The Mean Values of Experimental Group Judokas is 2664.50 in Pre Test and Post Test is 2805 in 12 Min Run Cooper Test. There is a improvement of Experimental group from 2664.50 to 2805 due to the Circuit Training. The Mean Values of Control Group Judokas is 2657.50 in Pre Test and Post Test is 2640 in 12 Min Run Cooper Test. There is a slight decrease in mean values of control group from 2657.50 to 2640 due to the general Training

Conclusion:

It is concluded that due to Circuit Training there is a improvement of endurance among Judokas. Judo is an ideal sport for all ages, male or female and attracts very many disability groups. Confidence and self-esteem are enhanced as a player progresses through the ranks and the very nature of the grading system ensures that the next goal is always realistic and achievable with effort. The grading system also ensures that regardless of their skill level all judo players can actively compete with players of similar ability and hence they have a reasonable chance of emerging victorious.

Recommendations:

Similar Studies can be conducted on Women Judokas and other sports and games. The Coaches can include the circuit training in their physical conditioning programs to improve the endurance among the Judokas

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Importance of Neuro Muscular Training in sports

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Abstract

Sports and games training are most important part in preparation of sportspersons. This can be of especial importance in elderly people when ageing leads to impairment in the neuromuscular performance and training may prevent or slow down some of the processes involved. Understanding of neuromuscular function is one of the crucial backgrounds for efficient application of sports training. The goal of the project is to analyse a response of neuromuscular system to various training loads in different population's sportsmen, adults, and elderly people.

- Fatigue appearance during work and effects of training on it,
- Differences in neuromuscular response to various proprioceptive exercise workouts,
- Acute and chronic response of neuromuscular system to mechanical vibrations and effectiveness of antivibrating devices,
- Muscle synergies techniques in different sports movements and effect of neuromuscular conditioning on them, and
- Effect of different training modalities on some orthopedic problems. Next to the upper goal, the aim of the project is also to develop a research team that will research response of neuromuscular system to training and exercise systematically and in long-term.

Key Words: Training and exercise, neuromuscular system, strength training.

Introduction

Sport performance is the manner in which sport participation is measured. Sport performance is a complex mixture of biomechanical function, emotional factors, and training techniques. Performance in an athletic context has a popular connotation of representing the pursuit of excellence, where an athlete measures his or her performance as a progression toward excellence or achievement. Sport performance has four distinct aspects, each of which has a number of subcategories, some of which are rooted in physical certainty, others of which tend to the highly variable.

- The four areas include neuromuscular factors, the relationship between the nervous system and its dimensions and the musculoskeletal system; mental control and psychological factors; environmental conditions; and coaching and external support for the athlete.
- The neuromuscular factors that impact sports performance are typically the most comprehensive and represent those aspects of performance that occupy the greatest degree of focus and preparation time. In many sports, no matter how devoted to training the athlete may be, if he or she is not physically equipped to compete, the performance will not improve.
- The neuromuscular component of sports performance is subdivided into its own discrete elements. Each of these elements must be the subject of specific training approaches, including body type.

Importance

- Neuromuscular component is muscular strength, both in terms of muscle mass and muscle power. While body type will tend to significantly influence the ability of an athlete to develop muscle strength, training will permit strength development in all athletes; strength, whether in terms of discernable power or as a function of the core strength, the neatly counter-balanced relationship between the upper body and lower body musculoskeletal structures when in movement.

- Endurance, which is the ability of the body to perform over time, is essential to success in all sports. In high-intensity sports of a short duration, such as sprinting and weightlifting, endurance is similar to a backbone to the activity, assisting in the speedy and efficient recovery from the stress of the event or training.
- Flexibility is the counterpoint to muscular strength; the greater the range of motion presents in the joints of an athlete, the greater the ability to move dynamically. An inflexible athlete is unlikely to ever achieve outstanding athletic performance. Inflexibility in human joints creates imbalance in the connective tissues and muscle structures, which will reduce the ability of the muscle to achieve maximum power, and will increase the risk of injury.
- The ability of the body to respond to external stimuli in sport, such as the movement of an opponent or the starter's gun, requires the development of aspects of the athlete's motor control. These specific neuromuscular abilities include the feature of reaction time.
- Agility, balance, and coordination are three interrelated concepts. These aspects of sport performance are also influenced by heredity and body type to a significant degree, but all can be enhanced through training. Each of these neuromuscular features of sport performance is less influenced by the strength of the musculoskeletal system, and more impacted by technique and repetition.
- Speed is built by training that is focused on the development of the fast-twitch fibers of the skeletal muscles. The distribution of fast-twitch fibers through the muscles of the body is also regulated by genetics, but training can maximize the fast-twitch effect.
- In many sports, the ability of the athlete to develop a rhythm to the performance will be crucial to success. Running, cross-country skipping, cycling, and speed skating are sports where the establishment of an effective rhythm or cadence will keep the athlete organized and physically efficient. The development of a rhythm is the imposition of a cadence on musculoskeletal activity.
- Mental control and the related psychological factors in sport performance are intangibles that are reflected in the final result of an athlete's effort. In many respects, the mental elements of sport are the most difficult to master, as they usually require a high level of athletic experience and maturity to reach fruition.
- The ability of an athlete to self-motivate is essential to success, both in competition and training. Additionally, creativity is also an intangible that will separate the successful athletes from the merely talented. Creativity manifests itself in team games through clever or well-conceived tactics. In individual sports, creativity is often reflected through the athlete's approach to training routines.

Muscle fatigue is extremely common in professional athletes: high levels of competitive activity and regular races or matches during the course of a week can severely test a person's ability to maintain certain performance levels.

“Peripheral” processes affected by muscle fatigue

- Nerve fiber conduction
- Neuromuscular transmission
- Muscle excitability
- Electromechanical coupling
- Muscle relaxation Vascular and metabolic factors of muscle fibers. Continuous physiological stress, even when preventive measures are taken, does not facilitate recovery: the tiredness associated with muscle fatigue is caused by dehydration and overheating, reduction of the muscles' energy reserves, depletion of carbohydrates, lowering of blood glucose levels, increase of lactic acid, muscle micro traumas and central fatigue.
- Exercise-induced fatigue: main causes
- Dehydration and overheating
- Depletion of muscle energy stores
- Depletion of carbohydrates
- Lowering of blood glucose levels
- Accumulation of lactic acid
- Muscle micro traumas
- “Central” muscle fatigue

- The aim of Neuromuscular Taping in this case is to facilitate recovery by increasing the blood supply to and drainage of the muscles involved.
- Objective and rehabilitation program
- The aims in the recovery phase after intense physical activity that has produced delayed onset muscle soreness do not are influenced by the physiological recovery times 24-72 hours and are summarized.
- Delayed onset muscle soreness: aims of rehabilitation
- Rest
- Relieve pain and contracture
- Limit pain and control bleeding if present and edema
- Reflexive mass therapy on the surrounding areas
- Lymphatic drainage
- Promote healing and reduce the formation of fibrous scar tissue
- Recover strength and muscle elasticity
- Recover full loading

Conclusion

Sports have been part of man's life from the very early days. Regular participation in organized youth sports does not ensure that youth are adequately exposed to fitness regimens and activities that sufficiently improve health and sports-specific fitness to minimize risk of injury and promote lifelong health and fitness. Integrative neuromuscular training programs that integrate a variety of fundamental movements designed to enhance both health and skill-related fitness may be most beneficial if initiated during pre-adolescence. Moreover, integrative neuromuscular training is more likely to have long-lasting effects if qualified professionals focus on the process of developing fundamental motor skills rather than the product of enhanced sports performance. Integrative neuromuscular training maintained throughout childhood and adolescence will likely improve movement biomechanics, minimize the risk of sports-related injury, and promote positive health outcomes during adulthood. With a program based on the physical and psychosocial uniqueness of children, integrative neuromuscular training that is sensibly progressed over time and consistent with individual needs, goals and abilities can be integral to development and promotion of a health-oriented approach to lifelong physical activity.

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Effects Of Swiss Ball Exercise With Green Tea And Ginger Tea Intake On Serum Glucose Restingheart Rate And Total Cholesterol Among Bodily Apathetic People

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Swiss Ball: it is a very large inflatable ball made of strong elastic rubber, used for physical exercise and in physiotherapy.

Benefits of Swiss Ball Exercise:

the biggest benefit to training using ball exercises is that they are very effective at targeting core muscles, those muscles that are essential for stability and good posture but are often overlooked when exercising with fixed position equipment such as those found in gyms.

Green Tea:

tea made from unfermented a leaf that is pale in color and slightly bitter in flavor, produced mainly in China, India and Japan. Green tea is an herb that differs from black and GINGER teas because it is not fermented.

Ginger Tea:

Ginger is a light brown root with a distinctive taste and qualities that make it a much-coveted herb due to high levels of Vitamin C, magnesium and other minerals.

Statement Of The Problem:

The purpose of the study was to find out the Effects of Swiss Ball Exercise with Green Tea and Ginger Tea Intake on Serum Glucose Resting Heart Rate and Total Cholesterol Among bodily apathetic People.

Selection Of Variables: the following variables were selected for this study. **Dependent Variables -**

Physiological Variables: BMI, Waist hip ratio, Plasma glucose.

Independent Variable: 1. Experimental group I- fifteen selected subjects were Swiss ball exercise with green tea 2.Experimental group II-fifteen selected subjects were Swiss ball exercise with ginger tea 3. Experimental group - fifteen selected subjects were Swiss ball exercise III 4.Control group-fifteen selected subjects were not given any supplements.

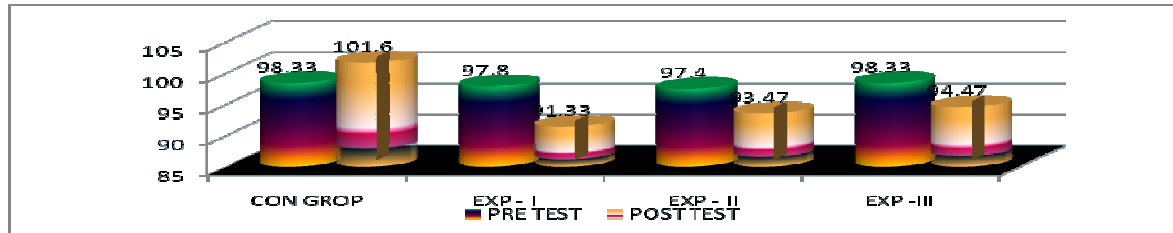
Statistical Technique: Analysis of Covariance statistical technique was used, to test the significant difference among the treatment groups. If the adjusted post-test results were significant, the scheffe's post hoc test was used to determine the paired mean significant difference. Thirumalaisamy R.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

Computation Of Analysis Of Covariance And Scheffe's Post Hoc Test Of Serum Glucose: The following tables illustrate that statistical result of the Effects of Swiss Ball Exercise with Green Tea and Ginger Tea Intake on Serum Glucose Resting Heart Rate and Total Cholesterol Among bodily apathetic People and the adjusted post test mean and difference between the means of the groups under study were given in the tables

Table I - Computation Of Analysis Of Covariance Of Serum Glucose

MEAN	EXP-I	EXP-II	EXP	CON	S.V	S.S	D.F	M.S	O.F	T.F
Pre test Mean	97.80	97.40	98.27	98.33	B	8.58	4	2.86	0.07	3.23
					W	2294.27	56	40.97		
Post test mean	91.33	93.47	94.47	101.60	B	891.78	4	297.26	6.20	
					W	2662.40	56	47.54		
Adj.Post	91.48	94.0	94.16	101.23	B	789.90	3	263.30	27.70	
					W	517.49	55	9.41		

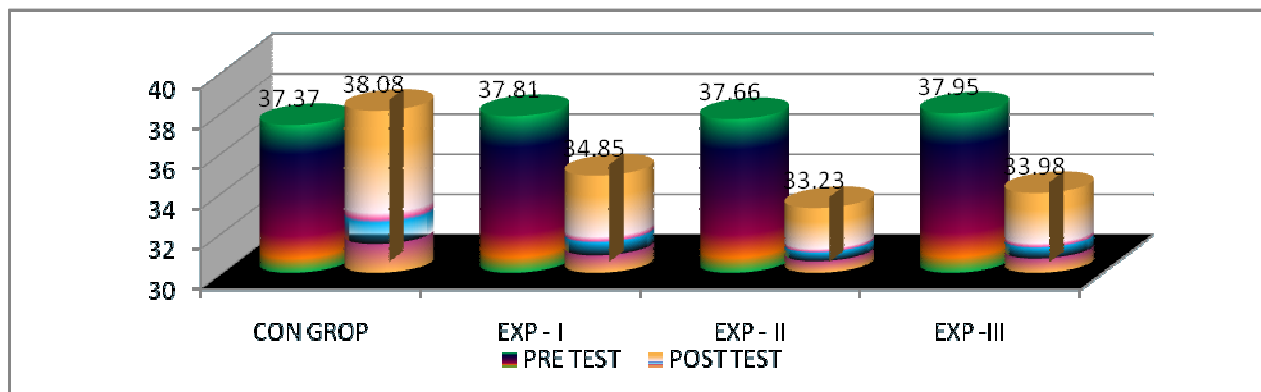
Discussions And Findings Of Serum Glucose: This result indicated that the effect of Swiss ball exercise with green tea and Ginger tea intake had significantly decreased the plasma glucose level among bodily apathetic People. Swiss ball exercise with green tea has decreased plasma glucose than the Ginger tea and Swiss ball exercise. The further findings of the study indicated that Swiss ball exercise with Ginger tea intake and green tea had significantly greater reduction in plasma glucose.



During the training periods the result indicated that the green tea and Ginger tea decreased the plasma glucose among the groups because of the intake is influenced and utilized the plasma glucose among bodily apathetic People.

Table li - Computation Of Analysis Of Covariance Of Waist Hip Ratio

MEAN	EXP-I	EXP-II	EXP III	CON	S.V	S.S	D.F	M.S	O.F	T.F
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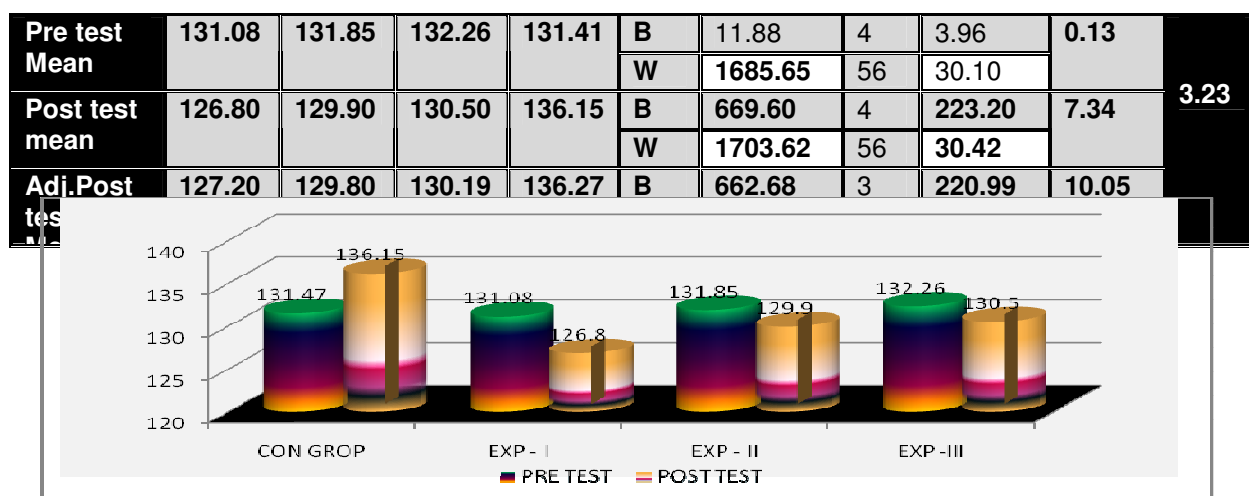


Discussions And Findings Of Waist Hip Ratio: This result indicated that the effect of Swiss ball exercise with Ginger tea has decreased waist hip ratio among the experimental groups. The further findings of the study indicated that Ginger tea had significantly greater reduction in waist hip ratio than that of green tea and Swiss ball exercise.

During the training period the result indicated that the Ginger tea decreased waist hip ratio than the experimental groups because the supplementing is influenced and utilized abdominal fat conversion so there is a solid change in the waist hip ratio among bodily apathetic People.

Table I - Computation Analysis Of Covariance Of Serum T. Cholesterol

MEAN	EXP-I	EXP-II	EXP III	CON	S.V	S.S	D.F	M.S	O.F	T.F
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Discussions Serum Total Cholesterol: This result indicated that the effect of Swiss ball exercise with green tea and Ginger tea intake had significantly decreased the Serum Total Cholesterol level among bodily apathetic People. Swiss ball exercise with Green tea has decreased Serum Total Cholesterol than the Ginger tea and Swiss ball exercise.

The further findings of the study indicated that Swiss ball exercise with green tea had significantly greater reduction in Serum Total Cholesterol. During the training period the result indicated that Swiss ball exercise with green tea and Ginger tea intake the Serum Total Cholesterol among the experimental groups because of the intake of tea is influenced and utilized the total cholesterol in the form of plasma glucose. So the Serum Total Cholesterol showed greater reduction after eight week period of training with tea intake among bodily apathetic People.

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

The obtained result shows that there was significant improvement in Swiss ball exercise with green tea and Ginger tea intake in waist hip ratio serum glucose, and total cholesterol among the metabolic syndrome people.

The obtained result shows that there was significant improvement in Swiss ball exercise with green tea in serum glucose and serum total cholesterol than the Swiss ball exercise with green tea and Swiss ball exercise among bodily apathetic People.

The obtained result shows that there was significant improvement in Swiss ball exercise with ginger tea in hip waist ratio than the Swiss ball exercise with green tea and Swiss ball exercise among bodily apathetic People.

Sports Psychology: Making A Lot More Than Just A Champion

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Abstract:

Psychology is a usual term that everyone listens about time and again. What might we not know here, how it relates to sport. Well, psychology and sports both are different terms from different fields but when they are put together they become essential rules which are used in sport settings. Sport consultants use to check that how psychosomatic aspects can control your physical performance in competition at ground. Added to that, your psychological facets can affect your overall psychological development, performance as well as your health especially when you work hand in practice. Unfortunately this comes into consideration for those who are mentally weak than a normal competitor. Those people, having such issues, are looked after by consultants cautiously while on the real ground every athlete gets affected in same manner by mental game of sports. It does not matter at all, what their strengths and weaknesses are, they feel same mental pressure while gaming professionally. In order to meet their actual potential and do what they are made for, this discipline should be maintained at any cost. There are some generally used techniques in Sports psychology. They are arousal regulation, goal setting, imagery, performance routines and self talk, learning how to focus much concentrating on what they are here for are some techniques. It is not so easy to perform every time to all.

Key words: Sports, psychology, performance, motivation, physical factor, behaviour, injury, confidence, self control, awareness.

Introduction:

Sport psychology is a interdisciplinary science that draws on knowledge from the fields of Kinesiology and Psychology. It involves the study of how psychological factors affect performance and how participation in sport and exercise affect psychological and physical factors. In addition to instruction and training of psychological skills for performance improvement, sport psychology may include work with athletes, coaches, and parents regarding injury, rehabilitation, communication, team building, and career transitions. Sport is an imperative part of human life. There are some specific games that are played or fond of. There are lots of ups and downs included when a game is played. However, when games becomes a profession, it is crucial for players or gamer to act in a positive matter about any success and failure. Sports Psychology started to become visible at the Olympic games in 1984, when the Olympic teams began to hire sports psychologists for their athletes, and in 1985, when the U.S. team employed their first permanent sports psychologist. For the Summer Olympics in 1996, the U.S. already had over 20 sports psychologists working with their athletes, and today, each professional sports team has one that is regarded as an important member of their staff.

Techniques Of Sports Psychology:

Following are five of the more common techniques or skills sport psychologists teach to athletes for improving their performance.

Arousal Regulation:

Arousal regulation refers to entering into and maintaining an optimal level of cognitive and physiological activation in order to maximize performance. This may include relaxation if one becomes too anxious through methods such as progressive muscle relaxation, breathing exercises, and meditation, or the use of energizing techniques (e.g., listening to music, energizing cues) if one is not alert enough. The use of meditation and specifically, mindfulness, is a growing practice in the field of arousal recognition. The Mindfulness-Acceptance-Commitment (MAC) Theory is the most common form of mindfulness in sport and was formed in 2001. The aim of ACT is to maximize human potential for a rich, full and meaningful life. It includes specific protocol that involve meditation and acceptance practices on a regular basis as well as before and during competition.

Goal setting:Goal setting is the process of systematically planning ways to achieve specific accomplishments within a certain amount of time. Research suggests that goals should be specific, measurable, difficult but attainable, time-based, written down, and a combination of short-term and long-term goals. A meta-analysis of goal setting in sport suggests that when compared to setting no goals or “do your best” goals, setting the above types of goals is an effective method for improving performance. Short term goals should be used to help achieve long term goals. It is important to “set goals in positive terms by focusing on behaviors that should be present rather than those that should be absent.” Each long term goal should also have a series of short term goals that progress in difficulty

Imagery:Imagery (or motor imagery) can be defined as using multiple senses to create or recreate experiences in one's mind. Additionally, the more vivid images are, the more likely they are to be interpreted by the brain as identical to the actual event, which increases the effectiveness of mental practice with imagery. Good imagery, therefore, attempts to create as lifelike an image as possible through the use of multiple senses (e.g., sight, smell, kinesthetic), proper timing, perspective, and accurate portrayal of the task. Both anecdotal evidence from athletes and research findings suggest imagery is an effective tool to enhance performance and psychological states relevant to performance (e.g., confidence). This is a concept commonly used by coaches and athletes the day before an event.

Preperformance routines:Preperformance routines refer to the actions and behaviors athletes use to prepare for a game or performance. This includes pregame routines, warm up routines, and actions an athlete will regularly do, mentally and physically, before they execute the performance. Frequently, these will incorporate other commonly used techniques, such as imagery or self-talk. Examples would be visualizations done by skiers, dribbling by basketball players at the foul line, and preshot routines golfers or baseball players use prior to a shot or pitch. These routines help to develop consistency and predictability for the player. This allows the muscles and mind to develop better motor control.

Self-talk:Self-talk refers to the thoughts and words athletes and performers say to themselves, usually in their minds. Self-talk phrases (or cues) are used to direct attention towards a particular thing in order to improve focus or are used alongside other techniques to facilitate their effectiveness. For example, a softball player may think “release point” when at bat to direct her attention to the point where the pitcher releases the ball, while a golfer may say “smooth stroke” before putting to stay relaxed. Research suggests either positive or negative self-talk may improve performance, suggesting the effectiveness of self-talk phrases depends on how the phrase is interpreted by the individual. The use of words in sport has been widely used.

Conclusion:

Time is not same and who would know this fact better than a player. Athletes see many aspects of their gaming life throughout their career. They become happy when they win game. Similarly they become sad as they loss one or they have an injuries. Some of the most common therapy goals for athletes include improving confidence, self-control and self-awareness. To reach these goals, the psychologist may utilize tools such as meditation, visualization, goal-setting and an assortment of other mental training techniques. Another important contribution of sport psychology involves working with injured players because improving an athlete's mental state may aid in his or her recovery. Recently, the role of sport psychology has been called on to meet the increasing demand for anger management for athletes. Increasingly, Sport Psychologists have needed to address this topic and provide strategies and interventions for overcoming excessive anger and aggression in athletes, and techniques for athletes to manage emotions.

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A Comparative Study On Anxiety Level Among National Players Of Hyderabad In Relation To Their Time Factor Games And Non Time Factor Games

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Introduction

The science of the human behavior is really a group of sciences. On one side we find Physiology, studying the operation of the numerous organs and cells within the organism and at the other extreme we find the Social sciences, studying nations and groups of men. The middle science that focuses its attention upon the individual is Psychology. Sports Psychology is becoming very popular in the modern trend of Education. As teaching includes the aspects of learning and understanding, investigators have provided that Sports Psychology makes the teaching more easy and interesting.

Anxiety

Anxiety is an unpleasant state of inner turmoil, often accompanied by nervous behavior, such as pacing back and forth, somatic complaints and rumination. It is the subjectively unpleasant feelings of dread over something unlikely to happen, such as the feeling of imminent death. Anxiety is not considered to be a normal reaction to a perceived stressor although many feel it occasionally.

Anxiety In Sports

Anxiety in sport is most common in competitive sports environments and could also be termed competitive stress. One definition, proposed by sport psychology consultant Dr. Graham Jones in the book "Sport Psychology: A Self-Help Guide," is that it's "the result of an interaction between the individual and the environment ... an emotional response to the demands placed upon the individual by the environment."

Anxiety has two main types: State anxiety is transient and specific only to the particular situation an athlete finds herself in. Trait anxiety is more general and enduring, suggesting a predisposition to anxiety in all areas of life, not just in sport.

Significance Of The Study

The study may provide guidance to the physical education teachers and coaches to prepare training programmes. It may help the researchers who are interested in time factor and non time factor games.

The study may add the quantum of knowledge in the area of sports.

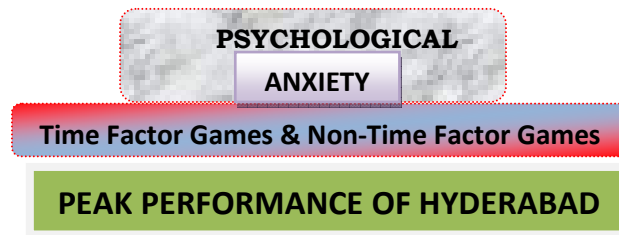
Objectives of the study

To find out the existing difference between TFG and NTFG national players at Hyderabad in relation their Anxiety level.

Hypothesis Of The Study

There may not be any significant difference between TFG and NTFG national players at Hyderabad in relation to their anxiety level.

Design Of The Study



Sample Of The Study

The sample was divided in two equal groups as the Time Factor Games(TFG) ie: Kho-Kho, Kabaddi, Hockey, Football, Basketball and Non Time Factor Games(NTFG) ie: Volleyball, Lawn Tennis, Table Tennis, Badminton, Softball.

Each group consist of 50 National players.

The sample was collected from various colleges of Hyderabad of Osmania University and JNTU.

Results And Discussion:

Independent Sample Test						
Groups	N	Mean	Std. Deviation	Std. Error	t	Sig.
Anxiety – Time Factor Games	50	41.2800	6.0476	.8553	-1.138	0.258
Anxiety – NON Time Factor Games	50	42.4800	4.3670	.6176		

The results of the Study shows the Time Factor Games are having Low Anxiety compare to Non Time Factor games. The Mean of Time factor games is 41.2800 and Mean of Non Time Factor Games is 42.4800. The standard deviation of Anxiety of Time factor games is 6.0476 and Non Time factor games is 4.3670. The t values is -1.138.

Conclusion:

It is concluded that Time Factor Games are having less anxiety compare to Non Time factor games. Time Factor Games Kho-Kho, Kabaddi, Hockey, Football, Basketball are having good psychological variable of anxiety compare to Non Time Factor Games(NTFG) ie: Volleyball, Lawn Tennis, Table Tennis, Badminton, Softball.

Recommendations:

Similar studies can be conducted on other sports and games. Male and Female Players can also be conducted.

Effect of a Six Week Emotional Intelligence Programme on the Sports Performance of Amateur Athletes

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Abstract

Emotional intelligence (EI) has been reported to be more realistic than other measures in evaluating performances in many fields of human activities. However, research evidences reveal that its application to amateur athletes and its possible effectiveness in enhancing sports performances is yet unknown. This study therefore investigated the effectiveness of emotional intelligence programme on the performances of amateur athletes from selected sports in Maharashtra State of Aurangabad. The pre test, post test randomized control group quasi experimental design was adopted for the study. The fish bow method of the simple random, sampling technique was used to select four sports, which include basketball, handball, throw ball and weightlifting. The modified Emotional Competence Inventory Version 2 (ECI2) ($\alpha=0.8$ and the Emotional Competence Development Module Sports Version (ECDMSPORTS) ($\alpha=0.79$) were administered to 92 male and female amateur athletes whose ages ranged between 18 and 25. The experimental groups were exposed to six weeks of emotional competence training using the ECDM Sports programme. Two hypotheses were tested at significant level of 0.05. The data were analyzed using Analysis of Covariance (ANCOVA). The results revealed significant difference in (EI) post-test (Exp.x= 196.20; Control x= 186.98) ($P<0.05$). Further, the treated group consequently performed better in the sports performance posttest ($x=66.19$) than the control group ($x=52.30$) ($P<0.05$). Results further indicated no significant difference in the EI and sports performance scores between the sports groups that were treated ($P>0.05$). This showed that the amateur athletes from all the sports groups equally utilized and benefited from the treatment programmes. Keyword: - Emotional Intelligence, Performance, Athletes players

Introduction

Of all the factors affecting sports performance, it seems that the most important is the ability of the athlete to identify and assume the appropriate feeling required to perform at his best when he needs to. Whatever might be the level of skill, strength and experience of an athlete, his performance in the face of stiff competition will be largely influenced by his ability to assume the right emotion and attain an appropriate level of the emotional energy for performing at his optimum. According to Sharma (2006), how you feel is how you will play. The significance of emotional influence on sport performance has often been evident in most comments of spectators, team managers and sports analysts on athletes and teams performances during and after competitions. Oftentimes, they comment on player's display of confidence or lack of it, aggressiveness or timidity, resilience or depression, anger or enthusiasm, frustration or determination and other forms of emotionality while attributing to such factors, the responsibility for the success or failure of their performances.

Methodology

The study adopted the pre-test, post-test randomized group's quasi experimental design. This design, according to Thomas and Nelson (2001), is concerned with whether the experimental group changes more than the control group. Each of the four group's comprising the Basketball, Handball, Throw ball and the Weightlifting teams have a male and female group as well as an experimental and control groups. Thus, a $2 \times 2 \times 4$ factorial design was adopted for the study. The groups were formed randomly. All the groups were subjected to pre and post tests.

Table 1: Population Distribution for the Experimental and Control Groups

Sports Group	Experimental Groups	Control Groups	Total
Basketball	Male = 6 Female = 6	Male = 6 Female = 6	N = 12 N = 12
Handball	Male = 7 Female = 7	Male = 7 Female = 7	N = 14 N = 14
Throw ball	Male = 6 Female = 6	Male = 6 Female = 6	N = 12 N = 12
Weightlifting	Male = 4 Female = 4	Male = 4 Female = 4	N = 8 N = 8
Total	46	46	N = 92

Table 2: Factorial matrix for the Emotional Intelligence Experiment

Sports Group	Treatment Group (EIT)		Control Group (EIC)		Total
Basketball	Male	Female	Male	Female	N = 24
	TBM (n=6)	TBF (n=6)	CBM (n=6)	CBF (n=6)	
Handball	Male	Female	Male	Female	N = 28
	THM (n=7)	THF (n=7)	CHM (n=7)	CHF (n=7)	
Throw ball	Male	Female	Male	Female	N = 24
	TTM (n=6)	TTF (n=6)	CTM (n=6)	CTF (n=6)	
Weightlifting	Male	Female	Male	Female	N = 16
	TWM (n=4)	TWF (n=4)	CWM (n=4)	CWF (n=4)	
Total	23	23	23	23	N = 92

The main instrument used for this study was the modified Emotional Competence Inventory Version 2 (ECI 2) (Boyatzis & Sala, 2004). Participants were evaluated before and after the administration of the programme of emotional intelligence. The Emotional Competence Development Module for Sports (ECDM Sports 1), a self developed module for emotional intelligence development was used in a six week programme of training and activities designed to enhance the emotional intelligence status of amateur athletes. Achievement of sports skills were measured by using standardized Skills tests and Performance test (AAPHERD, 1997) before and after the administration of the programme of emotional intelligence. The inferential statistics of Analysis of Covariance (ANCOVA) was used in analyzing the results of emotional intelligence status and performance levels between the control and the experimental groups as well as the differences between the pre and the posttest levels. Hypotheses were tested at 0.05 alpha levels. A two week field test with 24 male and female teen age basketball players was carried out for test retest of the modified version (ECI2) of the instrument. The participants were students of senior secondary schools who train regularly at the Basketball Court, Aurangabad. Data obtained from this was analyzed using the Combat Alpha Coefficient method. The internal consistency results obtained averaged 0.79. This compares favorably with the degree of reliability in terms of Cronbach's alpha for average item scores, as 0.84 earlier reported by Boyatzis and Sala, (2002). The Confirmatory Factor Analysis of ECI scores carried out by Bar-On and Parker (2002) reported to average at 0.76.

Results

Table 3: Summary of analysis of covariance of post test

EI scores of the experimental and control groups according to treatment with the emotional intelligence programme

Source of Variation	Sum of Square	DF	Mean Square	T	Sig
Covariates Pre Test	8073.28	1	8073.28	11.58	.01*
Main Effects	4181.31	1	4181.31	5.69	
Treatment	4181.31	1	4181.31	5.69	
Explained between	9254.60	2	14627.30	16.64	P. <0.05
Residual	62019.01	89	696.84		
Total	71273.62	91	783.22		

*Significant at P. <0.05

From the table 3 above, the effect of treatment on the post test scores of the participants is significant $F(1, 91) = 5.69, P. < 0.05$

Conclusion

Sport emotional intelligence is relatively new not only in Aurangabad but also in the developed state and nation. It is a recent therapy in the management of athletic pressures and performance modifiers. This work has established the applicability of the concept of emotional intelligence to sports and to amateur athletes. It has further discovered that emotional intelligence training is effective in improving sports performances of amateur athletes. This study is unique for its effectiveness in boosting emotional strength of athletes under competitive situations. It is also observed that for the first time, in the area of sports psychology, especially in Aurangabad, the relatively new concept of emotional intelligence was empirically tested on Aurangabad participants. This is evident from the virtual dearth of literature on emotional intelligence in the state and country. It is this dearth of literature that also affects, to some extent, the robustness of discussion of the findings of the study. The successful application of EI to amateur sports has thus extended the fields of human activities that the concept had hitherto been applied.

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

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Abstract:

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

Key words: Strength, Hammer throw, Shot put etc

Introduction:

In Athletics the throwing events comprise of javelin throw, discus throw, hammer throw and shotput. The differences between the four disciplines includes the type of implement that is thrown and the run-up or pattern of movement prior to the throw. A Javelin is a long spear like implement. The thrower runs down a runway prior to releasing the implement. To record a legal throw in javelin the thrower must ensure the tip of the javelin contacts the ground first. A discus is a circular implement, which when thrown should spin while in the air and is released from the throwers hand with a straight arm. A shot put is a spherical lead implement which must be thrown from a position close and tight into the neck of the thrower to record a legal throw. A Hammer is similar to a shotput but has a wire extending from it to a handle, by which it is rotated in a circular motion before being released. Discus, Shot Put and Hammer Throw are all thrown from within a circle rather than from a runway. All the throwing events rely on strength, power and speed for performance.

The **shot put** is a track and field event involving "throwing"/"putting" (throwing in a pushing motion) a heavy spherical object —the *shot*—as far as possible. The shot put competition for men has been a part of the modern Olympics since their revival in 1896, women's competition began in 1948. With roots dating back to the 15th century, the contemporary version of the hammer throw is one of the oldest of Olympic Games competitions, first included at the 1900 games in Paris, France (the second Olympiad of the modern era). Its history since the late 1960s and legacy prior to inclusion in the Olympics have been dominated by European and Eastern European influence, which has had an impact on interest in the event in other parts of the world.

Methodology:

The sample for the present study consists of 20 Male shot put throwers and 20 Male Hammer Throwers between the age group of 18-22 Years and participated in the Hyderabad District Athletics Championships, District Schools and Junior Colleges Athletics Meet and O.U. Inter College Athletics Meets. To assess the Strength the Shot-put back throw were conducted on Shot put Throwers and Hammer Throwers.

Shot Put Back Throw:

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

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

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

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

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

Results and Discussion:

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

Table-I

Mean values and Independent Samples Test of shot put back throw between Shot Putters and Hammer Throwers

Variables	Group	Mean	SD	t	P - Value
Shot Put Back Throw	Shot Put Throwers	14.14	1.26	1.22	0.231
	Hammer Throwers	14.06	1.22		

***Significant at 0.05 level**

In Table –I the Mean Values of Pre Test of shot Put Throwers in Shotput Back Throw is 14.14 and Hammer Throwers is 14.06. The Standard Deviation of Shotputters is 1.26 and Hammer throwers are 1.22 and t is 1.22 and P-Value is 0.231.

Conclusion:

1.It is concluded that shotputters are having better strength than hammer throwers.

2.It is concluded that there will be shotputters requires more strength to throw the shot spherical lead implement compare to the hammer throwers,

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

Recommendations:

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

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

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Role of Coaching Behavior Need Satisfaction, and the Psychological and Physical Welfare of Young Athletes

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Abstract

Grounded in self-determination theory the (Ryan, 2000), the purpose of this study was to examine the relationship of dimensions of coaching behavior to intrinsic need satisfaction and indices of psychological and physical well-being among male adolescent athletes. The present study utilized two measures of well-being to be essential to the experience of eudaimonia (subjective vitality and intrinsic satisfaction/interest in the activity) and one measure of ill-being (self-reported physical symptoms). What is particularly attractive about the concept of need satisfaction is that it allows researchers to identify the conditions under which the three needs should be satisfied and, in turn, promote well-being. One key social environmental factor in the self-determination framework assumed to nurture the fundamental need for autonomy is autonomy support. Autonomy support refers to the readiness of an individual in a position of authority (e.g., a coach) to take the other's (e.g., the athlete's) perspective, provide appropriate and meaningful information, offer opportunities for choice, while at the same time minimize external pressures and demands.

Keyword: Behavior, Satisfaction, Psychological and Welfare

Introduction

In today's world of sport, pain rather than pleasure is often presented as the hallmark of what the motivated young athlete should feel. In quest of "the right body," many athletes starve themselves to be lighter or thinner, or inflate their body size via banned substances. Overtraining in the pursuit of higher performance, although often leading to burnout and overuse injuries, is part of the sport experience for a number of sport participants (Nationals, 2006). The present study utilized two measures of well-being to be essential to the experience of eudaimonia (subjective vitality and intrinsic satisfaction/interest in the activity) and one measure of ill-being (self-reported physical symptoms). What is particularly attractive about the concept of need satisfaction is that it allows researchers to identify the conditions under which the three needs should be satisfied and, in turn, promote well-being. One key social environmental factor in the self-determination framework assumed to nurture the fundamental need for autonomy is autonomy support. Autonomy support refers to the readiness of an individual in a position of authority (e.g., a coach) to take the other's (e.g., the athlete's) perspective, provide appropriate and meaningful information, offer opportunities for choice, while at the same time minimize external pressures and demands. Mental and Physical Welfare of Young Athletes Studies conducted in the sport setting have provided support for the basic tenets of SDT with respect to the relationship of autonomy support to need satisfaction. For example, research by Blanchard and Vallerand (1996, cited in Vallerand & Losier, 1999), on basketball players, revealed that the more the coach was perceived as autonomy supportive by his or her athletes, the more autonomous the athletes felt. In a study by Standage, Duda, and Ntoumanis (2003) in the context of physical education (PE), perceptions of an autonomy-supportive climate were strong positive predictors of students' perceptions of autonomy.

Method:

Two hundred and sixty-five State adolescent (Mage = 16.44; SD = 1.32) male soccer and cricket players participated in this study. In terms of ethnicity breakdown, 51.3% reported to be Aurangabad, 24.2% Parbhani 5.7% Afro- Jalna and 4.5% mixed. Thirty-eight participants did not state their ethnic background. Secretaries and coaches of the teams that had agreed to take part were contacted and received a letter explaining the purpose of the study. All athletes under the age of 18 also received informed consent forms that were signed by their parents/guardians. None of the athletes were denied permission to participate. A multisession questionnaire, also containing other variables that are not reported here, was

administered by the principal investigator either before or after a normal practice in a team clubhouse or a classroom. At all meetings, instructions on how to fill in the questionnaire were given, emphasizing that they do so as personally and honestly as possible, that there were no right or wrong answers, and that their responses would be kept confidential. On average, the questionnaire required approximately 25 min to complete.

Measures: Environmental Factors

To assess the sporting environment created by the coach, participants were asked to think about what the environment is like on their team in general. To measure athletes' perceptions of coach autonomy support, seven items were drawn and adapted to sport from the Health-Care Climate Questionnaire (Williams, Grow, Freedman, Ryan, & Deci, 1996). In line with the work of Kasser and Ryan (1999), the chosen items focused exclusively on the coach's support for self-determination (e.g., "the coach provides players with choices and options").

Data Analysis

Structural Equation Modeling (SEM) utilizing EQS 5.7 (Bentler, 1995) was employed to test the hypothesized model. Because the normalized estimate of Mardia's coefficient was relatively large (multivariate kurtosis = 18.33), the data were analyzed using robust maximum likelihood analysis, as recommended by Bentler (1995). This analysis adjusts the chi-square statistic (χ^2) and the standard errors under conditions of nonnormality to protect from Type I error. To examine the hypothesized model, we followed the two-step approach recommended by Anderson and Gerbing (1988). Firstly, confirmatory factor analyses (CFA) were performed in regard to the hypothesized measurement model to determine whether the indicators were related to the latent factors in a satisfactory manner. Secondly, after a satisfactory fit was achieved for the measurement model, we tested the fit of the structural model which linked the latent factors.

Results

The analysis report presents the means and standard deviations of, and correlations between the variables used in the study. Pearson product moment correlations revealed that the dimensions of coach behavior were significantly and positively related among themselves as well as to the three needs and the well-being variables (subjective vitality and intrinsic satisfaction). The three psychological needs were positively and moderately inter correlated. Positive and significant relationships emerged between the need satisfaction variables and the well-being variables. The three need satisfaction variables were negatively correlated with the reported physical symptoms.

Discussion

Grounded in SDT the purpose of this study was to test a model that considered how three dimensions of the social environment embedded within the SDT, achievement goal, and social support literatures would predict need satisfaction and indices of mental/physical welfare among a sample of team sport participants. Overall, the results were supportive of the proposed pattern of sequences in the model.

Conclusions and Practical Implications

The present study tested and found preliminary support for Deci and Ryan's (2000) basic needs theory in the context of sport. Our findings tentatively suggest that a social environment which is autonomy supportive, emphasizes improvement and effort, and is socially supportive, may help maximize the satisfaction of athletes' basic needs which in turn may possibly foster eudemonic well-being among adolescent sport participants. Coaches are assumed to play a very active role in training and competition. They spend a lot of time interacting with athletes, trying to motivate them, and providing instruction and feedback. Therefore, it makes sense to investigate the psychological environment/climate they create and how that environment corresponds to the quality of athletes' sport experience and subjective well-being. Coaches can foster the satisfaction of the need for autonomy by giving athletes' choices and options, providing rationales for requested behaviors, and encouraging self-regulation. For example, they may provide athletes with the necessary information to solve a problem or learn a new skill or strategy, while encouraging them to solve the problem or develop the skill/strategy in their ownway.

To promote athletes' sense of competence, coaches might develop evaluation criteria based on self-referenced improvement and the degree to which effort is exerted in training and competition. They could also encourage athletes to develop internalized performance standards and help them learn to self-monitor. Finally, to satisfy the need for relatedness, coaches may do well in accepting, caring for, and valuing players as people, not just as performing athletes.

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Effects Of Swiss Ball Exercise With Green Tea And Ginger Tea Intake On Waist Hip Ratio Good And Bad Cholesterol Among Bodily Apathetic People

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Introduction: Swiss Ball is a very large inflatable ball made of strong elastic rubber, used for physical exercise and in physiotherapy.

Benefits of Swiss Ball Exercise: the biggest benefit to training using ball exercises is that they are very effective at targeting core muscles, those muscles that are essential for stability and good posture but are often over looked when exercising with fixed position equipment such as those found in gyms.

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

Ginger Tea: Ginger is a light brown root with a distinctive taste and qualities that make it a much-coveted herb due to high levels of Vitamin C, magnesium and other minerals.

Statement of the Problem: The purpose of the study was to find out the Effects Of Swiss Ball Exercise With Green Tea And Ginger Tea Intake On Waist Circumference Resting Heart Rate Good And Bad Cholesterol Among Bodily Apathetic People.

Selection Of Variables:

the following variables were selected for this study. **DEPENDENT VARIABLES** - such as Waist hip ratio, good and bad cholesterol.

Independent Variable:

1. Experimental group I- fifteen selected subjects were Swiss ball exercise with green tea 2. Experimental group II-fifteen selected subjects were Swiss ball exercise with ginger tea 3. Experimental group III 4. Control group-fifteen selected subjects were not given any supplements.

Statistical Technique:

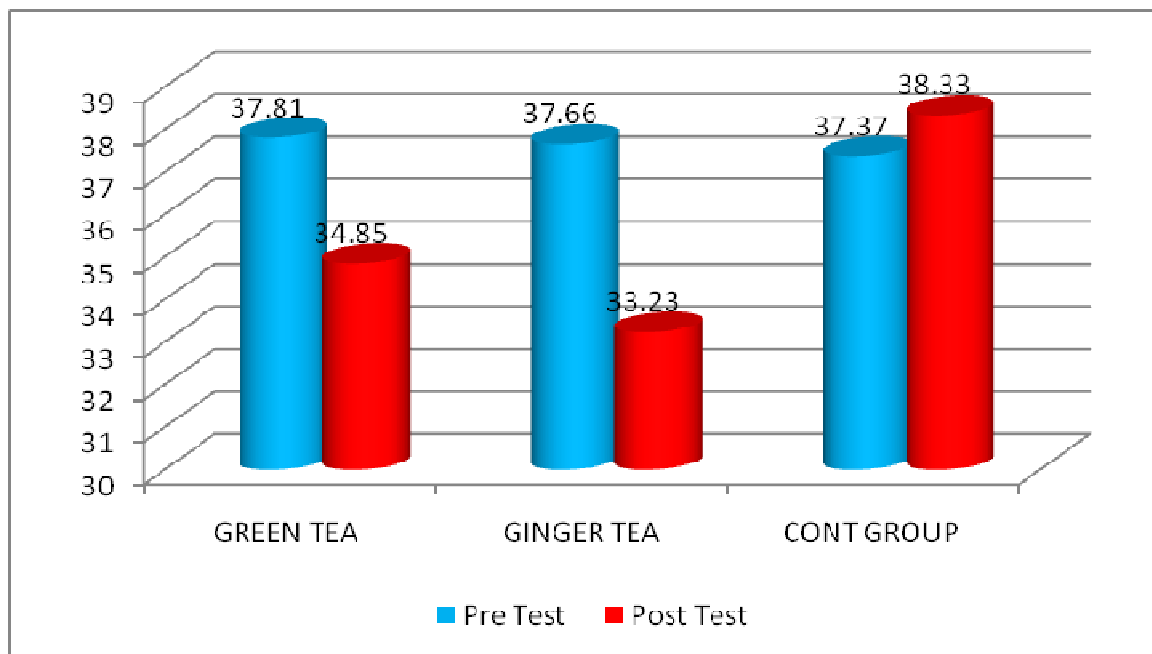
Analysis of Covariance statistical technique was used, to test the significant difference among the treatment groups. If the adjusted post-test results were significant, the scheffe's post hoc test was used to determine the paired mean significant difference. Thirumalaisamy R. (2004).

Computation Of Analysis Of Covariance And Scheffe's Post Hoc Test Of Bmi: The following tables illustrate that statistical result of the Effects of Swiss Ball Exercise with Green Tea and Ginger Tea Intake on Waist hip ratio, Good And Bad Cholesterol Among bodily apathetic People and the adjusted post test mean and difference between the means of the groups under study were given in the tables

TABLE II - COMPUTATION OF ANALYSIS OF COVARIANCE OF WAIST HIP RATIO

MEAN	EXP-I	EXP-II		CON	S.V	S.S	D.F	M.S	O.F	T.F
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Discussions And Findings Of Waist Hip Ratio: This result indicated that the effect of Swiss ball exercise with green tea and Ginger tea intake had significantly decreased the waist hip ratio level among bodily apathetic People when compare with control group. Swiss ball exercise with G inger tea has decreased waist hip ratio among the experimental groups. The further findings of the study indicated that Ginger tea had significantly greater reduction in waist hip ratio than that of green tea and Swiss ball exercise.

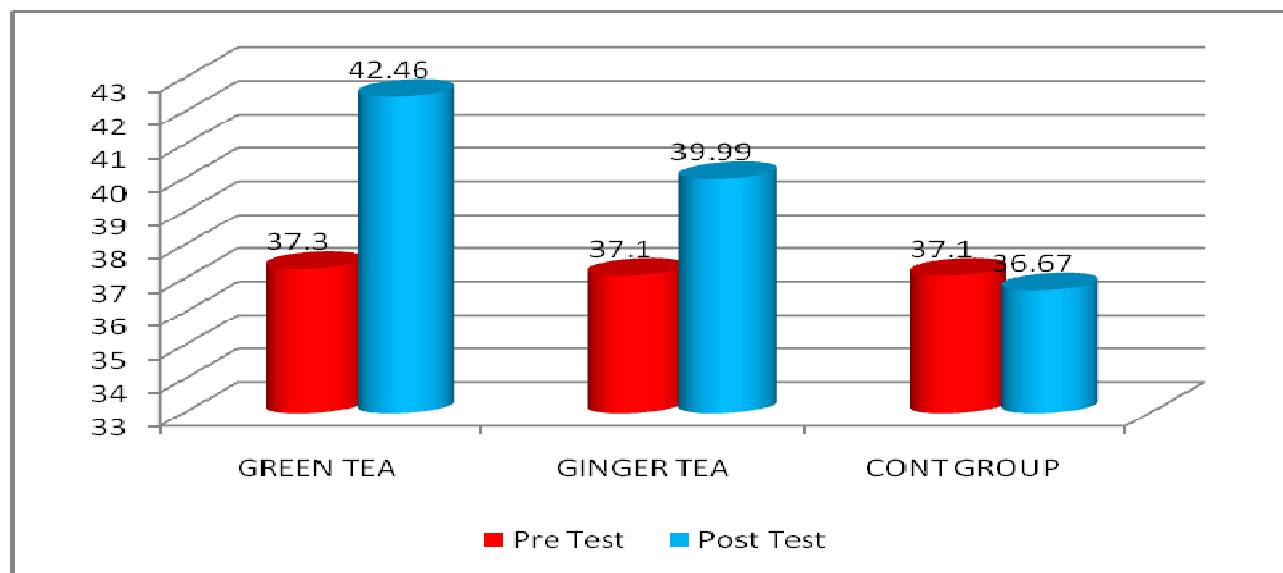


During this training period the result indicated that the Ginger tea decreased waist hip ratio than the other experimental groups because the supplementing is influenced and utilized abdominal fat conversion as glucose, so there is a solid change in the waist hip ratio among bodily apathetic People.

Discussions On Good Cholesterol: This result indicated that the effect of Swiss ball exercise with green tea and Ginger tea intake had significantly increased the good cholesterol level among bodily apathetic People when compare with control group.

TABLE III - COMPUTATION ANALYSIS OF COVARIANCE OF GOOD CHOLESTEROL

MEAN	EXP-I	EXP-II		CON	S.V	S.S	D.F	M.S	O.F	T.F
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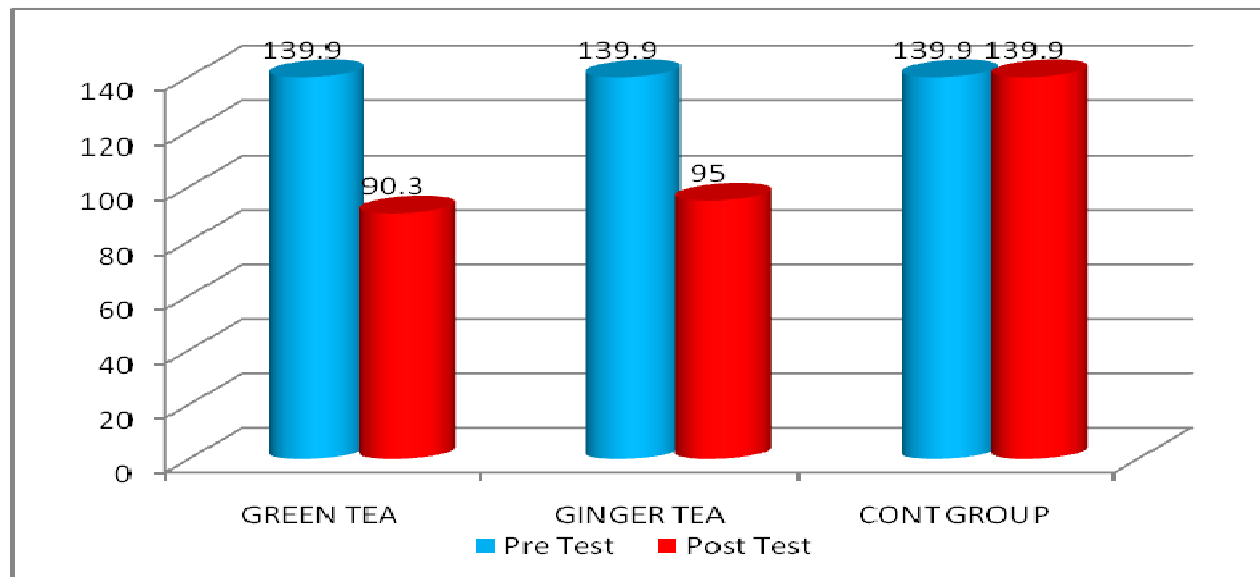


Swiss ball exercise with green tea and Ginger tea intake had significantly increased the good cholesterol level among the experimental. The further findings of the study indicated that Swiss ball exercise with Ginger tea had significantly greater increased in good cholesterol level among bodily apathetic People when compare with Swiss ball exercise with green tea and Swiss ball exercise.

TABLE III - COMPUTATION ANALYSIS OF COVARIANCE OF BAD CHOLESTEROL

MEAN	EXP-I	EXP-II		CON	S.V	S.S	D.F	M.S	O.F	T.F
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Discussions On Bad Cholesterol: This result indicated that the effect of Swiss ball exercise with green tea and Ginger tea intake had significantly Decreased the Bad cholesterol level among bodily apathetic People when compare with control group.



Swiss ball exercise with green tea and Ginger tea intake had significantly increased the good cholesterol level among the experimental. The further findings of the study indicated that Swiss ball exercise with Ginger tea had significantly greater decreased in bad cholesterol level among bodily apathetic People when compare with Swiss ball exercise with ginger tea and Swiss ball exercise.

Conclusion:

The following conclusions were drawn within the limitation of this study
The obtained result shows that there were significant changes in Waist Hip Ratio Resting Heart Rate, Good And Bad Cholesterol due to influence of Swiss ball exercise with green tea and Ginger tea intake among bodily apathetic People. Further it was discovered that Swiss ball exercise with ginger tea had significant reduction on waist hip ratio greater than that of Swiss ball exercise and Swiss ball exercise with green tea intake. Further it was discovered that Swiss ball exercise with green tea had significant effect on good and bad cholesterol greater than that of Swiss ball exercise and Swiss ball exercise with Ginger tea intake.

Comparative study of medical and psychological treatments for depression

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Introduction:

The main medical treatment for depression is antidepressant medication. There is a lot of misinformation about antidepressant medication and while there is no simple explanation as to how it works, it can be very useful in the treatment of moderate to severe depression (and some anxiety disorders). Antidepressant medication may be prescribed, along with psychological treatments, when a person experiences a moderate to severe episode of depression. Sometimes, antidepressants are prescribed when other treatments have not been successful or when psychological treatments are not possible due to the severity of the illness or a lack of access to the treatment. People with more severe forms of depression (bipolar disorder and psychosis) do generally need to be treated with medication. This may include one or a combination of mood stabilisers, anti-psychotic drugs and antidepressants.

Which antidepressant should be used?

Making a decision about which antidepressant is best for a person can be complex. The decision is made in consultation with a doctor, after careful assessment and consideration. People can help the doctor's assessment by providing as much information as possible about themselves and their medical history. Important factors include the person's age, symptoms, other medications and, if female, whether they are pregnant or breastfeeding. There are many different types of antidepressant medication which have been shown to work, but their effectiveness differs from person to person. Antidepressants take at least two weeks before they start to help, and it may also take some time for the doctor to find the most suitable medication and dosage.

What are the side effects?

Antidepressants can make people feel better, but they won't change their personality or make them feel happy all the time. Like taking any other medication, some people will experience some side effects. Common side effects, depending on which medication is taken, include nausea, headaches, anxiety, sweating, dizziness, agitation, weight gain, dry mouth and sexual difficulties (e.g. difficulty becoming/staying aroused). Some of these symptoms can be short-lived, but people who experience any of these symptoms should tell their doctor, as there are ways of minimising them. The likelihood of a particular side effect happening varies between individuals and medications.

Types of antidepressants

There is a wide range of antidepressant medication available. Below is a description of the different classes of antidepressants used in Australia.

Selective Serotonin Reuptake Inhibitors (SSRIs)

This class includes sertraline; citalopram; escitalopram; paroxetine; fluoxetine; fluvoxamine. SSRIs are:

- the most commonly prescribed antidepressants in Australia
- often a doctor's first choice for most types of depression
- generally well tolerated by most people
- generally non-sedating.

Serotonin and Noradrenalin Reuptake Inhibitors (SNRIs)

This class includes venlafaxine; desvenlafaxine; duloxetine. SNRIs: have fewer side effects compared to the older antidepressants, are often prescribed for severe depression and are safer if a person overdoses.

Reversible Inhibitors of Monoamine oxidase (RIMAs):

The class includes moclobemide. RIMAs:

have fewer side effects, are non-sedating, may be less effective in treating more severe forms of depression than other antidepressants and are helpful for people who are experiencing anxiety or sleeping difficulties.

TriCyclic Antidepressants (TCAs)

The class includes nortriptyline; clomipramine; dothiepin; imipramine; amitriptyline. TCAs are: effective, but have more harmful side effects than newer drugs (i.e. SSRIs) more likely to cause low blood pressure – so this should be monitored by a doctor.

Noradrenaline-Serotonin Specific Antidepressants (NaSSAs)

This class includes mirtazapine. NaSSAs are:

relatively new antidepressants

helpful when there are problems with anxiety or sleeping, generally low in sexual side effects, but may cause weight gain.

Noradrenalin Reuptake Inhibitors (NARIs)

This class includes reboxetine. NARIs are: designed to act selectively on one type of brain chemical – noradrenalin, less likely to cause sleepiness or drowsiness than some other antidepressants, more likely to: make it difficult for people to sleep, cause increased sweating after the initial doses, cause sexual difficulties after the initial doses, cause difficulty urinating after the initial doses and cause increased heart rate after the initial doses.

Monoamine Oxidase Inhibitors (MAOIs)

This class includes tranylcypromine. MAOIs are prescribed only under exceptional circumstances as they require a special diet and have adverse effects.

Things to note

- All of these drugs have been shown to be effective as antidepressants.
- When symptoms are directly due to depression, the person is likely to begin to improve after 4-6 weeks of effective therapy. For example, although SSRIs commonly make sleep difficulties or insomnia worse initially, they are associated with improved sleep 4–6 weeks later.
- SSRIs or clomipramine (TCA) would be the first choice if Obsessive Compulsive Disorder symptoms were prominent.

How long are antidepressants usually needed?

Like any medication, the length of time a person needs to take antidepressants for depends on how severe the illness is and how they respond to treatment. Some people only need to take them for a short time (usually 6–12 months), while others may need to take them over the long term, just like someone with diabetes might use insulin or someone with asthma would use ventolin. Stopping antidepressant medication should only be done gradually, on a doctor's recommendation and under supervision.

Everyone needs to find the treatment that's right for them. Just because a treatment has been shown to work scientifically, doesn't mean it will work equally well for every individual. Some people will have complications, side effects or find that the treatment does not fit in with their lifestyle. It can take time, strength and patience to find a treatment that works.

After seeking appropriate advice, the best approach is to try a treatment you're comfortable with and one that works for most people. If you do not recover quickly enough, or experience problems with the treatment, discuss this with your health professional and consider trying another.

Psychological treatments for depression

psychological treatments (also known as talking therapies) help people with depression to change negative patterns of thinking and improve their coping skills so they are better equipped to deal with life's stresses and conflicts. Psychological therapies may not only help a person to recover, but can also help to prevent the depression from reoccurring. There are several types of psychological treatments shown to be effective in the treatment of depression

Cognitive behaviour therapy (CBT)

CBT is a structured psychological treatment which recognises that a person's way of thinking (cognition) and acting (behaviour) affects the way they feel. CBT is one of the most effective treatments for depression, and has been found to be useful for a wide range of people, including children, adolescents, adults and older people. In CBT, a person works with a professional (therapist) to identify the patterns of thought and behaviour that are either making them more likely to become depressed, or stopping them from improving once they become depressed. CBT has an emphasis on changing thoughts and behaviour by teaching people to think rationally about common difficulties, helping them to shift their negative or unhelpful thought patterns and reactions to a more realistic, positive and problem-solving approach. CBT is also well-suited to being delivered electronically (often called e-therapies).

Interpersonal therapy (IPT)

IPT is a structured psychological therapy that focuses on problems in personal relationships and the skills required to deal with these problems. IPT is based on the idea that relationship problems can have a significant impact on a person experiencing depression, and can even contribute to the cause. IPT is thought to work by helping people to recognise patterns in their relationships that make them more vulnerable to depression. Identifying these patterns means they can focus on improving relationships, coping with grief and finding new ways to get along with others.

Behaviour therapy

Behaviour therapy is a major component of cognitive behaviour therapy (CBT), but behaviour therapy focuses exclusively on increasing a person's level of activity and pleasure in their life. Unlike CBT, it does not focus on changing the person's beliefs and attitudes. Instead it focuses on encouraging people to undertake activities that are rewarding, pleasant or give a sense of satisfaction, in an effort to reverse the patterns of avoidance, withdrawal and inactivity that make depression worse.

Mindfulness based cognitive therapy (MBCT)

MBCT is generally delivered in groups and involves learning a type of meditation called 'mindfulness meditation'. This meditation teaches people to focus on the very present moment, just noticing whatever they are experiencing, be it pleasant or unpleasant, without trying to change it. At first, this approach is used to focus on physical sensations (like breathing), but later it is used to focus on feelings and thoughts. MBCT helps people to stop their mind wandering off into thoughts about the future or the past, or trying to avoid unpleasant thoughts and feelings. This is thought to be helpful in preventing depression from returning because it allows people to notice feelings of sadness and negative thinking patterns early on, before they have become fixed. It therefore helps the person to deal with these early warning signs better.

Analysis Of Bone Mineral Density Using Ultra Sound Bone Densitometer Among Women Belonging To 70-75 Years Who Chew And Do Not Chew Betel Leaves.

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Abstract

In this study, an attempt has been made to analyze the bone mineral density using ultra sound bone densitometer among women belonging to 70-75 years who chew and do not chew betel leaves. The study was carried out on 40 women (age 70-75 years) who chew and do not chew betel leaves by Convenience sampling method. Ultrasound bone densitometer CM-200 was used to measure bone density at heel. The machine processed the data and result was showed in T scores. The collected data were analyzed statistically using percentile. It was concluded from the findings that, the women who have the habit of betel chewing were less osteoporotic than the women who do not have the habit of betel chewing.

Key words: Osteopenia, Osteoporosis, Bone mineral density,

Introduction

The health concerns associated with aging are critical for women since they live longer with chronic illness and disability. Disease, rather than normal aging, usually accounts for loss of function in the mature woman. Nothing can be done about the passage of years, but a great deal can be done throughout a woman's life to prevent and treat the diseases that keep from being in the best possible health. The diseases for which women are more at risk include osteoporosis, coronary artery disease, hypertension, cerebrovascular disease, certain cancers, diabetes, and weight-related disorders (Michele Grodner, 2007).

Osteoporosis is reduced bone mass per unit volume of bone with normal ratio of mineral to matrix without any abnormality in the mineral or matrix composition. Post menopausal osteoporosis is seen in women within 15-20 years after menopause the bone loss is mainly trabecular with fractures mainly of vertebrae and distal radius with a female to male ratio of 6:1 and is mainly attributed to estrogen deficiency. (Kulkarni G S, 1999) In India, the leaves of Piper betle are chewed together in a wrapped package along with the areca nut (which, by association, is often called the "betel nut") and mineral slaked lime (calcium hydroxide). The areca nut contains the alkaloid arecoline, which promotes salivation (the saliva is stained red), and is itself a stimulant. This combination, known as a "betel quid", has been used for several thousand years.

Statement Of Problem

The study was intended to analyze the bone mineral density using ultra sound bone densitometer among women who chew and do not chew betel leaves.

Methodology

Totally Forty women belonging to 70-75 years were identified by Convenience sampling method. Group 1 includes women who chew betel leaves and group 2 includes women who do not have the habit of chewing betel leaves. Twenty subjects were selected from each group. Ultrasound bone densitometer CM-200 was used to measure bone density at heel. Subject right foot was kept on the foot plate of the machine. Calcaneum - heel bone was fixed. Age and gender was entered. Ultra sound waves were passed. The machine processed the data and result was showed in T scores.

Analysis Of Data

The collected data were analyzed statistically using Percentile.
Bone mineral density (BMD)

Bone mineral density is the amount of bone tissue in a certain volume of bone. Osteoporosis is a progressive bone disease that is characterized by a decrease in bone mass and density which can lead to an increased risk of fracture.

Instrument used: Ultrasound bone densitometer CM-200 was used to measure bone density at heel.

Procedure

Right foot was kept on the foot plate of the machine. Calcaneum - heel bone was fixed. Age and gender was entered. Ultra sound waves were passed. The machine processed the data and result was shown in T. scores

Scoring : Bone density measurements were reported as a value in g/cm² and as a T-score.

T score Up to (-1) Normal

T Score between (-1.1 to - 2.5) Osteopenia

T Score below (-2.5) Osteoporosis

Results :

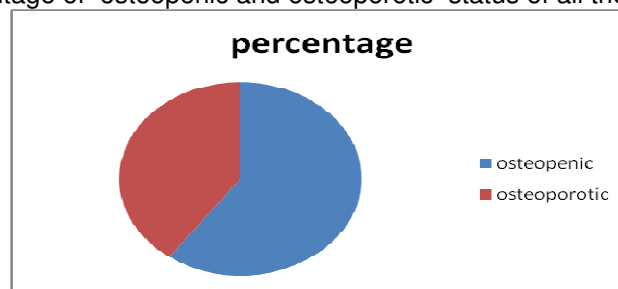
Table I shows the T score of women belonging to both groups

S No	T score of women	
	Who chew betel leaves	Who do not chew betel leaves
1	-1.5	-1.3
2	-2.1	-2.8*
3	-1.8	-1.2
4	-1.2	-1.6
5	-1.5	-2.8*
6	-1.6	-2.9*
7	-1.5	-1.7
8	-2.4	-2.7*
9	-1.3	-1.9
10	-1.6	-2.9*
11	-2.8*	-1.8
12	-2.9*	-2.7*
13	-1.5	-1.6
14	-2.8*	-1.9
15	-1.7	-2.7*
16	-2.1	-2.3
17	-2.8*	-2.8*

* indicate osteoporosis

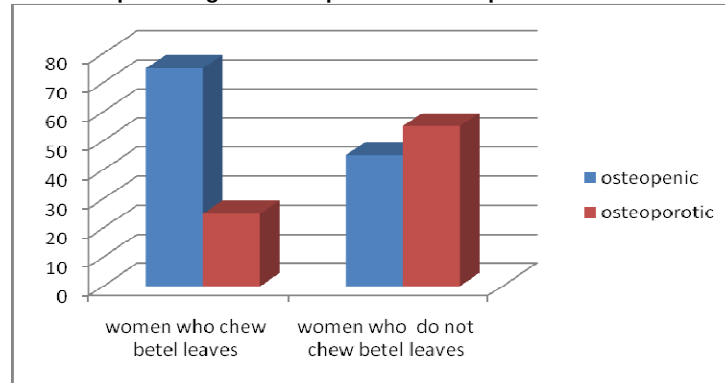
Out of the above data received from forty subject twenty four (60%) were osteopenic and sixteen (40%) were osteoporotic.

Figure I shows the percentage of osteopenic and osteoporotic status of all the subjects taken for study



Among the twenty women who chew betel leaves fifteen (75%) subject were osteopenic and five (25%) subject were osteoporotic. Among the twenty women who do not chew betel leaves nine (45%) subject were osteopenic and eleven (55%) subject were osteoporotic.

Figure 2 shows the percentage of osteopenic and osteoporotic status of both the groups



Discussion On Findings

The study shows that all the women above 70 years do not have normal bone density. Among the total women who have been tested 60% were osteopenic and 40% were osteoporotic. This implies that bone density was decreased in women more than 70 years.

Among the two groups, the women who chew betel leaves 75% of the subjects were osteopenic and 25% of the subjects were osteoporotic. Among the twenty women who do not chew betel leaves 45% of the subjects were osteopenic and 55% of the subjects were osteoporotic. The results infer that osteoporosis was more prevalent in women who do not have the habit of betel chewing.

Conclusion

It was concluded from the study that women who chew betel leaves have better bone density than the women who do not have the habit of betel chewing.

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Effects of Yoga, Circuit Training and Combined Training on Creatinine and High Density Lipoprotein Status among Mild Intellectually Challenged Persons

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Abstract:

Purpose of the study was to facilitate the Effects of yoga, circuit training and combined training on Creatinine and High Density Lipoprotein status among mild intellectually challenged persons, in this study sixty (N=60) male mild intellectually challenged persons were randomly selected in AGAPE and Deebam special school in Chennai. Their Age ranged between 14-18 years. They were randomly divided in to four equal groups of fifteen subjects each. Experimental group I underwent yogic practices, Experimental group II underwent circuit training, Experimental group III combined training and group IV was control group no training for the period of twelve weeks. Creatinine and High Density Lipoprotein was selected as dependant variables and independent variables are Yoga, Circuit training and combined training. The data was collected before and after the experimental treatment period. Analysis of Covariance (ANCOVA) and scheffe's post hoc test was used in this study. It was concluded that Creatinine and High Density Lipoprotein level was significantly improved due to the influence of twelve weeks practices of Yoga, Circuit Training and Combined Training to comparing the control group among mild intellectually challenged persons.

Keywords: Mild intellectually challenged Persons, Creatinine, High Density Lipoprotein, Yoga, circuit and combined Training.

Introduction

Intellectual challenged is a generalized disorder appearing before adulthood, characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviors. It has historically been defined as an intelligence quotient score (IQ) under 70. Once focused almost entirely on cognition. Persons diagnosed as having significantly lower than average intelligence and considerable problem in adapting to everyday life or lacking independence in regard to activities of daily living (medical dictionary (12-dec-1998).

Mild Intellectually Challenged Persons

Mild Intellectual disability is generally defined as having below average IQ and poor adaptive behavior skills, evident before the age of 18. Their IQ level is 70-75. A person with mild intellectual disability learns more slowly than other people. They may also have difficulty with dates and time, and with expressive and receptive communication. (Disability awareness kit produced by the State Library of Victoria)

Yoga

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 a 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 influence the life of man at each level. Therefore, the effect of yoga must be felt in every movement of our day- to- day lives. Today the whole world is looking towards yoga for answers to the various problems the modern man is facing. Yoga is a way of life. It is an integrated system of education for the body, mind and inner spirit. This art of right living was perfected and practiced in India thousands of years ago but, as yoga deals with universal truths, its teachings are valid today as they were in the ancient times.

Circuit Training

Circuit training is the combination of exercise training that will have eight to fifteen station in a circle, the subject or persons should do exercise as for the instruction and move one station to another station and another station like that they have to finish that circle.

Circuit training typically involves working out various muscle groups in a circuit. We start out working one muscle group, then move on to another and another. Circuit training can be done with bodyweight exercises, free weight exercises, exercise equipment or machines, or a combination of these.

Circuit training is a form of exercise that combines strength training with cardio to boost our metabolism and help us to see results faster. This is accomplished by moving continuously, unlike typical strength training where we do a set, rest, then do another set. In circuit training we do a set each of several exercises in a row without resting. Each type of exercise is considered station, even if you do not move from one location to another to perform the exercise. After a Rest of only about one minute, we do the circuit again and again until we have achieved the Number of sets we want to accomplish for that work out.

Combined Training

Combined training is the combination of two different training both yoga and circuit training. In this training method is very useful method for the correct functions of varies systems such as motor, physical, physiological, psychological and biochemical system of intellectually challenged persons.

Statement of the Problem

The purpose of study was find out to effects of yoga, circuit training and combined training on Creatinine and High Density Lipoprotein status among mild intellectually challenged persons.

Hypothesis

It was hypothesized that there would be a significant improvement on Creatinine and High Density Lipoprotein status due to the influence of 12 weeks of yoga and circuit training and combined training on mild intellectually challenged persons.

It was hypothesized that combined training would have greater significant effect on Creatinine and High Density Lipoprotein then the yoga and circuit training groups among mild intellectually challenged persons.

Reviews on Related Literature

Desai BP and Gharote ML.(2009) examined on the Effect of Kapalabhati on blood urea, creatinine and tyrosine. The present study conducted on twelve normal healthy male subjects showed decrease in blood urea, increase in creatinine and tyrosine after one minute of Kapalabhati, a fast-breathing technique of Hatha Yoga (120 respiratory strokes (min.)). From biochemical point of view the practice of Kapalabhati seems to promote decarboxylation and oxidation mechanisms due to which quieting of respiratory centres is achieved, which is also the prerequisite for the practice of Pranayama, another important technique of Yoga.

Methodology: To achieve the purpose of this study sixty (N=60) male mild intellectually challenged persons were randomly selected in AGAPE and DEEBAM special school in Chennai. Their age group ranged between 14-18. They were randomly divided in to four equal groups and each group consists of fifteen subjects. Experimental group I underwent yogic practices, Experimental group II underwent circuit training, Experimental group III combined training and group IV was control for the period of twelve weeks. Creatinine and High Density Lipoprotein was selected as dependant variables and independent variables are Yoga, Circuit training and combined training. The data was collected on related test items as per the methods decried above the pre test was organized before the experimental period and after twelve weeks of experimental period post test was organized and data was collected for the study. Analysis of Covariance (ANCOVA) used to find out the significant differences between the pre test and post test, for each of these variables and scheffe's post hoc test is to be used to find out the paired means differences among the groups.

Results on Creatinine

The following tables illustrate the statistical results of the Effects of Yoga, Circuit Training and Combined Training on Creatinine of mild intellectually challenged persons and ordered adjusted means and the difference between the means of the groups under study.

Table- I Computation Of Analysis Of Covariance Of Creatinine (Scores In Mg/Dl)

Means	YG	CTG	CBTG	CG	SV	SS	Df	MS	F
Pre Test Mean	0.82	0.83	0.83	0.85	B	0.06	3	0.02	0.19
					W	0.58	56	0.11	
Post Test Mean	1.06	1.08	1.20	0.87	B	0.83	3	0.28	18.53*
					W	0.83	56	0.05	
Adjusted Post Test Mean	1.07	1.08	1.20	0.86	B	0.91	3	0.31	33.37*
					W	0.50	55	0.09	

Table F-ratio at 0.05 level of confidence for 3 and 56 (df) =2.7 and 55(df)=2.72, *Significant

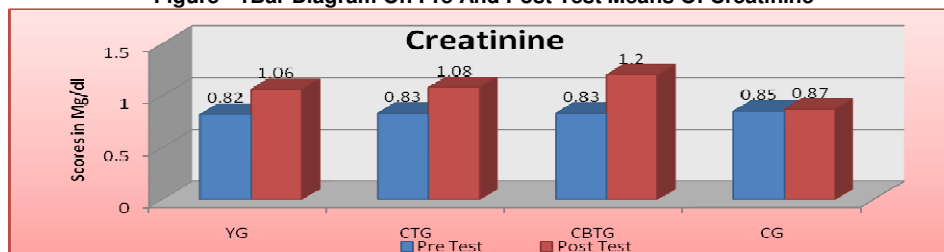
Computation Of Scheffe's Post Hoc Test Ordered Adjusted Final Mean Difference Of Creatinine (Scores In Mg/Dl)

CG	YG	CTG	CBTG	MD	CI
0.85	1.07	-	-	0.21	0.10
0.85	-	1.08	-	0.22	0.10
0.85	-	-	1.20	0.34	0.10
-	1.07	1.08	-	0.01	0.10
-	1.07	-	1.20	0.13	0.10
-	-	1.08	1.20	0.12	0.10

Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 33.37 was greater than the required value of 2.7 and hence it was accepted that the yoga, circuit training and combined training significantly improved the creatinine level among mild intellectually challenged persons at 0.05 level.

The post hoc analysis of obtained ordered adjusted means proved that there were significant differences existed between yoga group and control group and circuit training group and control group and combined training group and control group on creatinine. This proved that due to twelve weeks of yoga, circuit and combined training creatinine level was significantly improved among mild intellectually challenged persons.

Figure - 1 Bar Diagram On Pre And Post Test Means Of Creatinine



Discussion on the Findings of Creatinine

The analysis of co-variance of Creatinine indicated that experimental group I (yoga), experimental group II (circuit training), experimental group III (Combination of yoga and circuit training), were significantly improved than the control group on Creatinine. It is due to the effects of yoga, circuit training and combined training. The finding of the study showed that the experimental group III had improvement Creatinine more than the experimental group I and II. Yoga, circuit training and combined training have its own value toward a healthy life style. We can use yoga, circuit training and combined training not only as part of a programme to improve Creatinine, but also as a way to assist in attending other goals Comeaux, et. al, (2013) and Agte, et. al, (2011).

Table- II Computation Of Analysis Of Covariance Of High Density Lipoprotein (Scores in mg/dl)

Means	YG	CTG	CBTG	CG	SV	SS	Df	MS	OF
Pre Test Mean	38.87	38.34	38.07	38.87	B	7.2	3	2.4	0.34
					W	397.74	56	7.11	
Post Test Mean	46.94	46.54	51.27	38.14	B	1356.85	3	452.29	26.74*
					W	947.34	56	16.92	
Adjusted Post Test Mean	46.77	46.64	51.51	37.97	B	1418.51	3	472.84	30.79*
					W	844.54	55	15.36	

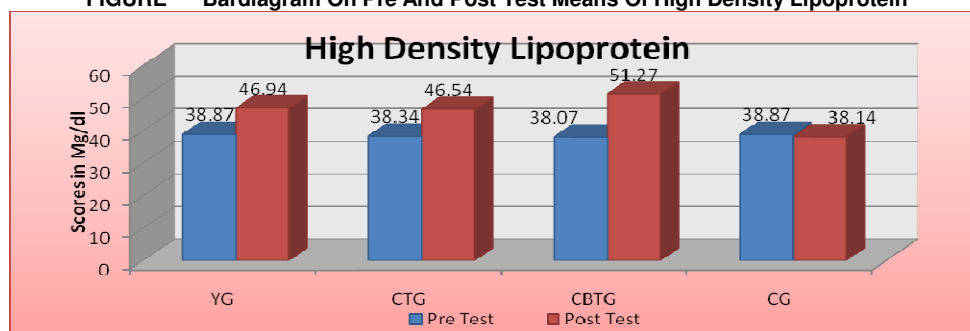
Table F-ratio at 0.05 level of confidence for 3 and 56 (df) =2.7 and 55(df)=2.72 *Significant

Table- II (A) Computation Of Scheffe's Post Hoc Test Ordered Adjusted Final Mean Difference Of High Density Lipoprotein (Scores in Mg/dl)

CG	YG	CTG	CBTG	MD	CI
37.96	46.76	-	-	8.80	4.09
37.96	-	46.64	-	8.67	4.09
37.96	-	-	51.50	13.54	4.09
-	46.76	46.64	-	0.13	4.09
-	46.76	-	51.50	4.74	4.09
-	-	46.64	51.50	4.87	4.09

Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 30.79 was greater than the required value of 2.7 and hence it was accepted that the yoga, circuit training and combined training significantly improved the High density lipoprotein level among mild intellectually challenged persons at 0.05 level.

The post hoc analysis of obtained ordered adjusted means proved that there were significant differences existed between yoga group and control group and circuit training group and control group and combined training group and control group on High density lipoprotein. This proved that due to twelve weeks of yoga, circuit and combined training on High density lipoprotein level was significantly improved among the mild intellectually challenged persons.

FIGURE Bar diagram On Pre And Post Test Means Of High Density Lipoprotein

Discussion on the Findings of High Density Lipoprotein

The analysis of co-variance of high density lipoprotein indicated that experimental group I (yoga), experimental group II (circuit training), experimental group III (Combination of yoga and circuit training), were significantly improved than the control group on high density lipoprotein. It is due to the effects of yoga, circuit training and combined training. The finding of the study showed that the experimental group III (combination of yoga and circuit training) had improvement high density lipoprotein more than the experimental group I and II. Yoga, circuit training and combined training have its own value toward a healthy life style. We can use yoga, circuit training and combined training not only as part of a programme to improve high density lipoprotein, but also as a way to assist in attending other goals Nash, et. al, (2001) and Cohen, et. al, (2003).

Conclusions

Within the limitation of this study, the following conclusions were drawn. It was concluded that mild intellectually challenged person's Creatinine and High Density Lipoprotein level was significantly improved due to the influence of twelve weeks practices of Yoga, Circuit Training and Combined Training to comparing the control group. But particularly the Combined Training group has significantly improved in Creatinine and High Density Lipoprotein when compared to the Yoga and Circuit Training groups.

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Sport and Politics in the Modern Era and their Consequences

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Introduction

Despite repeated newspaper claims to the contrary and notwithstanding occasional bursts of outrage from governments who consider themselves the victims of international conspiracies, it is axiomatic that sport and politics do mix. There have always been political and nationalistic undercurrents whenever sporting prowess has been put to the test: at the feast known as The Field of the Cloth of Gold, in 1521, for instance, the boastful Henry VIII decided for no reason other than personal [and perhaps nationalistic] vanity to try out one of his wrestling throws on France's King Francis. Unfortunately for the English monarch, it seems that Francis was au fait with the particular manoeuvre and threw Henry to the ground. From this point on, negotiations went downhill, and months of diplomatic endeavour between the two nations were ruined. A hundred years before, Henry VI had banned the import of French tennis balls to England as a political measure, so this was not the first sporting contretemps between the two nations. Indeed, centuries before this, the French had brought the notion of chivalry and the heraldic tournament to Britain. Contests in the lists between knights of different nations were more than just festive gatherings for the glory of the individual.

Sport and Politics in the Modern Era

Pride before a fall - Germany in 1936 and England in the 1950s

The nineteen-thirties, which witnessed the rise of European fascism, also saw the dictatorships use convenient, if unsound theories of eugenics to support their political purges. The Italians and Germans, in particular, vaingloriously paraded their muscular young athletes and sportsmen and women in massive gatherings that made no attempt to disguise the message of physical and political supremacy. The Italians did gain world-wide acclaim for their achievement in winning the football world cups of 1934 and 1938. The Germans, on the other hand, were the subject of international and very public ridicule following the defeat of Hitler's Aryan supermen at the hands of Jesse Owens at the 1936 Olympics in Berlin. Owens, a Black American, won four gold medals ahead of the much-vaunted Germans and caused Hitler public humiliation: the German leader refused to present the awards and left the stadium. The Germans had made a huge impression with their achievement in building the Olympic stadium and with their magnificent opening ceremony. Unfortunately for Hitler, fortunately for the rest of us, the myth of Aryan supremacy was exposed in the most emphatic way.

1953 was a year of great nationalistic fervour in Britain. The new queen was crowned and the ceremony brought the nation to a standstill as flag-waving royalists blocked city streets and crowded in front of new-fangled television sets. As if to show to the world that, having played her part in ridding the world of the menace of fascism, the British lion was ready to roar from on high once again, a British expedition conquered Everest. Sir John Hunt, leader of the expedition, succeeded in putting Britain on top of the world in the most literal sense possible, and all other nations were expected to sit up and take notice. It seemed to matter little that of the two men who made it to the summit one, Edmund Hillary, was a New Zealander, whilst the other, Sherpa Tensing, was Nepalese. It was British daring and British leadership which had triumphed. Britain's burgeoning political ambitions were mirrored in the athletic achievements of its sporting heroes. So, too, were its failures and embarrassments.

It was a misplaced belief in its own authority and influence overseas which saw the government precipitate the Suez fiasco of 1956. Similarly it was in a spirit of invincibility that England's footballers took on the Hungarians at Wembley in November of 1953. The previous five encounters between the two nations, four of which had been in Budapest, had seen England score twenty-six goals and concede only eight. The Hungarians' 6-3 victory on that day in 1953 stunned the nation, but was seen as an aberration. It was a chastened but still confident England side which travelled to Budapest six months later for a return match. This time Hungary won by seven goals to one, and England's 'sporting heroes' were well and truly humbled.

In 1971, the Springboks' rugby tour caused some of the most violent demonstrations witnessed in Britain and Ireland for many decades. The protest march to the Lansdowne Road stadium 'constituted the largest public assembly this century' [Williams: 337]. It was the last time the Springboks were to come to Britain until 1995. The protests centred on the issue of apartheid, the system under which the Pretoria government denied Blacks equal rights with Whites. In the same year as this ill-fated tour, the International Olympic Committee [IOC] suspended South Africa from the Games for its refusal to accept inter-racial sport, a ban that was to last for over twenty years.

Three years earlier, the England cricket tour to South Africa had been called off because of the host nation's refusal to accept the presence of Basil d'Oliviera in the tourist's party. D'Oliviera had actually been born in South Africa, but his colour prevented him from playing there, so he moved to England and gained his residence qualification. Brailsford points out that the England selectors had tried to avoid the issue by selecting another player [Tom Cartwright] ahead of him, but injury to Cartwright meant that they could not avoid choosing d'Oliviera. So it would appear that England's 'bold stance' in defying the apartheid regime was no more than an accident of circumstance.

Apartheid was not a new political issue, nor was this the first time that the national team's selectors were seen to lack political backbone. As far back as the 1920s, they had accommodated the South African government by dropping the Indian-born Duleepsinghi from the team to play the tourists in England. It was not until 1977, however, that the countries of the Commonwealth took united action against the South Africans. Following a much publicised meeting of sports ministers at Gleneagles, in Scotland, they produced the Commonwealth Statement on Apartheid in Sport, more commonly known as the Gleneagles.

Although the agreement did prove effective in excluding South Africa from competitions such as the Commonwealth Games, the equivocal nature of its wording left the door open for individual nations to pursue their own political line. The election of Margaret Thatcher's Conservative Government in 1979 was always likely to produce tensions over South Africa, given the traditional Tory support for White Government in the country. It came as no surprise to political commentators, then, when the Sports Council took advantage of what they no doubt saw as a change in policy to send a fact-finding mission to the Republic to investigate progress made in multi-racial sport. There are suspicions that the group was merely shepherded about to visit one or two model sports integration programmes, although their reports claim that they had witnessed 'significant advances' made in terms of racial integration in sport. Their impressions were certainly favourable, for the following year the Council was pressing for South Africa to be readmitted to the international sporting scene. Hargreaves condemns their ingenuousness.

Since that time, South African politics has been turned upside down, and universal suffrage has given the Blacks the rights they had been fighting for three-quarters of a century. Significantly, Mandela's release from incarceration on Robben Island and his subsequent election as president have done a great deal for sport in South Africa. He is a self-confessed sports enthusiast, even embracing the traditionally White-dominated sports, such as cricket and rugby, with an infectious exuberance which has encouraged others to set aside racial grievances and enjoy sports for their own sake. The new, multi-racial national fervour of sports fans in the country has been well rewarded, too: South Africa were world champions in rugby union, have one of the best records of all the test teams at one-day cricket, and are African champions at football.

Olympic Blood and Boycotts

The IOC's ban on South Africa was the beginning of a period of almost two decades during which the Olympic Games was the arena for political protest and action from all quarters: global superpowers, terrorist organisations, and banana republics all had their few moments of notoriety on the world's most public sporting stage.

Munich 1972

The most powerful statement was made by the Black September terrorist organisation in 1972, when they broke into the rooms of Israeli athletes at the Olympic village in Munich. In a stand-off which was played out before the world's media - gathered for an entirely different sort of occasion - they held several members of the Israeli team hostage whilst the German anti-terrorist brigade watched and waited. In the ensuing shoot-out at the airport, the terrorists were shot dead but detonated hand-grenades which killed nine of their hostages. Despite the brilliance of Mark Spitz's seven gold medals in the swimming pool, despite the appearance of Her Royal Highness Princess Anne in the equestrian event, and despite the dominance of several outstanding Eastern Europeans in the men's and women's athletics and of the

Russian gymnasts, Munich 1972 is remembered for the bloody shoot-out which left the corpses of Muslims and Jews lying side by side on the tarmac at Munich airport.

Canada 1976

The 1976 Olympics in Canada saw boycotts from several Commonwealth countries over the South African situation, but the Games were not badly hit because most of the teams that withdrew would not have been expected to finish high up the medals table.

Moscow 1980

The same could not be said of 1980 in Moscow, when the United States pulled out and the athletes representing Great Britain had to fight parliamentary intervention in order to take part. In the end, competitors from the UK were represented under the Olympic flag, and 'God Save the Queen', always a rarity in the modern Olympic era, was not played at all. The issue which brought about the boycott was the Soviet invasion of Afghanistan, which the US rightly condemned. The decision to boycott the Games backfired somewhat, however, when these proved to be successful, competitive and well-organised. They received a terrible press in the West, however, and Hargreaves is quick to point out the negative attitudes both of Margaret Thatcher ['medals won at Moscow will be of inferior worth and the ceremonies a charade', p.200] and of the television companies.

Conclusion

It came as no surprise, then, when The Soviet Union and all her satellite countries except one boycotted the Los Angeles Olympics of 1984. This was a tit-for-tat political statement which meant that the world's best athletes had not met at the highest level for eight years. The exception to the boycott was Romania, who had had a very public dispute with the USSR over the marking of gymnasts at the previous Games. President Ceausescu publicly defied Moscow and sent a team to the USA. His reward was a clutch of Olympic medals and the granting of most-favoured-nation status from a grateful US Government, highlighting just how much political importance was attached to his decision by the hosts.

The LA Games will go down in history as embarrassingly jingoistic and openly one-sided. American television producers naively focused on their own athletes to an extent that had many otherwise disinterested viewers murmuring noises of sympathy with critics of the US. The BBC played down the political side of the boycott, but was unable to ignore the blatant and excessive patriotism which all but obscured some parts of the athletic competition. By the end of the Games, British commentators with a reputation for a fair degree of impartiality were quite clearly siding with non-American contestants in just about every competition, and the public were undoubtedly in agreement with them.

The boycott had produced only losers, so far as the superpowers were concerned. The USA had publicly gloated and lost friends, whereas Russia had been seen to act like a petulant child, albeit in response to the Americans previous boycott. Public dismay at the Soviet stance was heightened when Romanian attaches began to leak carefully-timed stories of Soviet sporting misdeeds, citing drug-taking, cheating by officials, the falsification of records and even the poisoning of food supplies for visiting competitors as systematic occurrences. At the time, gleeful journalists barely hesitated to consider what the Romanians had been doing while all this was going on, so thrilled were they to have the story from the inside. Lessons would appear to have been learned, however, for boycotts since 1984 have been little publicised and ineffective, only involving sparring between minor players on the world's political stage.

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Effects Of Interval Running And Aerobic Dance On Selected Bio-Chemical Variables Of College Women

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Introduction:

The lipids compounds are transported in the body as lipoproteins [1], which differ in size, density and the contents of lipids and proteins [2]. Three main categories of lipoproteins were discerned: of very low density (VLDL), of low density (LDL) and of high density (HDL). Intestinal lipid absorption is associated with the generation of chylomicrons, i.e. very large lipoproteins of very low density, which are rapidly eliminated from the blood stream [3]. Lipoproteins are generated predominantly in the liver, the VLDL ones being converted in blood into LDL which supply cholesterol to the cells. High-density lipoproteins (HDL) are generated in the liver and the intestine; they transport cholesterol from peripheral tissues back to the liver, the site of cholesterol degradation [4]. A close association is known between cardiovascular diseases (atherosclerosis, CHD, etc.) and lipid profiles [5, 6], the concentrations of LDL and of total cholesterol being of particular importance [7]. On the other hand, high levels of HDL in serum are antiatherogenic and protect from CHD [8]. Regular physical exercises induce decreased levels of total cholesterol and LDL and increased HDL [9, 10].

Materials And Method

To execute this investigation the research scholar has used random sample technique of ninety subjects drawn at random among the Government First Grade College, Haliyal, Karwar district, Karnataka Hostel women students. Their age ranges from eighteen to twenty-two years. They were divided in to three equal Groups namely Control Group, Interval Running Group and Aerobic dance Group. The initial and final test score were recorded for three Groups.

Experimental Design

The study was formulated as a true random Group design. The subject ninety were randomly assigned to three equal Groups of thirty women each. The Government First Grade College, Haliyal, Karwar district Karnataka hostel students selected as a subjects. They were divided into three Groups namely, Control Group (Group-1), Interval Running Group(Group-2), and Aerobic dance Group (Group-3).The subject were tested in order to find Body fat weight, Total fat percentage, lean body weight, Body mass index and total body weight.

Body composition variables

Skin fold caliper used for measuring Total body percentage, Lean body weight, Body fat weight, Durnin JVGA, Womersley J. Body fat assessed from total body Method was used (11)

Standard BMI Chart used for Body Mass Index

Used weighing machine for Total Body Weight

Interval Running Training

Interval training is a type of discontinuous physical training that involves a series of low- to high-intensity exercise workouts interspersed with rest or relief periods. The high-intensity periods are typically at or close to anaerobic exercise, while the recovery periods involve activity of lower intensity. The training programme included six repetitions. In each repetition they had to run 200 meters. The recovery period between each repetition was 90 seconds and between sets was 180 seconds. The programme was scheduled for one session in the morning between 6.30A.M.-7.30A.M, for three alternate days on a week and the same was continued for 12 weeks. (12).

Aerobic Dance

The training programme was schedule for one session in the morning between 6.30A.M-7.30A.M. for three alternate days on a week and the same was continued for 12 weeks. Ten to fifteen minutes warm

up and cool down periods were also included. The duration of training programme was gradually increased and also the number of repetitions. (13).

Table: Comparison of three groups with respect to post test scores of total cholesterol of college women

Groups	Pre test	Post test	Paired t-test	P-value	Effect size
	Mean± SD	Mean± SD			
Control group	136.57±33.01	136.67±32.97	-1.1395	0.2638	0.043
Interval running group	143.50±37.22	140.43±37.03	37.3448	0.00001*	0.980
Aerobic dance group	143.67±33.75	139.70±33.75	52.4992	0.00001*	0.990
F-test	0.4088@	681.9080#			
P-value	0.6656	0.00001*			
Pair wise comparisons by Tukeys multiple post hoc procedures					
Control vs Interval running	0.7202	0.0001*			
Control vs Aerobic dance	0.7088	0.0001*			
Interval running vs Aerobic dance	0.9998	0.0001*			

*p<0.05, @one way ANOVA applied, # ANCOVA applied

table: Comparison of three groups with respect to post test scores of HDL of college women

Groups	Pre test	Post test	Paired t-test	P-value	Effect size
	Mean± SD	Mean± SD			
Control group	47.97±3.95	48.07±3.90	-1.3605	0.1841	0.060
Interval running group	48.50±5.14	51.53±5.35	-8.4934	0.00001*	0.713
Aerobic dance group	48.20±4.58	52.13±4.78	-31.1555	0.00001*	0.971
F-test	0.1020@	80.08918#			
P-value	0.9031	0.00001*			
Pair wise comparisons by Tukeys multiple post hoc procedures					
Control vs Interval running	0.8944	0.0001*			
Control vs Aerobic dance	0.9789	0.0001*			
Interval running vs Aerobic dance	0.9653	0.1467			

*p<0.05, @one way ANOVA applied, # ANCOVA applied

Table: Comparison of three groups with respect to post test scores of triglycerides of college women

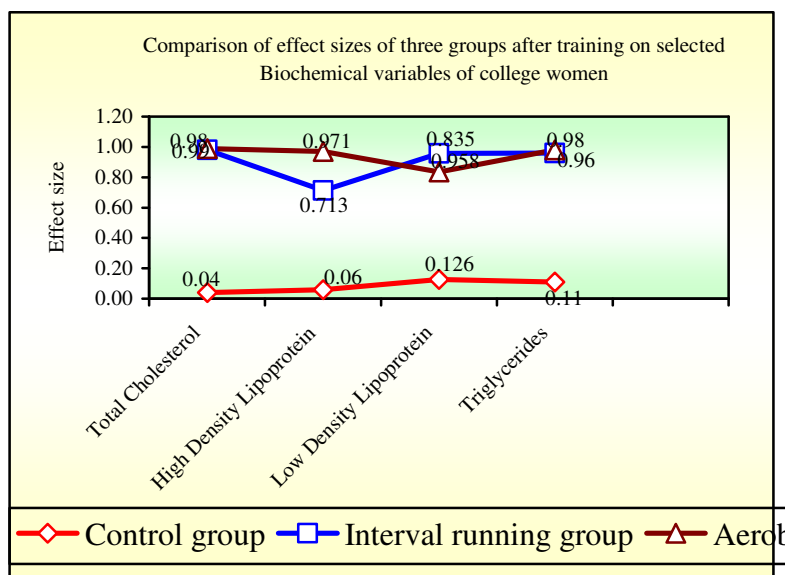
Groups	Pre test	Post test	Paired t-test	P-value	Effect size
	Mean± SD	Mean± SD			
Control group	110.90±30.11	111.07±30.13	-1.9796	0.0573	0.119
Interval running group	97.33±29.42	94.33±29.66	27.9821	0.00001*	0.964
Aerobic dance group	114.37±36.57	110.47±36.61	39.0000	0.00001*	0.981
F-test	2.3454@	486.1039#			
P-value	0.1018	0.00001*			
Pair wise comparisons by Tukeys multiple post hoc procedures					
Control vs Interval running	0.2378	0.0001*			
Control vs Aerobic dance	0.9088	0.0002*			
Interval running vs Aerobic dance	0.1068	0.0001*			

*p<0.05, @one way ANOVA applied, # ANCOVA applied

Table: Comparison of three groups with respect to post test scores of LDL of college women

Groups	Pre test	Post test	Paired t-test	P-value	Effect size
	Mean± SD	Mean± SD			
Control group	76.97±20.58	77.20±20.55	-2.0414	0.0504	0.126
Interval running group	95.83±20.03	92.80±20.03	51.9452	0.00001*	0.958
Aerobic dance group	98.67±21.78	94.70±21.73	12.1345	0.00001*	0.835
F-test	9.6413@	93.4638#			
P-value	0.0002*	0.00001*			
Pair wise comparisons by Tukeys multiple post hoc procedures					
Control vs Interval running	0.0021*	0.0001*			
Control vs Aerobic dance	0.0004*	0.0001*			
Interval running vs Aerobic dance	0.8582	0.0001*			

*p<0.05, @one way ANOVA applied, # ANCOVA applied



Discussion

Physical exercise is known to positively affect the lipid profile, i.e. to decrease the concentrations of total and LDL-cholesterol and of triacylglycerols and to increase that of HDL[14,10]Petibois et al.[15]. The result of the study indicated there was significant improvement in total cholesterol, High Density Lipoprotein, Low Density Lipoprotein and Triglycerides due to Twelve Week of the Training. The findings of the study showed that there was a significant improvement after training of Aerobic dance Group on in total cholesterol, High Density Lipoprotein, Low Density Lipoprotein and Triglycerides. Aerobic dance Training group was found to better than the Control group and Interval Running Group. The Aerobic dance group was better than Interval Running Group. The study was conducted on hard working age group i.e. from eighteen to twenty two. Being a hard working group without prescribed exercise also they can maintain good health. The outcome of the study helps to prescribe physical activities for middle and upper middle age women who are unable to provide proper and healthy exercise.

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A study on stressors and its management of BPO employees at Bangalore

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Introduction

Stress is a normal component of the body's response to demands that are placed on it. When we are frightened or angry, the body responds to this stress with a number of physical reactions that prepare it for action. Factors that trigger this stress response are known as stressors. Stressors are encountered in almost every aspect of our lives. Excess stress, or distress, has been identified as an important factor in many types of illness. Occupational stress is often the combined effect of several stressors. Workplace stressors include physical and organizational factors. Stress can be described as the adverse psychological and physical reactions that occur in an individual.

Need For The Study

Stress has become an inevitable part of everyday life specially for the people working in the BPO sector, it is so because BPO jobs are very demanding in nature, the result is stress due to which people are not able to perform their job efficiently which reduces the productivity. There is a need for research to identify the link between the nature of work and the mindset of the employees towards the work. This prompts the need to study about the stress management and find solutions.

Objectives Of The Study

To identify the various sources by which employees get stress at work place.

To analyze the work environment and its association with stress.

To recommend coping up strategies to manage stress.

Methodology

A. Type of Study: Descriptive Research design is used for the purpose of the study. The ideology of using this research design is that the research can know more about the problem being studied and new ideas can be generated.

B. Type of Data: Sources of Secondary Data: Websites, Research Articles, Industry Reports

Primary Data: Data is collected from the employees of various BPO Companies through Questionnaire & personal Interviews

Type of Survey: Sample survey

Method of Sampling and Sample Size: Sampling unit: Meeting BPO sector employees in Bangalore

Sampling size: 130 Sampling procedure: Convenient & Judgmental sampling

Tool for Data Collection: Questionnaire

Techniques of Analysis: Percentage is used to describe relationships and can also be used to compare the relative terms, the distribution of two or more series of data

Limitations Of The Study: This study is limited only to the Bangalore BPOs sector. Hence, a general conclusion cannot be drawn out of the study.

Findings

37% of the respondents faced stress most of the time at work. 38% of the respondents faced stress sometimes. 25% of the respondents faced stress rarely

Majority of employees said that they faced a lot of time pressures from their superiors and clients.

These are various situations at work which causes stress to the employees like too much or too little work, unnecessary obstacles, time pressures, performing beyond ability, keeping up with technology, constantly changing policies, lack of clear job objectives and no support or career advice. 21% of the

respondents agreed that time pressure leads to stress at work. The important work related factors that led to stress at work place are tedious or meaningless tasks, unreasonable performance demands, and excessive workload.

The organisational sources which caused stress are unclear responsibilities or expectations, conflicting job demands, lack of autonomy or participation in decision making, Inefficient communication patterns and multiple supervisors.

The workplace changes factors leading to stress are poor chances for advancement or promotion, tension brought about by greater workplace diversity and fear of layoff.

86 respondents indicated that work related factors caused more stress to them and 21% of the respondents agreed that, no promotion and motivation to work causes stress.

Suggestions

Employees must be given more responsibilities and power, which shall enable them to make their own decisions. The employees must be provided adequate training programs to manage change and to improve their skills, so that they would gain confidence in doing any sort of work and will accept the change gracefully.

Arranging Yoga, Meditation sessions etc for employees to overcome stress. The company can also introduce the concept of —Self-managed work teams. There can be a positive linkage between employee empowerment and stress reduction.

The company should run Employee Assistance Program (EAP) to help stressed staff cope better. EAP acts as a bridge between the employer and the employees operating on the belief that the workforce is one living unit and not merely a mechanical body of people.

The company should ensure enabling environment of the workplace by setting clearly measurable goals and defined objectives for the employees.

To ensure that HR prepare employees for future promotions encouraging flexible hours of working.

Conclusion-

Burnout is a state of physical, emotional and mental exhaustion caused by long-term exposure to demanding work situations. Every employee feels work-related stress. Therefore in the research conducted we come across various factors which cause stress. The various situations at work which causes stress to the employees are too much or too little work, unnecessary obstacles, time pressures, performing beyond ability, keeping up with technology, constantly changing policies, lack of clear job objectives and no support or career advice. The work environment is very much related to stress. Different ways employees cope up with stress caused by work environment are prioritizing tasks, delegating responsibility, self management, cultivate allies at work, find humor in the situation or talk with the manager.

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A Comparative Study On Balance Ability Among The Rural And Urban Zp High School Boys Of Medak District

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Introduction

Physical Education is an integral part of the total education of every child from kinder garden through grade 12. Therefore, every student should have the opportunity to participate in a quality physical education program. It is the role of quality physical education programs to help students develop health related fitness, physical competence in movement activities, cognitive understanding and positive attitudes toward physical activity so that they can adopt healthy and physical active lifestyles. Quality programs are also important because they provide learning experiences that meet a student's developmental need, which in turn helps to improve the mental alertness, academic performance, readiness, and enthusiasm for learning.

Balance

Balance is the process of maintaining the position of the body's center of gravity vertically over the base of support and relies on rapid, continuous feedback from visual, vestibular and somatosensory structures and then executing smooth coordinated neuromuscular actions. Balance represents a complex integration of mechanical, sensory and motor processing strategies. Balance is thought to be of great significance as it is an integral part of all movements.

Balance can be defined as the ability to maintain or recover the body's center of mass within the body's base of support to prevent falling and complete the required movements and it is usually divided into basic components.

*Static balance

*Dynamic balance

Static Balance

Static balance is the ability to maintain a base of support with minimal movement and Static balance is the ability to maintain a posture in a resting position.

Dynamic Balance

Ability to maintain or regain balance on unstable surface with minimal extraneous motion. Dynamic balance is the ability to maintain postural control during the performance of functional tasks.

The Significance Of The Study

The study will help to estimate the avoid injuries of the Rural and Urban school Boys in Medak District of A.P. The study will also help to perform several fundamental motor skills of Rural and Urban ZP high schools boys. The study may help the physical education teachers, physical directors, coaches and other physical education departments. The study may also help in bringing new scope relating to balance abilities of both the groups, which may be investigated by future research scholars. The study may help to motivate the students to improve their balance abilities.

Sample Of The Study:

The study was formulated based on the simple random sampling. The samples were collected from the 50 Rural ZP and 50 Urban ZP high school boys in the age group of 13– 15 years from Rural ZP and Urban ZP high school boys in Medak district were considered for the study.

Showing The Sample Of The Study

Sl.No	Name of the subjects	Number of subjects
1.	Rural ZP high school boys	50
2.	Urban ZP high school boys	50

Tools Used

- * Stork balance stand test for static balance
- * Modified bass test in sec for dynamic balance

Data Collection Procedure

The study was conducted on healthy school boys from Rural and Urban areas of Medak district. A total of 100 school boys from rural ZP school boys and urban ZP school boys of Medak district were taken for study. Out of 100 boys, 50 were urban school boys and 50 were rural school boys. Urban school boys studied were from private schools and rural school boys were from Government schools. Detailed physical examination was carried out and only healthy boys were selected for the study.

Results And Discussions

Table: 1 showing that the variable, groups, sample number (N), Mean, Standard deviation (Sd), 't' value and level of significance of balancing abilities variable in static ability scores between urban and rural school boys.

variable	Groups	N	Mean	Sd	'T'	Level of significance
Static balance	Urban	50	19.306	6.363	15.357	0.00
	rural	50	28.643	11.159		
Dynamic balance	Urban	50	43.860	18.954	13.249	0.00
	Rural	50	57.581	14.614		

Above table no shows that comparison of both variables viz.. Stork balance test and modified bass test in sec in respect of rural and urban ZP high school boys in medak district. The value of mean and standard deviation on the above variable show in stork balance test 28.643 and 19.306 respectively in rural and urban ZP high schools boys of medak district. The value mean and slandered deviation and above variables shows in modified bass 570581 and 43.860 receptively in rural and urban ZP high school boys of medak district.

There is a significance difference between urban and rural school boys in their static and dynamic balancing abilities. It is concluded that the rural school boys have great static and dynamic balancing ability than urban school boys.

Discussions Of The Study

The purpose of this study was to compare static and dynamic balance between 100 school going boys between 13-15 years age group. The result of present study showed that there were significant difference in static and dynamic balance the age factor was influenced. Rural school going boys might have high level of tuning and harmony due to less weight

Conclusion

Balance represents a complex integration of mechanical, sensory and motor processing strategies. The result of this study indicated that there were significance differences in static and dynamic balance between urban and rural school boys age of 13-15 years. The age factor was influenced in developing static balance. A similar study with a large sample size may give more significance difference in static and dynamic balance of school age children. Long-term studies are needed to be done to establish the needed guidelines to protect children from injuries.