ISSN 2231-3265
(Online and Print)

Volume - 9 No. 1
Quarterly
January 2013 to March 2013

International Journal of Health, Physical Education & Computer Science in Sports

Published by :
Indian Federation of Computer Science in Sports
www.ijhpecss.org
Under the Auspices
International Association of Computer Science in Sports

Publisher: **Indian Federation of Computer Science in sports** **www.ijhpecss.org and www.ifcss.in** **under the auspices of** **International Association of Computer Science in sports** **Email:rajesh2sports@yahoo.co.in**	**International Journal of Health, Physical Education and Computer Science in sports (ISSN 2231-3265 On-line and Print) Journal published Quarterly for the months of March, June, September and December. IJHPECSS is refereed Journal.** **Published by the Indian Federation of Computer Science in Sports**

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp1-6

A Comparative Study Of Yogasanas And Gymnastic Activities On Flexibilities Of School Boys

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Abstract:
Purpose of the present study is to find out the effects of yogasanas and gymnastic activities on flexibility. One hundred and fifty (N=150) school boys of District Howrah, West Bengal State were randomly selected as subjects for the present study. The age limit of the subjects was 10-12 years. All the subjects were divided into three equal groups such as Gr. Y (n=50), Gr. G (n=50) and Gr. C (n=50). Gr. Y and Gr. G were experimental groups and Gr. C was control group. Initially all the flexibility measures of different parts of the body such as wrist flexion, wrist extension, elbow flexion, spine flexion, trunk flexion, knee flexion, ankle dorsi flexion and ankle planter flexion were employed to all the subjects of each group and thereafter specific yogic treatment and gymnastic activities were given to Gr. Y and Gr. G respectively for four days in a week and continued the period of one year and finally the subjects were retested on criterion measures. The data were analysed by t–ratio to find out the effects of the treatment. The investigator has also made an attempt to assess the superiority among experimental groups. The results of the present study showed that all the flexibility measures such as wrist flexion, wrist extension, elbow flexion, knee flexion, ankle dorsi flexion, ankle planter flexion; spine flexion and trunk flexion were improved significantly among the subjects of Gr. Y and Gr. G after one year treatment. In comparison among experimental groups, yogasanas was superior to gymnastic activities for improvement of wrist extension, spine flexion, trunk flexion and ankle dorsi flexion where as gymnastic activities were superior to yogasanas for improvement of wrist flexion. No superiority was observed among yogasanas and gymnastic activities for improvement of elbow flexion, knee flexion and ankle planter flexion.

Introduction:
The most popular form of yoga in our country is called hatha yoga, which use a series of physical exercise. Gymnastics are the father of all activities. Yoga and gymnastics develop individual fitness and make the mind calm and control the emotion. Yogasanas and Gymnastics develop various component of physical fitness such as strength, flexibility, co-ordination, balance, body composition and grace. Flexibility is a part and parcel of physical fitness. Actually yogasanas and gymnastics make a man complete fit - physically as well as mentally. Cureton (1941) stated that gymnastics much more flexible than other sports especially in trunk flexion and extension. Flexibility exercises are more conducive to build endurance in movements like swimming, running, aerobic dancing and tumbling than short static and weight lifting type of exercise. Jenson and Fisher (1979) stated that a high degree of total body flexibility is desirable and unusual amount of flexibility in certain body movement is necessary for maintenance of correct body form in gymnastics. Ghorate (1973) conducted a study on 27 males and 12 females of summer camp certificate course in yoga. His purpose was to observe the effect of yogic training on physical fitness. Physical fitness test was administered before and after the three weeks of yogic training. It was concluded that the training definitely improved general fitness of the male and female individuals with special emphasis on the fitness factor of flexibility, trunk strength and equilibrium.
Purpose of the present study is to find out the effects of yogasanas and gymnastic activities on flexibility. The investigators have also made an attempt to assess the superiority among experimental groups.

Methodology:
One hundred and fifty (N=150) school boys of District Howrah, West Bengal State were randomly selected as subjects for the present study. The age limit of the subjects was 10-12 years. All the subjects were divided into three equal groups such as Gr. Y (n=50), Gr. G (n=50) and Gr. C (n=50). Gr. Y and Gr. G were experimental groups and Gr. C was control group.
Initially all the flexibility measures of different parts of the body such as wrist flexion, wrist extension, elbow flexion, spine flexion, trunk flexion, knee flexion, ankle dorsi flexion and ankle planter flexion were employed to all the subjects of each group and thereafter specific yogic treatment and gymnastic activities were given to Gr. Y and Gr. G respectively for four days in a week and continued the period of one year and finally the subjects were retested on criterion measures. The data were analysed by t–ratio to find out the effects of the treatment.

Treatment consists of following asanas:

Padmasana, Vajrasana, Ardhasalavasana, Bhujangasana, Supta Vajrasana, Gomukhasana, Purnasalavasana, Viparitakarani Mudra, Shashankasana, Tadasana, Triyaka Tadasana, Sarvangasana, Halasana, Dhanurasana, Matsyasana, Padahastasana, Ardha Chandrasana, Baddha Padmasana, Paschimottanasana, Janusirasana, Ekpada Uttanasana, Uttanapadasana and Makarasana were considered as element of the treatment.

The subjects of Gr. Y were practiced savasana before and after practiced each asana during treatment season. Duration and repetation of asanas were increased gradually at four phases during the treatment season.

Treatment consists of following gymnastic activities:

Rolling- forward and backward, cart wheel, front turn and back turn, split sitting, handstand, handspring, round-off, back flip, front and back salt.

Prior to gymnastic activities all the subjects of Gr. G performed warm up exercise for 15 minutes. Gymnastic activities were assigned according to degree of difficulty in four phases. Subjects performed ten repetitions every activity.

Result And Disscussion:

All the sites of flexibility scores of both the groups were analysed by paired t – test and level of significance was set up at .05 level of confidence. Group comparison was also assessed by t-test and level of significant was set up at .05 level of significant.

TABLE-I:Group means increase in flexibility measures among Gr. Y, Gr. G and Gr. C after one year Treatment

VARIABLES	TYPE Of TEST	Gr. Y (n=50)			Gr. G (n=50)			Gr. C (n=50)		
		Mean	SD	t	Mean	SD	t	Mean	SD	t
Wrist Flexion (Degree)	Pre-test	89.4	5.82	18.93	87.04	5.87	27.23	89.66	6.34	0.10
	Post-test	93.82	5.63		92.62	5.89		89.24	6.10	
Wrist extension (Degree)	Pre-test	53.94	7.71	15.5	52.62	6.60	18.8	52.16	7.17	0.03
	Post-test	61.16	6.74		57.38	6.92		51.6	6.59	
Elbow flexion (Degree)	Pre-test	145.60	4.25	21.34	144.74	3.94	22.64	145.34	4.39	0.84
	Post-test	150.36	4.42		149.58	5.01		144.38	4.58	
Knee flexion (Degree)	Pre-test	138.06	5.88	29.4	137.24	6.38	35.74	137.52	6.43	-0.24
	Post-test	147.72	4.34		146.02	5.71		136.78	7.01	
Ankle dorsi flexion (Degree)	Pre-test	25.14	3.02	23.95	25.18	3.29	29.84	25.50	3.14	0.92
	Post-test	29.68	3.20		28.78	3.68		24.58	2.99	
Ankle planter flexion (Degree)	Pre-test	41.08	6.86	33.0	40.58	6.78	23.7	41.24	6.61	0.12
	Post-test	50.20	6.68		49.82	6.49		39.82	6.03	
Spine flexion (Inch)	Pre-test	13.25	1.95	29.45	13.5	2.12	25.98	13.24	1.93	-.021
	Post-test	8.39	1.13		10.7	1.58		14.16	2.04	
Trunk flexion (Inch)	Pre-test	1.92	2.08	34.4	1.48	1.18	30.7	1.62	1.29	1.12
	Post-test	12.16	3.03		9.20	2.62		0.92	1.10	

Significant at .05 level of confidence

Table-1 represents the mean values of pre test and post test for wrist flexion, wrist extension, elbow flexion, knee flexion, ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion of Gr. Y, Gr. G and Gr. C. The t-values of Gr. Y for all flexibility measures were 18.93, 15.5, 21.34, 29.4, 23.95, 33.0 29.45 and 34.4 respectively and the t-values of Gr. G for all flexibility measures were 27.23, 18.8, 22.64, 35.74, 29.84, 23.7, 25.98 and 30.7 respectively. To be significant at .05 level of confidence the t-value should be greater than 2.01. In this case, so all the t-values of Gr. Y and Gr. G were significant at .05 level of confidence for improving all flexibility measures. The t- values of Gr. C for all flexibilities measures were 0.10, 0.03, 0.84, -0.24, 0.92, 0.12, -0.21 and 1.12 respectively. The t values of Gr. C in relation to improvement of all flexibility measures were not significant at .05 level of confidence.

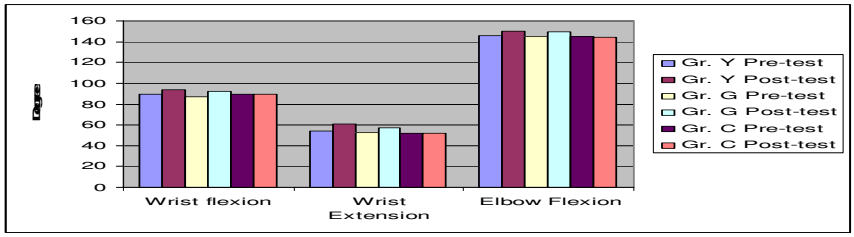


Fig. 1: A comparison of means of pre and post test data on wrist flexion, wrist extension and elbow flexion among Gr. Y, Gr. G and Gr. C.

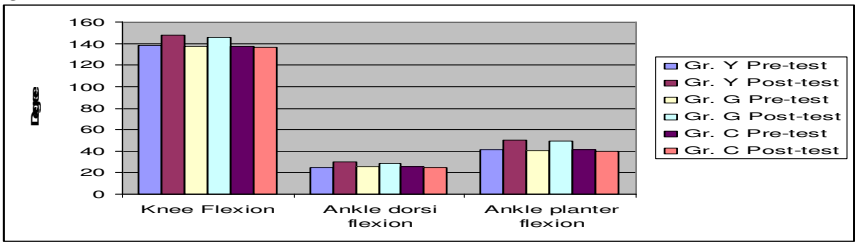


Fig. 2: A comparison of means of pre and post test data on knee flexion, ankle dorsi flexion and ankle planter flexion among Gr. Y, Gr. G and Gr. C.

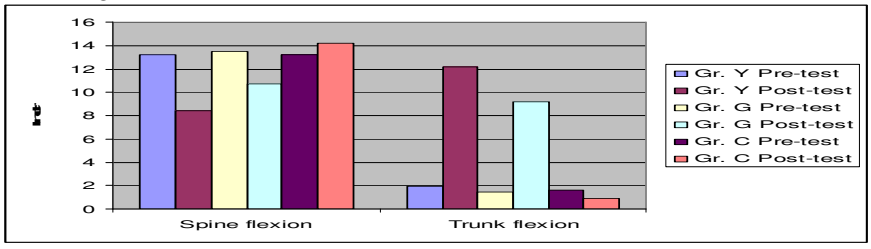


Fig. 3: A comparison of means of pre and post test data on spine flexion and trunk flexion among Gr. Y, Gr. G and Gr. C.

Flexibility has been considered not only a component of physical fitness but has been considered as a quality of every individual for a better movement, motor coordination and creative-esthetic performance. In this study eight flexibility measures were tested. The result of the studies showed that yogasanas and gymnastic activities improved wrist flexion, wrist extension, elbow flexion, knee flexion, ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion significantly at .05 level of confidence after one year treatment. These improvements have been presented by bar graph (Fig. 1-3).

The result of the present study corroborates with the finding of Devris(1961), Moorthy(1982), Cureton(1941), Downie(1970), Ghorate(1973), Ghildial(1980) and partly with the study of Kim & Park(2006) and Boraezynski & Urinaz(2009)

TABLE-II

Comparison of mean gains in wrist flexion, wrist extension, elbow flexion and knee flexion of Gr. Y, G and C after one year treatment

Group Compared	Wrist flexion (Degree)			Wrist extension (Degree)			Elbow flexion (Degree)			Knee flexion (Degree)		
	Mean	SD	t	Mean	SD	t	Mean	SD	t	Mean	SD	t
Gr. C & Gr. Y	-0.42	2.19	12.03	-0.56	2.56	12.53	-0.96	1.77	15.29	-0.74	2.66	20.24
	4.42	1.82		7.22	3.56		4.76	1.96		9.66	2.48	
Gr. C & Gr. G	-0.42	2.19	15.78	-0.56	2.56	11.55	-0.96	1.77	15.89	-0.74	2.66	20.74
	5.58	1.57		4.76	2.01		4.84	1.88		8.78	1.87	
Gr. Y & Gr. G	4.42	1.82	3.42	7.22	3.56	4.25	4.76	1.96	0.21	9.66	2.48	2.00
	5.58	1.57		4.76	2.01		4.84	1.88		8.78	1.87	

Significant at .05 level of confidence

Table-II represents the comparison of mean gains in wrist flexion, wrist extension, elbow flexion, knee flexion among Gr, Y, Gr. G and Gr. C after one year treatment. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in Wrist flexion were 12.03, 15.78 and 3.42 respectively. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in wrist extension were 12.53, 11.55 and 4.25 respectively. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in elbow flexion were 15.29, 15.89 and 0.21 respectively and the t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in knee flexion were 20.24, 20.74 and 2.00 respectively. To be significant at .05 level of confidence the t-value should be greater than 2.01. The result showed that the significant differences were observed among the groups in mean gains on wrist flexion, wrist extension but no significant differences were observed among the groups in mean gains on elbow flexion and knee flexion.

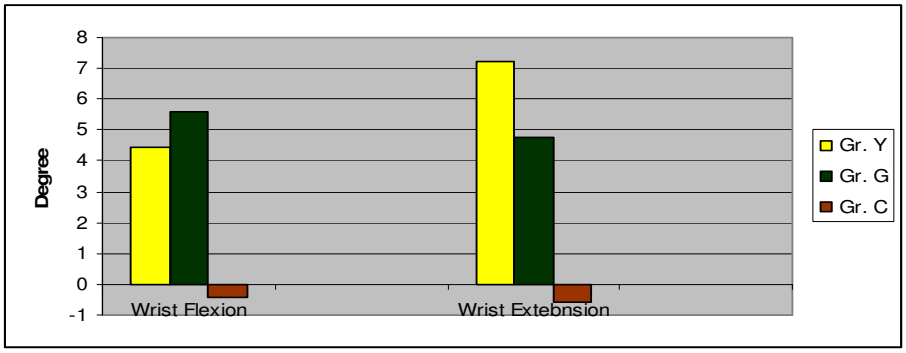


Fig. 4: Mean difference of wrist flexion, wrist extension among Gr.Y, Gr.G and Gr. C.

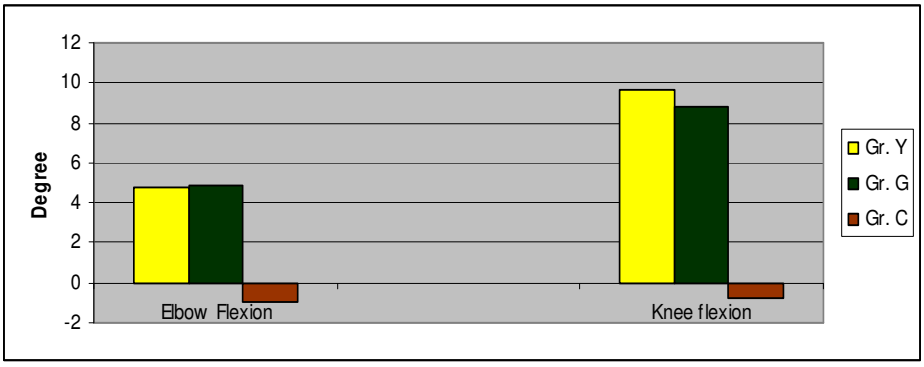


Fig. 5: Mean difference of elbow flexion, knee flexion among Gr. Y, Gr. G and Gr. C

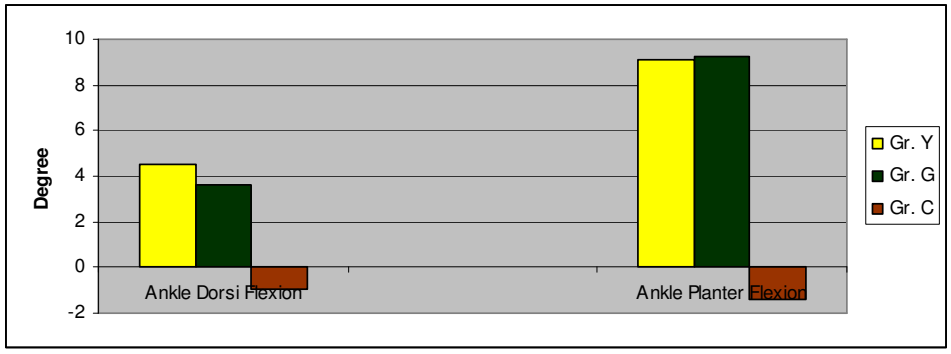
TABLE-III

Comparison of mean gains in ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion flexion of Gr. Y, G and C after one year treatment

Group Compared	Ankle dorsi Flexion (Degree)			Ankle planter flexion (Degree)			Spine flexion (Inch)			Trunk flexion (Inch)		
	Mean	SD	t	Mean	SD	t	Mean	SD	t	Mean	SD	t
Gr. C & Gr. Y	-0.92	1.16	19.11	-1.42	1.81	25.72	-2.30	2.06	25.39	-0.70	1.07	30.68
	4.54	1.66		9.12	2.26		12.14	3.45		10.24	2.28	
Gr. C & Gr. G	-0.92	1.16	19.96	-1.42	1.81	20.55	-2.30	2.06	20.22	-0.70	1.07	26.43
	3.60	1.11		9.24	3.19		7.0	2.52		7.72	1.98	
Gr. Y & Gr. G	4.54	1.66	3.34	9.12	2.26	0.18	12.14	3.45	8.51	10.24	2.28	5.90
	3.60	1.11		9.24	3.19		7.0	2.52		7.72	1.98	

Significant at .05 level of confidence

Table-III represents the comparison of mean gains in ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion among Gr, Y, Gr. G and Gr. C after one year treatment. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in ankle dorsi flexion were 19.11, 19.96 and 3.34 respectively. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in ankle planter flexion were 25.72, 20.55 and 0.18 respectively. The t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in spine flexion were 25.39, 20.22 and 8.51 respectively and the t-values between Gr. C & Gr. Y, Gr. C & Gr. G and Gr. Y & Gr. G in trunk flexion were 30.68, 26.43 and 5.90 respectively. To be significant at .05 level of confidence the t-value should be greater than 2.01. The result showed that the significant differences were observed among the groups in mean gains on ankle dorsi flexion, spine flexion and trunk flexion but no significant differences were observed among the groups in mean gains on ankle planter flexion.



F. 6: Mean difference of Ankle Dorsi Flexion and Ankle Planter Flexion among Gr. Y, Gr. G and Gr. C

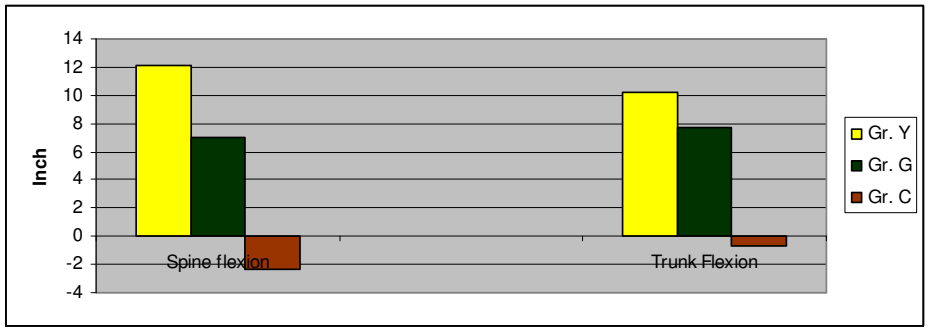


Fig.7: Mean difference of spine flexion and trunk flexion among Gr.Y, Gr.G and Gr. C

Table-III & Table-IV represent the comparison of mean gains among yogasanas and gymnastics treatment of various flexibility measures showed that in case of wrist extension, ankle dorsi flexion, spine flexion and trunk flexion Gr. Y was superior to Gr. G but in case of wrist flexion Gr. G was superior to Gr. Y. In the present study, no superiority was observed among Gr. Y and Gr. G for improving elbow flexion, knee flexion and ankle planter flexion. This may be due to the nature of the elbow joint and knee joint. The movement of hinge joint is restricted to a certain degree hence the minimum movement due to training effects was same and neither experimental group was superior to each other. The comparison of wrist flexion and wrist extension have been presented by bar graph(Fig. 4), the comparison of elbow flexion and knee flexion have been presented by Bar Graph (Fig. 5), the comparison of ankle dorsi flexion and ankle planter flexion have been presented by Bar Graph (Fig. 6) and the comparison of spine flexion and trunk flexion have been presented by Bar Grapg (Fig. 7).

In most of cases of flexibility, yogasanas was superior to gymnastics because yoga and flexibility go hand in hand. It increases range of motion of joints and also the mobilization of the joints. The result is enhanced fluidity throughout the body and a sense of ease and comfort. Apart from stretching the muscles, it also stretches the ligaments, tendons and the fascia stretch that surrounds the muscles. The best part of yoga is that it acts on those joints well, which were never really moved, without yogic exercise. In yogasanas practice, the body also develops a sense of harmony and balance. For improvement of flexibility static stretching plays a great role than ballistic stretching because static stretching method is less danger for tissue damage and it is less prevention of relief from muscular distress or soreness (Fox & Mathew, 1976). Gymnastics can also give the fluid movement and flexibility. Gymnasts have greater range of mobility than other person.

Conclusion:

Under the conditions of the present study the results seem to conclude the following:

All flexibility measures such as wrist flexion, wrist extension, elbow flexion, knee flexion, ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion were improved significantly due to one year treatment of yogasanas.All flexibility measures such as wrist flexion, wrist extension, elbow flexion, knee flexion, ankle dorsi flexion, ankle planter flexion, spine flexion and trunk flexion were improved significantly due to one year treatment of gymnastic activities.Yogasanas was superior to gymnastic activities for improvement of wrist extension, spine flexion, trunk flexion and ankle dorsi flexion.Gymnastic activities were superior to yogasanas for improvement of wrist flexion.No superiority was observed among yogasanas and gymnastic activities for improvement of elbow flexion, knee flexion and ankle planter flexion.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp7-9

Achievement Motivation And Socio-Cultural Deprivation Level Among The Sports Persons

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Abstract
Motivation can be defined as a psychological and physical condition that causes one to expend effort to satisfy needs and wants.To state these score in percentiles, based on the findings of the manual for deprived and non-deprived show more than 90% in favorable towards Physical education and sports programmes. deprived are in the favor of Physical Education and Sports programmes with mean values of 243.32 and 273 respectively.

Introduction:
Motivation means any idea, need, emotion or organic state, which prompts a man to an action. Motivation plays a major role in the all round development of a child. Sports activities have a higher degree of motivation or in other words through games we can motivate children for better understanding of different aspects of life. Motive is an internal factor that interferes with man's behaviour. Motivation is a process of getting the needs of the people realized with a view to induce them to work or the accomplishments of the task. Motivation can be defined as a psychological and physical condition that causes one to expend effort to satisfy needs and wants.

There are two types of motivation A) Intrinsic motivation. B) Extrinsic motivation. The Extrinsic motivation is the motivation throw the external force. Example: Peer group pressure, award & reward threat and punishment. The Intrinsic motivation is urge to do something. The extrinsic motivation will support intrinsic motivation.

Social Deprivation: Like 'social' the term 'social deprivation' has also been used differently by different investigators because of which certain degree of vagueness and imprecision exists in the contemporary literature of social Sawyer (1971) has questioned the use of the term relative deprivation on the ground of political bias inherent in it. There are others, who instead of social deprivation, prefer to use the term social isolation on the plea of being more precise. It is evident that prevalence of ambiguity in the usage of the term social deprivation and the researchers, inability to agree on the meaning of the term was resulted in a plethora of terms in the contemporary field of social deprivation.

Concept Of Cultural Deprivation:
Culture is a group phenomenon and is created in the course of the functioning and development of the group. Since in human society groups are identified with classes, culture can be said to be class-bound phenomenon. That is to say, culture presupposes existence of groups and classes. It is now a well documented fact that groups and classes emerged in their primitive forms much later the evolution of man from ape: that ever since its emergence, the character of class has been constantly changing and that because of uneven development there exists qualitative as well as quantitative differences among the various classes all over the world.

Concept Of Achievement: When a man comes in the world he has to do some work for his survival and existence in the world. He has to perform deeds in different walks of life. He does hard labour for his success in different areas; he may do sound mental work and perform toughest physical task, whatever he gets in the response or as a reward of these efforts is regarded as his achievement. Whatever one achieves in the different areas of performance is called one's achievement. How far a man can attain success in a particular field can be estimated by means of his aptitude, but how far he has been successful in a particular subject and has possessed knowledge in that subject is known as his achievement

The Objectives Of The Study
To make a comparative analysis of the levels of need for academic success, social achievement, vocational achievement and skill achievement between high and low deprived athletes and women athletes.To examine and compare the sex differences in the achievement motivation and its four dimensions (academic, social, vocational and skill achievement) between high and low deprived athletes and women athletes.To find out the level of achievement motivation and its four dimensions (academic, social, vocational and skill achievement) between rural and urban athletes and women athletes

Statement Of The Problem

The study intends to investigate the impact on achievement motivation and socio-cultural deprivation among the sports persons. To achieve this purpose the investigator intend to collect data by means of Questionnaire.

The Hypothesis Of The Study

The low deprived athletes have high need for vocational achievement than the high deprived athletes. The need for skill achievement is high among the low deprived athletes and very low among the high-deprived athletes. The athletes have high achievement motivation than the women athletes.The urban athletes have high achievement motivation than the rural athletes.

Limitations

The personal activities of the subject were not touched upon and what related to the objective of the study, is dealt with.

Methodology

Pilot study:The set of samples prepared by the investigator was first administered to a small population consisting of three deprived persons and three non-deprived persons. The investigator through this pilot study observed that the samples taken into consideration were easy to administer, understand and reliable and valid to assess the attitude of the deprived and non-deprived persons towards sports.

Reliability of data**:**Reliability of data is the consistency with which a tool measure what it measures. The internal consistency method was used to establish the reliability of the variables.

Collection of data:The researcher prepared a list of names by obtaining, a list of professionals from the deprived and the non-deprived groups from both urban and rural were taken. All the responses in the opinion rating, scale and the design were filled by the receiver. Among them ninety three persons responded to the request. Out of these only ninety were taken for analysis and the remaining were not considered because of incomplete responses.

Statistical Analysis: To meet the objectives of the study and to verify the formulated hypotheses the data were analyzed. As the purpose of the study was to find out the impact of socio-cultural deprivation on the achievement motivation level of athletes and women athletes, the mean, SD were calculated. 't' values were calculated to test the significant difference between the samples.

Results And Discussion

The purpose of this study is to find out the intention to investigate the impact on achievement motivation and socio-cultural deprivation among the sports persons. To achieve this purpose the investigator intends to collect data by means of Questionnaire. The data collected were converted into standard scores as specified in the manual. The difference of impact assessed through this course was subjected to statistical analysis and the results are presented and discussed in this Chapter. **The Prolonged Deprivation Scale (PDS)** developed and standardized by **Mishra and Tripathi**was used in the present study. This scale consists of 96 statements with five alternative answers for each statement, measuring 15 areas of life situation and experimental domains. Where The results in terms of the mean score of each category of deprived were given in Table 1, 1 shows the highest and lowest score secured by the socially deprived sports persons.

TABLE I

Highest And Lowest Scores Secured By Socially Deprived Sports Persons.

Highest Score: 267 Lowest score: 230

FREQUENCY FOR THE DEPRIVED SPORTS PERSONS.

SI	Frequency	Deviation	*fd*	fd^2
265-267	3	6	18	324
262-264	0	5	0	0
259-260	0	4	0	0
256-258	0	3	0	0
253-255	2	2	4	16
250-252	1	1	1	1
247-249	1	0	0	0
244-246	3	-1	-3	9
241-243	2	-2	-4	16
238-240	5	-3	-15	225
235-237	2	-4	-8	64
232-234	4	-5	-20	400
229-231	2	-6	-12	144
			-39	1199

Discussion

As presented in table I and table II the attitudes of the deprived are not in the favor of Physical Education and Sports programmes where as the non-deprived are in the favor of Physical Education and Sports programmes with mean values of 243.32 and 273 respectively.

To state these score in percentiles, based on the findings of the manual for deprived and non-deprived show more than 90% in favorable towards Physical education and sports programmes.
rivation could occur, were identified and isolated.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp10-12

Dance Therapy For A Sports Person

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Abstract:
Dance is a performing art. It is also physical education. When a student attends dance classes, both of these subjects are addressed. If your regular exercise routine is repetitive and boring, you may want to consider learning how to dance. Dance is a challenging form of exercise that requires coordination, full-body movements, stamina, flexibility and agility for extended periods of time. Solo dances like tap and jazz and partner dances like the waltz and swing require cardiovascular fitness and endurance for athletes and nonathletic alike.Dancing is the most vibrant and beautiful form of art. Besides this, it's a great way of social interaction and provides a fun workout, which increases flexibility and cardiovascular health. Dance is always bliss to watch in terms of costumes, elegant moves and music.? Merging aerobic exercise with the fun of dance is a great way to keep fit and achieve health through dance. We all know good cardiovascular exercise is a vital element of any health and fitness strategy. But for most of us “workout boredom” can manifest itself from time to time. With twice weekly trips to the gym to pound the treadmill and work the exercise machines it’s not surprising that the appeal can diminish quickly, and something you really don’t want when you’re attempting to firm up and lose weight is to lose your motivation. So why don’t you incorporate physical exercise with enjoyment and sign up for a dancing class?Dance fitness, also referred to as “beat-based” fitness. Dancing is a great overall exercise. It can be done in the comfort of your home and doesn’t cost any money to do. There are many benefits to starting a dance fitness program. And just remember enjoying yourself is great for you. It helps reduce stress, tension, and boredom due to the release of endorphins, plus dance can help reduce blood pressure. Speak with your doctor before beginning a new exercise or dance program. Your doctor can help you find appropriate dance styles that are suitable for your current physical condition. Health through dance! Your way to better health and feeling great too!!So Get Dancing… Keep Dancing.

Introduction

Dancing can be a most enjoyable form of exercise. But, what most people don't know is that it also has a large number of health benefits. Dancing is a great full out mind and body workout. It can make your body and soul feel good in a way that no other exercise can. The benefits of dancing are like no other. It can help you lose weight, strengthen and tone your body, increase stamina and flexibility, improve balance and posture, and produce confidence among other things. Dancing can be used in place of regular low – impact exercises such as cycling, walking, or aerobics. Depending on the form of the dance, you can actually burn a large amount of calories doing it. An excellent 30 minute workout raises the heartbeat, clears the lungs, burns stout, releases endorphin; feel excellent substances into the blood so you come away feeling on top of the world. Research shows that a 150-pound adult can actually burn approximately 150 calories doing 30 minutes of social dancing. Dance is a major part of many cultures throughout the world. Often looked upon as a form of art and expression, dance also requires a great amount of athleticism. According to the “Journal of Physical Education and Recreation,” dance develops strength, endurance, body type, flexibility, coordination, speed, agility, balance, intelligence and creativity. Dancers can gain many of the same cardiovascular benefits as individuals who participate in regular exercise regimens.Dance is a performing art. It is also physical education. When a student attends dance classes, both of these subjects are addressed. Dance classes definitely play a role in attaining fitness. The term fitness is broadly used and often vaguely defined. Many people perceive health and fitness as one and the same, yet there is a definite distinction between the two concepts. Health reflects a person's state of being; it is typically viewed as the presence or absence of disease.Dance is one of the most beautiful forms of art that has grown in leaps and bounds., dance therapy is very much in vogue these days simply because the experience of dancing helps a person to heal from within and dance is also a form of expression. If your regular exercise routine is repetitive and boring, you may want to consider learning how to dance.

Dance is a challenging form of exercise that requires coordination, full-body movements, stamina, flexibility and agility for extended periods of time. Solo dances like tap and jazz and partner dances like the waltz and swing require cardiovascular fitness and endurance for athletes and nonathletic alike.

If you are starting a new exercise program or are a novice to certain dance styles, it is important to understand and master the basics before advancing to more complicated movements. Properly performing movements can reduce your risk of injury and help you gain the maximum health benefits from the exercise. Dancing is a great way for people of all ages to get and stay in shape. Besides being fun, dancing has many positive health benefits. Following are the top 5 health benefits of dance

1. Flexibility

Flexibility is an important part of being healthy. Dance requires a great amount of flexibility. Most dance classes begin with a warm-up including several stretching exercises. Dancers must strive to achieve full range of motion for all the major muscle groups. The greater the range of motion, the more muscles can flex and extend. Most forms of dance require dancers to perform moves that require bending and stretching, so dancers naturally become more flexible by simply dancing.

Some of the best athletes are those who get injured the least. Injury prevention is a crucial part of being a top-performing athlete. If you're injured, you can't participate in your chosen sport until you recover and, when you do, it typically takes time to get back to your pre-injury level. The flexibility that you gain from dance class will help prevent sports-related injuries, according to Dr. Peter Brukner, author of "The Encyclopedia of Exercise, Sport and Health

2. Strength

Strength is defined as the ability of a muscle to exert a force against resistance. Dancing builds strength by forcing the muscles to resist against a dancer's own body weight. Many styles of dance, including jazz and ballet, require jumping and leaping high into the air. Jumping and leaping require tremendous strength of the major leg muscles. Ballroom dancing builds strength. Consider the muscle mass a male ballroom dancer develops by lifting his partner above his head!

Strength is the ability of a muscle or a group of muscles to exert a force against a resistance in one all-out effort. The body needs muscular strength for several reasons. First, strong muscles increase joint stability, which makes the joints less susceptible to injury. Second, improved muscle tone helps prevent common postural problems. For example, strong abdominal muscles can help alleviate postural problems associated with the back. Third, the body needs muscular strength because it contributes to agility, helps control the weight of the body motion, and helps the body maneuver quickly.

3. Endurance

Dance is physical exercise. Exercise increases endurance. Endurance is the ability of muscles to work hard for increasingly longer periods of time without fatigue. Regular dancing is great for improving endurance, especially vigorous dancing such as line and ballroom dancing. Elevating the heart rate can increase stamina. Just as in any form of exercise, regular dancing will build endurance.Endurance is the ability of a muscle or group of muscles to perform work for a long time. With endurance, a muscle is able to resist fatigue when a movement is repeated over and over or when a muscle is held in a static contraction. There are two types of endurance: muscular and cardiovascular.

Endurance is critical in many sports, including football, basketball and track and field. Your performance suffers if you can't endure running back and forth on a basketball court or driving down the field to score a touchdown. Taking a dance class assists with building endurance. The conditioning it provides helps your body build the stamina needed for athletic activity, according to Franklin. Because endurance training is essential to most sports, the stamina you build from dance class can help you perform better.

4.Betterblood.

New research has discovered that it is necessary to measure both good and bad cholesterol levels when determining our health. Dancing aids in lipid control, which raises our HDL (good cholesterol), and lowers our LDL (bad cholesterol). Dancing is also great for diabetics because it aids in blood sugar control.

5. Sense of Well-Being

Dancing is a social activity. Studies have shown that strong social ties and socializing with friends contribute to high self-esteem and a positive outlook. Dancing provides many opportunities to meet other people. Joining a dance class can increase self-confidence and build social skills. Because physical activity reduces stress and tension, regular dancing gives an overall sense of well-being.

Researchers believe that dancing can keep your mind and body healthy as you age. Any kind of dancing increases the number of chemicals being produced in the brain to help with the growth of nerve cells. More importantly, dances that require you to learn certain steps can actually increase your brain power and help to improve your memory skillsAny kind of dance has you using all the different parts of your body. This also means that all the different muscles in your body are being used. This helps to strengthen and tone your muscles without hurting your joints. It also helps to strengthen bones, and tone your entire body. Specific dances also have certain benefits for your body. For example, belly dancing helps prevent lower back problems; ballroom dancing helps keep the heart in shape; and salsa dancing helps lower blood pressure and cholesterol. All forms of dance however are known to lower your risk of heart disease, help with weight loss, and strengthen the bones and muscles in your legs and hips.

A study published in the “European Journal of Applied Physiology and Occupational Physiology” observed the maximal oxygen intake, body composition via skinfold tests and vital signs of 12 female dancers and 12 sedentary females. The study concluded that the dancers had significantly lower weight, lower resting heart rate and lower diastolic blood pressure. Maximal oxygen intake, an indicator of cardiovascular fitness that measures the body's efficiency of taking in and using oxygen in the bloodstream and tissues, was also higher in dancers. The American College of Sports Medicine and the American Heart Association recommend doing 20 to 60 minutes of aerobic activity, which is activity that requires oxygen, three to five days a week. The ACSM also recommends that you exercise intensely enough to raise your heart rate to between 55 and 90 percent of your maximum heart rate.

Therefore, to achieve greater cardio benefits from dance, choose moderately intense to intense dances such as ballet, tap, salsa, hip-hop or ballroom that are quick moving and require greater physical exertion. Speak with your doctor before beginning a new exercise or dance program. Your doctor can help you find appropriate dance styles that are suitable for your current physical condition.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp13-16

Influence Of Western Games On Indigenous Games Of India

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Abstract
Throughout the country a wide variety of sports are played. India is home to several traditional sports which originated in the country and continue to remain fairly popular. These include Atya-patya, Ball badminton, Hockey, kabbadi, kho kho, Mallakamba, Shuttle Badminton and Wrestling. Sports are an important segment of our country and also it is a prestige issue. Nowadays, the Western games are famous games and these games are played by all the persons compared with other games in India. But the government of India did not give the equal importance to all kinds of sports except western games. This is the main problem due to unpopular Indigenous games. Besides, this sports person has faced a lot of problems such as economic, political and environmental problems. It has made the attempt to make an attempt to understand the reason behind the lack of interest in promoting these games and to suggest the measures safeguard and to make plans to improve the indigenous games. The present research topic is related to country hence, the study was delimited to Mysore, Bengalure, Chitradurga, Belgaum and Gulbarga districts of Karnataka. The simple random sampling technique was applied to select the players. For this purpose 705 game players were selected during the competitions held at university level and state levels at different places of Karnataka. The self developed questionnaire was used to collect the opinion towards influence of western games on Indian indigenous games. Frequency tables were created and the chi-square test was used for the comparison of the players' responses according to games, opinion level of the players. From the research it was found that there was a significant association between opinion towards influence of western games on Indian indigenous games and their playing games. Atya-patya, Ball badminton, Chess, Hockey and Shuttle Badminton sports players have low level opinions as compared to Kabaddi, Kho-Kho, Mallambha and Wrestling players. Kabaddi, Kho-Kho, Mallakambha and Wrestling players have more opined that western games are more influencing on Indian indigenous games. As a result, like other countries, India has to safeguard to encourage and develop the indigenous games in collaboration with State Sports Boards through formulating academies immediately and suggested the measures to protect and to make plans to improve the indigenous games.

Introduction :
Activities relating to sports and physical education are essential components for human resource development. It helps to promote good health, comradeship and a spirit of friendly competition, which in turn, has positive impact on the overall development of personality. This leadership can guide India towards a greater achievement. Similarly, excellence in sports enhances the sense of achievement, national pride and patriotism. Sports also provide benefits like, recreations, improve productivity and foster social and cultural harmony and discipline.
There are many indigenous games in India that are played in villages across the country. These rural sports have different variations and are known by other names depending on the region they are played in. Popular with school children, these traditional games help build stamina, sharpen the mind and create a spirit of sportsmanship needed to excel in professional sports and other fields of life. There has been a long lasting tradition of sports, exercises and entertainments in India since ancient times and it has been continually obliging and helpful to the lives of people and to the ease of our society in all.
The present indigenous games Atya-Patya, Ball Badminton, Chess, Hockey, Kabaddi, Kho-Kho, Mallakambha, Shuttle Badminton and Wrestling are declining. In the present study was intended to find out the reasons for these games losing their importance at school and college levels. At the school and college levels the indigenous games were neglected and strengthen the western games.
In India all people are involving in sports and not possible to take advantage from these sports. 80% percent of the youths from school and colleges in India are from rural area and till now the encouragement and facilities are limited to only urban areas. It has made the attempt to make an attempt to understand the reason behind the lack of interest in promoting these games and to suggest

the measures safeguard and to make plans to improve the indigenous games. The main purpose of this study to converse to youths, sports persons and sports interested persons to know the importance of indigenous games and its social relationship. Therefore the present study is selected to know the influence of western games on indigenous games of India with reference to opinions of the different game players.

Review Of Related Literature :

The main purpose of this review of related literature is to have more knowledge and clear insight of the overall field.Thongutum and Chantachon (2009) studied on "the Co-Operation, Conservation and Development of Indigenous Sports and Games for Strengthening Community's Health in Bangkok." The cooperation on conservation and development of indigenous sports and games for strengthening community's health in Bangkok Metropolitan areas include promoting and revitalizing 25 selected local indigenous sports: Support from the central government in funds, equipment and promotion to include and organize indigenous sports competitions in villages, sub-districts, districts, cities and provinces throughout the country. Local indigenous sports should also be taught and learned by children in local schools and included as a curriculum so that Thai's can understand and enjoy their cultural heritage.

Ross's (1955) study also reveals the same that the social factors, the students income and fathers education provide to be the strongest factors of influence on the rate of participation by the students in their respective recreational activities sports and games.

Cratty (1967) on the basis of several studies observed that the economic circumstances do influence the availability of equipment and facilities. Moreover, the size of the play yard and the number of the pieces of play equipment are positively related to the size of the family income and there is a corresponding relationship between the activity level and socio-economic conditions. It is to be realized that more and more data has been emerging from studies carried out in this area related to the comparative fitness of children within various socio-economic groups. It is very clear from the above remarks of Crafty that the socio-economic status of the families and players, in particular plays a vital role in the development of the sports activity and subsequent performance.

The present study is designed to study the opinion of influence of western games on indigenous games of India especially in Karnataka which has not been touched upon by others. Studies on assessing factors influence of western games on indigenous games are relevant in this context and hence the present study.

Methods :

Sample :

This is a descriptive study in survey model conducted for the purpose of determining the opinions of players with different games. The data was collected during the competitions held at university level and state levels at different places of Karnataka. The present research topic is related to country hence, the study was delimited to Mysore, Bengalure, Chitradurga, Belgaum and Gulbarga districts of Karnataka.

Table-1:Table showing samples of players selected according to their playing games.

Game	Number	Percentage
Atya-Patya	60	09.00
Ball Badminton	82	12.00
Chess	54	08.00
Hockey	94	13.00
Kabaddi	93	13.00
Kho-Kho	100	14.00
Mallakambha	36	05.00
Shuttle Badminton	100	14.00
Wresting	86	12.00
Total	705	100.00

From the above table it was shown that the players were selected for the present study on the basis of their priority in playing games.

Hypothesis :

It is hypothesized that there may not be significant association between opinion of the players about influence of western games on indigenous games of India and their playing game type.

Data Collection :

A self prepared 26 item questionnaire was distributed to players during the competitions. The questionnaire comprised of questions regarding the opinions about game, facilities, knowledge and experience of players towards influence of western games on indigenous games of India. Personal data concerning players were also recorded.

Statistical Techniques :
Frequency tables were created and the chi-square test was used for the comparison of the players' responses according to playing game type and their opinion levels.
Analysis And Interpretation : To find out the relevant facts from the players about the influence of western games on indigenous games in India, a questionnaire was administered on 705 different games players and the data thus collected was analyzed using appropriate statistical techniques. This could enable the investigator to find out the aspects which are relevant in the process of internal evaluation. The data and results of the chi-square analysis are given in Table-2.

Table-2: Table showing different game players' opinion towards Influence of Western Games on Indigenous games of India, their opinion level types and Chi-square value.

Game	Low Group		High Group		X^2 Value
	Frequency	Observed	Frequency	Observed	
Atya-Patya	34	31.70	26	28.30	56.132**
Ball Badminton	47	43.30	35	38.70	
Chess	35	28.50	19	25.50	
Hockey	63	49.60	31	44.40	
Kabaddi	26	49.10	67	43.90	
Kho-Kho	49	52.80	51	47.20	
Mallakambha	14	19.00	22	17.00	
Shuttle Badminton	70	52.80	30	47.20	
Wresting	34	45.40	52	40.60	
Total	372	372.00	333	333.00	

** Significant at 0.01 level.

The analysis of the statement, i.e. players opinion towards Influence of western games on Indigenous games of India and their players choice of game showed a significant association when tested using chi-square test ($X^2 = 56.13$; $p < 0.01$). Hence the stated hypothesis was rejected. From the research it was found that there was a significant association between opinion of the players and their play game type. The different types of game players have different opinion about indigenous games.
Atyapatya, Bal Badminton, Chess, Hockey and Shuttle Badminton players have low level opinion towards influence of western games on indigenous games of India and other players such as Kabaddi, Kho-Kho, Mallakambha and Wrestling games players have high level of opinion towards influence. Kabaddi, Kho-Kho, Mallakambha and Wrestling players have more opined that western games are more influencing on Indian indigenous games. The same is represented in the graphical presentation in Fig.1.

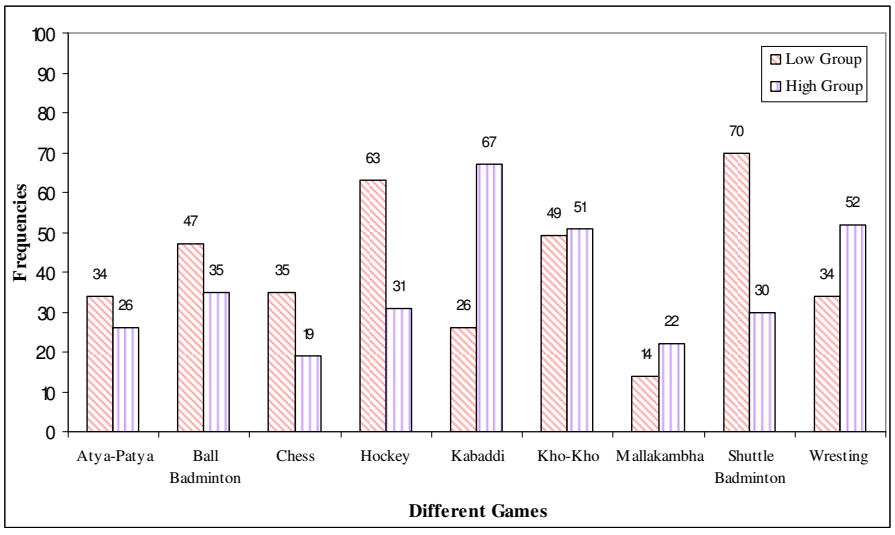

Fig.1 : Graph showing opinion of different game players towards influence of western games on indigenous games of India in relation to their level group.

Conclusion :

From the research it was found that there was a significant association between opinion of players about influence of western games on indigenous games of India and their choice of game. Kabaddi, Kho-Kho, Mallakambha and Wrestling indigenous games have influenced by more western games than other games. It was also found that the players are playing indigenous games from long years. The players were selected games due to financial problem and unavailable facilities. As western games the indigenous games are not famous due to reason of type of play, barefoot game and rural area game. The facilities availed to indigenous games are satisfactory. From the research it was also found that players opined that more audients were interested in viewing indigenous games and middle class players were participated in the games due to their more interest in the games. The identity of the indigenous games compared to other games is very low the reason being that there is no dress code, no attractive play grounds and as a rural game. There is no attractive play kits for indigenous games, barefoot game and the small ground are major reasons for not attracting international levels. More players opined that if the indigenous games will made as a indoor game it will attract more countries. Sponsors, playground and dress codes are the main reason for low level of progress in the development of indigenous game. Majority of players were opined that the people more attracted to western games and neglected the indigenous games. The people not have favourable opinion towards nationality and the western games like Cricket, Football were killing the indigenous games. The government is not given more importance to indigenous games. There is no encouragement for indigenous games in rural areas and there is no importance given at school and college levels. From the study it was found that indigenous games are far-away from the people due to lack of proper attention and recognition. The main reason for spoiling indigenous games is not having professionalism.

Recommendations :

On the basis of the findings and conclusions of the study the following recommendations are made :

Like other countries, India should also safeguard the indigenous games to encourage in collaboration with State Sports Boards through formulating academies immediately.

Indigenous sports competitions should played in all villages, taluks, districts, and provincial level in every region throughout the year. The indigenous sports should also be taught and made to learn by children in local schools and colleges. Popular local indigenous sports that are favored in the community should be supported by the community leaders and they should be provided with the utilities such as, equipment and area to play their favorite sports. The community or local indigenous sports group should find and arrange for an expert indigenous sports trainer to teach youths in the community on the special techniques and fund ways to play. Leading to the recognition of their achievements should create an incentive for children and youths to participate in local indigenous sports during their cultural celebrations and activities.There should be support from the government budget.The government should also organize local indigenous sports competitions in villages, sub-districts, districts, and provincial level in every region throughout the year. Preserving and protecting the Indigenous Games through support from corporate.Empowering various sport and recreation associations and federations with sport administration skills.Facilitating sustainable sport development and infrastructure and encouraging active and healthy lifestyles.There should be an equal status and recognition for the players taking to the indigenous games like other players while recognizing for awards and cash prizes.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp17-18

Effect Of Cup Stacking Training On Selected Psychomotor Variables Of School Students

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Abstract

The purpose of the study was to find out the effect of cup stacking training on selected psychomotor variables of school students. To achieve the purpose of the study, twenty four boys from P.R.Govt.Higher Secondary school, Nagarasampatti, Krishnagiri District were selected as subjects randomly. The subject age ranged from 12 to 15 years. The subjects were divided into two equal groups. Each group consists of twelve subjects. Group I underwent Cup Stacking Training Group (CSTG) for three days for five weeks and group II acted as Control Group. Hand-eye co-ordination and visual reaction time were selected as variables. The selected criterion variables such as Hand-eye co-ordination and Visual reaction time were assessed before and after the training period. Hand-eye coordination was assessed by catching a tossed ball with both hands, visual reaction time were assessed by chronoscope. The total duration of the training period was fixed for five weeks. The collected data were statistically analyzed by using analysis of co-variance (ANCOVA) was used to find out the significant difference between experimental and control groups. In all the cases .05 level of confidence was fixed to test the significance. The results of the study revealed that there was a significant difference between CSTG and CG on Hand-eye coordination and visual reaction time.

Keywords: Cup stacking, psychomotor, Hand-eye coordination and Reaction time.

Introduction

Physical educators continually search of new activities to incorporate into their cup stacking is a relatively new activity that has been highly promoted at many of the state, regional and national conventions for physical educators. “In the exciting sport of cup stacking, students stack and unstack 12 specially designed plastic cups (speed stacks) in predetermined sequences and complete for time”. The promoters claim participation in this activity will result in many benefits, one of which is improve hand-eye coordination. (Malanie A. Hart, 2004). Awareness of impact of movement difficulties on children’s life has increased dramatically over the last 20 years (Sugden & Henderson, 2007). Basically, these children exhibit difficulty in coordinating their movements and learning fine and gross motor skills, so that as results their impaired motor performances often affect their social and psychological well-being. Moreover, poor motor coordination, in its broader meaning, can present very differently and show widely different profiles of performance (Visser, 2003). Sport stacking has been even adopted recently by many physical education programs to enhance rudimentary motor skills such as hand-eye coordination and ambidexterity as well as quickness and concentration. (Undermann et al., 2004).

Methodology: To achieve the purpose of the study, twenty four boys from P.R.Govt.Higher Secondary school, Nagarasampatti, Krishnagiri District were selected as subjects randomly. The subject age ranged from 12 to 15 years. The subjects were divided into two equal groups. Each group consists of twelve subjects. Group I underwent cup stacking training (CST) for three days for five weeks and group II acted as control group (CG). In Cup stacking, so many factors like concentration, Hand-eye coordination, Hand steadiness, visual reaction time, sharpness, and ambidexterity were played important role in determining the cup stacking performance. Among these variables Hand-eye coordination and visual reaction time were selected. Hand-eye coordination and visual reaction time in cup stacking are very importance without these factors the performance is not worth.

Training Programme: The sport stacking training consisted 3 sessions per week over a period of five weeks. Each session consists of 45 minutes. The instruction and progression of cup stacking began with a basic of three stacks and progressed to more complicated stacks. Cup stacking drills can be classified into up stack and down stack. 1) [3-3-3 stack], up stack: the 3 stack: down stacking: the 3-3 stack, the 3-3-3 stack 2) [3-6-3 stack], up stack: the 6 stack (3-2-1 method): down stacking: the 3-6-3 stack.

Results and Discussion:Table - I

Dependent t- test for pre and post tests means on hand-eye coordination and reaction time of cup stacking training group and control group

Group	Variables	Pre test mean ± S.D	Post test mean ± S.D	't' value
CSTG	Hand-eye coordination	3.17 ± 0.58	4.17 ± 0.21	4.69*
	Reaction time	0.33 ± 0.05	0.27 ± 0.04	2.79*
CG	Hand-eye coordination	3.08 ± 1.00	3.25 ± 1.06	0.62
	Reaction time	0.34 ± 0.05	0.33 ± 0.05	0.97

* Significant at 0.05 level, with df 11 is 2.20.

Table - II

Analysis of covariance on hand-eye coordination and reaction time of cup stacking training and control groups

Variables	CSTG	CG	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Hand eye co-ordination	4.14	3.27	Between	4.51	1	4.51	**7.26***
			Within	13.06	21	0.62	
Reaction time	0.28	0.32	Between	0.14	1	0.014	**7.07***
			Within	0.04	21	0.01	

* Significant at 0.05 level of confidence, with df 1 and 21 is 4.32

Discussion on Findings

Coordination is defined as "the integration of the nervous and the muscular systems to produce correct, graceful, and harmonious body movements" (Hoeger & Hoeger, 2004) and "reaction time is defined as the time required initiating a response to a given stimulus". The results of the study indicates that the experimental group namely cup stacking training group (CSTG) had significantly improved the selected dependent variables namely hand- eye coordination and visual reaction time when compared to the control group. It is also found that the improvement caused by cup stacking training when compared to the control group.

Our results indicate that cup stacking positively influenced scores on tests to measure hand-eye coordination and reaction time in these second-grade students. These findings are important to the physical educator because hand-eye coordination and reaction time are essential elements in many movement forums and motor skills and tie directly into the national standards for physical education (NASPE, 1995). Specifically, the basic development and mastery of these skills allows one to engage productively in additional motor skill development, designed to increase overall motor skill proficiency and facilitate participation in a variety of lifetime sporting and fitness-related activities. The subjects in cup-stacking training improves hand-eye co-ordination and visual reaction time by over 31.55% and 18.18%, respectively by finding significant improvements were noted for both hand-eye co-ordination and visual reaction time between pre and post-test scores. Therefore, cup-stacking is indeed effective in enhancing hand-eye co-ordination and visual reaction time.

Conclusions:-From analysis of the data, the following conclusions were drawn.

1. The experimental groups namely the cup stacking training group (CSTG) have achieved significant improvement on Hand-eye coordination and visual reaction time, when compared to the control group (CG).
2. Significant difference was found between cup stacking training group (CSTG) and control group (CG) towards the improvement in Hand-eye coordination and visual reaction time.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp19-20

"Internet And Its Role In Insurance Companies"

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ABSTRACT
The main objective of this article is to explain how all possible functionalities of the insurance sectors can be automated and to compare the Old Insurance companies following the traditional methods with the companies which use Internet as a tool, which helps all stakeholders to use Internet as a tool to do their regular policy transactions online. Obviously all companies are looking for more profit, bigger market reach and different availability of services. Insurance, in law and economics is the form of risk management primarily used to hedge against the risk of a contingent loss. Insurance is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for a premium, and can be thought of a guaranteed small loss to prevent a large, possibly devastating loss. An Insurer is a company selling the insurance. The Insurance rate is a factor used to determine the amount, called the premium, to be charged for a certain amount of insurance coverage. Risk management, the practice of appraising and controlling risk has evolved as a discrete field of study and practice.

KEYWORDS: Manager, Agent, Customer.

INTRODUCTION:
Previously many Insurance companies were semi-automated. In which the agent plays a key role, customer who wants the information about any policy has to approach agent personally. More physical interactions take place in this type of system. Agents use manual devices like calculators for the calculation of policy premiums. Providing service to the customers manually was a tedious job. Communication between a customer and an Insurance company were made using letters only, and those Insurance companies don't have 24x7 services. Advertising and promotion of Insurance policies were done manually, this involves lot of paper work and agents used to go and meet customers personally.
Insurance companies which use Internet as their tool are way forward in terms of Advertising and Promotion and Customer Service. This makes the work of Manager, Agents, and Customers very easy. Manager can add and update agent's information, keep backup, recovery of data and can gather various kinds of reports online. Manager can also add new companies, new policies information.
Agents register themselves online. He/She can search for customers online and they can interact with them. Agents set alert mails for the premiums due or new or important notices. All such formats are made available in advance to the customers by agents. A customer can login and access his account 24x7. He can select new policy and premium details. He can pay his/her
Premium online, and view his previous payment details.

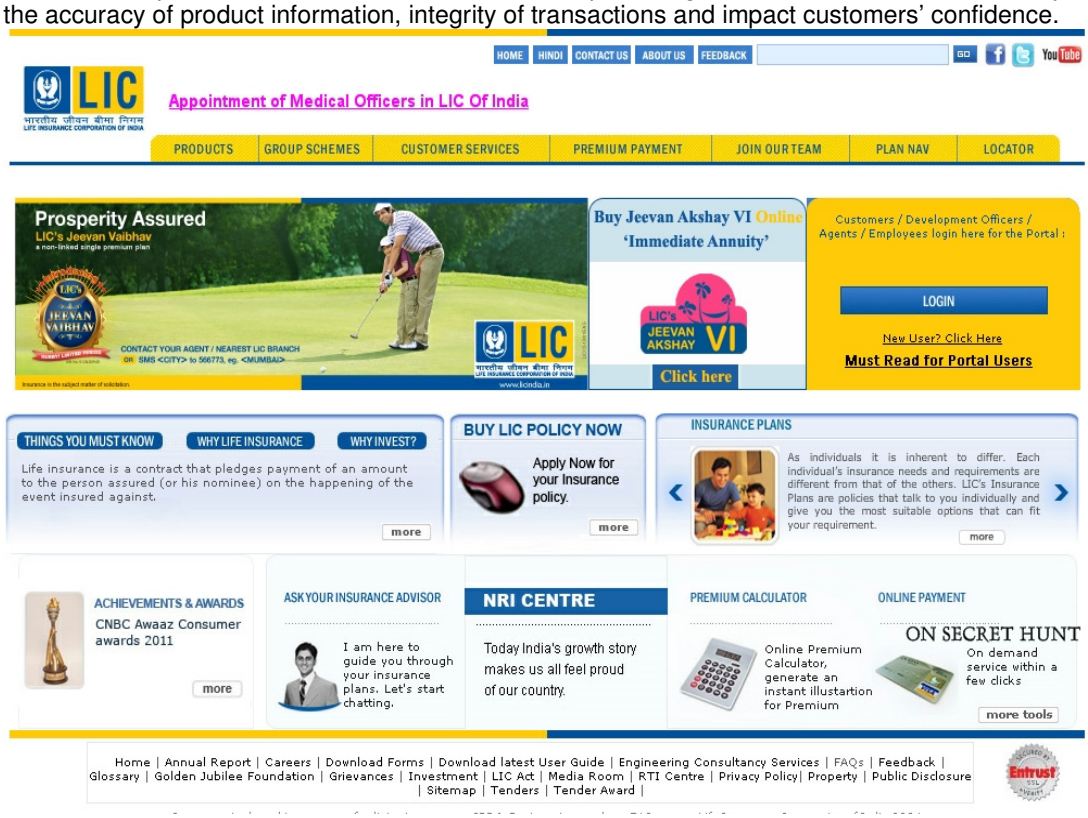
TYPES OF INTERNET INSURANCE WEBSITES:
Internet Insurance Websites are of two types:
Information-based website provides predefined publicly available marketing information of the insurer including the product and services offered. It may also enable policy owners make monologue e-mail contact with the insurer.
2)Interactive-based website It provides for transactions to be executed including soliciting insurance proposal and the purchase and renewal of policies that may or may not involve online payments.

Internet Insurance Risks
As a guide for the insurers to identify, quantify and manage Internet insurance risks, the types of Internet insurance risks can be categorized as follows:-

Strategic Risk
Strategic risk arises when the overall implementation of Internet insurance is not in line with the vision and business objectives of the insurer.
Operations Risk
Operations risk may include inaccurate forecast of customer volume or traffic, inappropriate management information systems and ineffectively managed outsourcing. Poor estimation of the volume of customer visits to the insurer's website, whether to view information or to transact, may impact on the performance and accessibility of the insurer's website.

Transaction Risk
This arises from deficiencies in system design, implementation or ineffective monitoring resulting in fraud, errors and the inability to deliver insurance products and services offered as agreed.

Security Risk
Data may be monitored and read by unauthorized parties. Data may be altered or modified by unauthorized parties with malicious intent, thus compromising the insurer's databank and may affect the accuracy of product information, integrity of transactions and impact customers' confidence.



CONCLUSION:
This article tries to differentiate between companies using Internet for their business and companies which don't. And it is observed that companies using Internet as their tool for business are much advanced from their competitors. There are some security issues and risks but many companies prefer Internet for their business.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp21-24

A Comparative Study On Motor Fitness Of Varsity Level Male Athlete Of Four Selected Games

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Abstract
The purpose of this study was to analyze the selected motor fitness of university level athlete of four selected games namely Track & Field, Basketball, Football, Cricket. Forty (40) varsity level male athletes from four selected games were selected randomly as subjects. The F- ratio of vertical jump among four groups was 6.21, F-ratio of chin-ups among four groups was 0.98, F-ratio of shuttle run was 1.28 and F-ratio of total motor fitness among four groups was 0.015. The t-values of track & field and basketball group, track & field and football, track & field and cricket; basketball and football, basketball and cricket and football and cricket groups were 2.41, 3.64, 3.84, 1.22, 1.26 and 0.04 respectively. There have significant difference in Motor fitness and its components among the athletes.

Introduction:
Fitness may mean many things - strength, vigor, vitality, capacity for work, and so on, but these are all partial views of fitness, which is a very idea term to be viewed and understood in its broad perspective. Fitness is total and total fitness generally implies soundness and readiness for life, and its functions. Fitness is the ability to perform muscular work satisfactorily (WHO, 1994). Physical fitness is the capacity to meet successfully the present and potential physical challenges of life (Lamb, 1984).Physical fitness, today, is better understood in terms of the functioning of the heart, blood vessels, lungs, and muscles to function at optimum efficiency. Motor fitness is a limited phase of physical fitness, and can be more concrete3lu defined is a readiness or preparedness for performance with special regard for big muscle activity without undue fatigue. It concerns the capacity to move the body efficiently with force over a reasonable length of time. Motor fitness takes into account efficiency of basic movements and therefore would involve such elements as power, agility, speed, balance, etc.Motor fitness is a limited phase of physical fitness and can be more concretely defined as a readiness of preparedness for performance with special regard for big muscle activity without undue fatigue. It concerns the capacity to move the body efficiently with force over a reasonable length of time.The capacity of performing physical activity is named physical fitness or motor fitness, albeit these terms are difficult to define (Gallahue, 1982). Physical fitness may be conceived as the capacity to perform one's daily tasks without fatigue; motor fitness, also termed motor ability, refers to a person's performance abilities as affected by the factors of speed, agility, balance, coordination, and power (Gallahue, 2006). Motor abilities represent an integrated outcome of most bodily functions involved in physical activity and can be used to assess the effectiveness of physical education as well as measure by standardize test J.C.R test batteries.
Motor fitness refers to the ability of an athlete to perform successfully at their sport. The components of motor fitness are – agility, balance, coordination, power and reaction time.

Purpose of the study:
The purpose of the study is to find out whether:
There had any significant difference of motor fitness and its components among four groups.
If there had any significant difference of motor fitness, then which group is better among four groups.

Methodology:
To achieve the purpose of the study, forty (40) varsity level male athletes from four selected games (Track and Field, Basket ball, Football and Cricket) were selected randomly as subjects. They were selected as the subjects from different university of West Bengal. 10 (ten) athletes were selected randomly from each selected games.
To measure personal data (Age, Height and Weight), standard procedure were followed. The motor fitness was measured by J.C.R Test. The collected data were analyzed for mean, SD and ANOVA.
Presentation of data and Statistical procedure:

Personal data of four groups:
The mean and Standard Deviation (S.D) of personal data of four groups (Track and Field, Basket ball, Football and Cricket) groups has been presented in table-1.

Table-1
Personal data of four groups

Criterion variable		Groups			
		T & F	BB	FB	CRI
Age(year)	Mean	25	23.5	25.8	25.4
	SD	1.34	1.36	0.87	1.15
Height(cm)	Mean	169.2	173.2	166.7	169.7
	SD	3.50	2.40	2.28	3.07
Weight(kg)	Mean	62.8	60.5	63.5	64.9
	SD	1.60	3.07	1.12	1.90

From an analysis of mean and SD values of personal data of the four groups it appears that the age and weight of four groups were more or less equal and hence we can say that the groups were homogeneous. It was also found that mean height of Basket ball group was higher than other three groups.

Motor Fitness and Its Components:

The mean and S.D of the components of Motor Fitness and Total motor fitness of four selected groups have been presented in table-2.

Table-2
Motor fitness and its components

Components of Motor Fitness		Groups				F-Ratio	Table value of F at 0.05 level
		T & F	BB	FB	CRI		
Vertical jump	Mean	45.1	39.6	36.7	36.8	6.21*	
	SD	3.48	1.96	6.64	5.51		
Chin-up	Mean	6.7	7.7	6.5	6.8	0.98	2.87
	SD	1.68	1.67	1.63	1.47		
Shuttle run	Mean	26.55	26.47	26.76	27.55	1.28	
	SD	1.33	0.48	0.99	1.21		
Total motor fitness	Mean	149.98	149.99	149.99	150.00	0.015	
	SD	8.27	9.99	14.45	9.62		

*Significant at 0.05 level.

Comparing the mean and SD value in vertical jump of the four groups, it appears that there were some difference exists among the groups. The mean value of T&F group was 45.10 which was more than other three groups and the Basket ball group had also higher mean value than Football and Cricket groups. It was also found that the mean value of Chin-up, Shuttle run and Total motor fitness of four groups were more or less equal. To observe the significance difference F-test was conducted and found F-value of vertical jump was 6.21 which were significant at 0.05 levels. The difference among the groups was shown in table-3. But F-values of chin-up, shuttle run and total motor fitness were 0.98, 1.28 and 0.015 respectively which were not significant at 0.05 levels and hence there were no significance difference among those four groups.

Table-3
t-table for vertical jump

	T & F	BB	FB	CRI	
T & F		2.41*	3.64*	3.84*	Table value of t at 0.05 level is 2.03
BB	2.41*		1.22	1.26	
FB	3.64*	1.22		0.04	
CRI	3.84*	1.26	0.04		

*Significant at 0.05 level.

To observe the difference between two groups 't' values were calculated. The 't' values between T & F Vs BB was 2.41; T&F Vs FB was 3.64; T&F Vs Cri was 3.84; all the values were significant at 0.05 level. So the Track & Field group is significantly better in Vertical Jump than other three groups in

respect to 't' value. The 't' values between BB Vs FB was 1.22; BB Vs Cri was 1.26 and FB Vs Cri was 0.04. These values were not significant with respect to 't' value. So there was no significant difference exist among those groups.

Graphical representation of data:

Figure-1
Graphical representation of Vertical jump

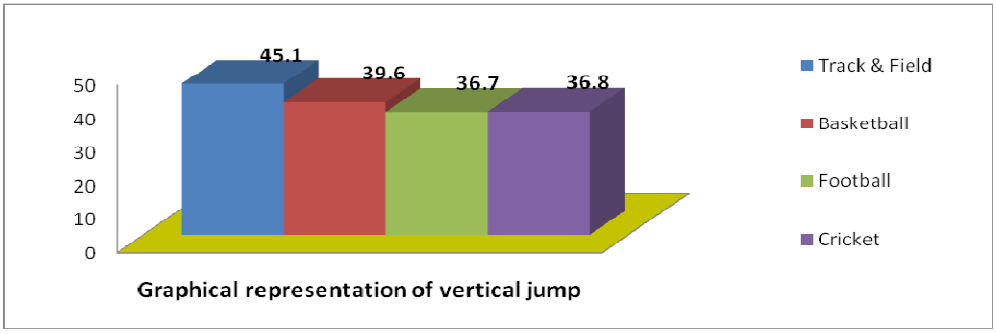
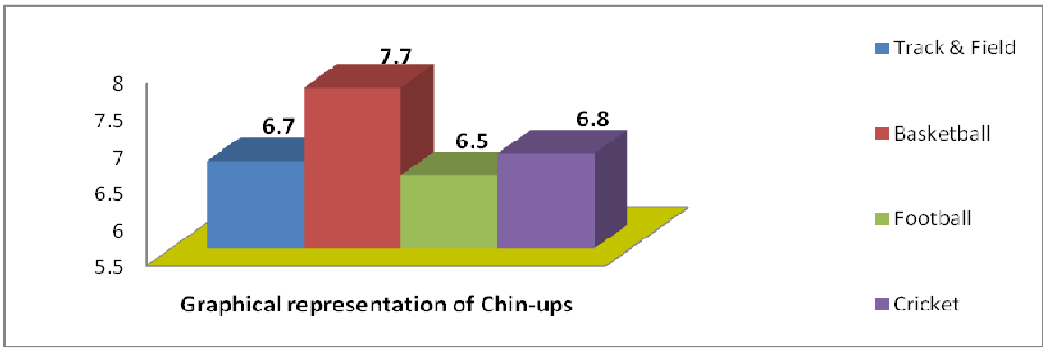


Figure-2
Graphical representation of chin-ups



Figuer-3
Graphical representation of shuttle run

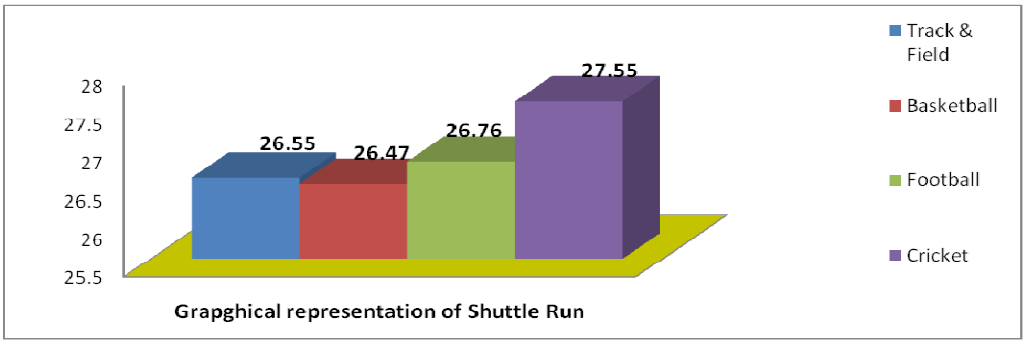
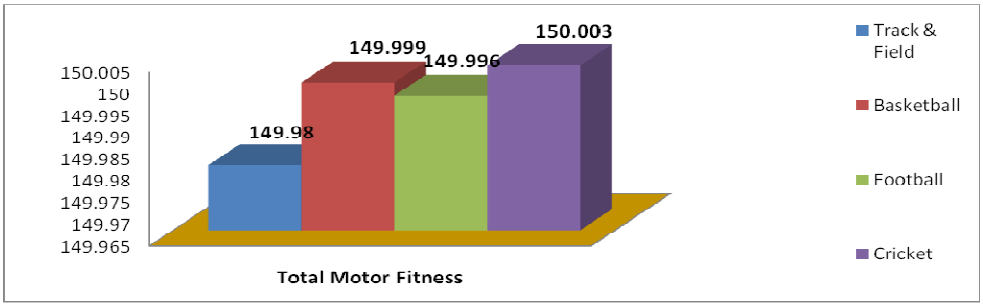


Figure-4
Graphical representation of total motor fitness



Results and Discussion:

The F- ratio of vertical jump among four groups was 6.21, F-ratio of chin-ups among four groups was 0.98, F-ratio of shuttle run was 1.28 and F-ratio of total motor fitness among four groups was 0.015. The t-values of track & field and basketball group, track & field and football, track & field and cricket; basketball and football, basketball and cricket and football and cricket groups were 2.41, 3.64, 3.84, 1.22, 1.26 and 0.04 respectively.The result of the study indicates that there had no significant difference of total motor fitness and its components _ chin-ups, shuttle run. There had only significant difference of vertical jump among four groups.

Conclusion: On the basis of result and discussion the following conclusions were drawn.There have no significant difference in Motor fitness and its components - chin-ups and shuttle run. But vertical jump of four groups had positive significant difference among groups.The vertical jump of Track & Field groups was better than Basket ball, Football and Cricket groups.The vertical jump of Basketball group was better than Football and Cricket groups.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp25-28

Impact On Achievement Motivation And Deprivation Level Among The Sports Persons

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Abstract: Achievement is the act of accomplishment in which one completes, perfects, or equips thoroughly; which one constitutes excellence of mind or elegance of manners, acquired by education or training. Motive is an internal factor that interferes with man's behaviour. Motivation is a process of getting the needs of the people realized with a view to induce them to work or the accomplishments of the task. Motivation can be defined as a psychological and physical To test the significance of the differences of scores between these persons, the investigator applied't' test between deprived and non-deprived sports persons in table IV. According to which they obtained't' value of 5.39 is greater than the required value of 2.06 to be significant at 0.05 level of confidence.

Key words: Motivation can be defined as a psychological and physical to test the significance of the differences of scores between these persons

INTRODUCTION

The concept of achievement motivation has commanded the attention of many scholars over the past 30 years. Besides being prevalent in psychological research, the theoretical foundations of achievement motivation have been readily applied to the practical realm (Alschuler 1973; McClelland and winter 1969). When this application is toward diverse groups of people in varying situations, though, the present concept of achievement motivation seems to be lacking. The purpose of this paper is to point out the shortcomings and ethnocentric nature of this theoretical approach to achievement motivation and suggest an alternative conceptualization which might better account for cross-cultural and cross-situational differences.

A sport is highly specialized activity in one or the other event. And involvement in sports event requires a basic desire to compete and excel in performance. It is needless to say that the sports activity is meaningless without competition. However, success in competition depends on the performance of an individual. Higher the performance greater the chances of success. It is true that for these kinds of competitive activities, achievement motivation is going to be the base. Because motivation appears to be a key factor in an accomplishment of competitive activity.

Motivation means any idea, need, emotion or organic state, which prompts a man to an action. Motivation plays a major role in the all round development of a child. Sports activities have a higher degree of motivation or in other words through games we can motivate children for better understanding of different aspects of life. Motive is an internal factor that interferes with man's behaviour. Motivation is a process of getting the needs of the people realized with a view to induce them to work or the accomplishments of the task. Motivation can be defined as a psychological and physical

In India there are hundreds of athletes (both Men and Women) who suffer from certain socio-economic and cultural handicaps, which would affect their performance in sports. And it is a established fact all over the world that, socio- economic, cultural and psychological as well as many other relevant factors contribute to their performance in sports. There are many psychological concomitants of poverty that often impose severe handicaps on the performance of athletes in the competition.

When a man comes in the world he has to do some work for his survival and existence in the world. He has to perform deeds in different walks of life. He does hard labour for his success in different areas; he may do sound mental work and perform toughest physical task, whatever he gets in the response or as a reward of these efforts is regarded as his achievement. Whatever one achieves in the different areas of performance is called one's achievement. How far a man can attain success in a particular field can be estimated by means of his aptitude, but how far he has been successful in a particular subject and has possessed knowledge in that subject is known as his achievement. It

depends upon the success and the failure of the person. When a person aspires more and gets less it is regarded as failure, but when a person's aspiration level is low and he gets more, it is regarded as a big success. The closer group expectations and personal aspirations are to a person's capacities, the greater is the likelihood that his achievements will be regarded as successful both by him and by the group (Hurlock, 1976).

THE OBJECTIVES OF THE STUDY

1. To study the nature of relation between socio cultural deprivation and achievement motivation of high and low deprived athletes.
2. To examine the level of achievement motivation between the high and low deprived athletes.
3. To understand the impact of socio-cultural deprivation on the level of need for academic success between high and low deprived athletes and women athletes.
4. To understand the influence of socio-cultural deprivation on the need for social achievement between high and low deprived athletes and women athletes.

Justification For Selecting The Topic

William H. Sheldon, (1975), states that change is necessary because our society is not static, our students are changing; and our resources are changing. The investigator was involved with the deprived sports persons from his/her college days. The investigator was curious to know about the impact of the socio-cultural deprivation level among the sports person and hence he went through many literary

Definition Of Terms

Motivation

Motivation is the psychological feature that arouses an organism to action toward a desired goal and elicits, controls, and sustains certain goal directed behaviours.

Achievement

Achievement is the act of accomplishment in which one completes, perfects, or equips thoroughly; which one constitutes excellence of mind or elegance of manners, acquired by education or training.

Option Questionnaire

The information from which one attempts to measure the attitude or belief of an individual is known as opinion questionnaire or attitude scale

Personality

According to All port, "Personality is the dynamic organization within individual of those psychological systems that determine his unique adjustments to this environment"

STATEMENT OF THE PROBLEM

The study intends to investigate the impact on achievement motivation and socio-cultural deprivation among the sports persons.

To achieve this purpose the investigator intends to collect data by means of Questionnaire.

THE HYPOTHESIS OF THE STUDY

To meet the objectives of the study, the following hypotheses were formulated with regard to the present investigation.

1. There is a significant difference of achievement motivation between the high and low deprived athletes.
2. The low deprived athletes have high need for academic success than the high deprived athletes.
3. The need for social achievement is high among the low deprived athletes than the high deprived athletes.
4. The low deprived athletes have high need for vocational achievement than the high deprived athletes.

THE SIGNIFICANCE OF THE STUDY:Deprivation is multi-dimensional concept lying implying dispossession or loss or withholding. It may be considered as a prolonged process relative to a defined social setting, socio-cultural life in any social setting can be conceptualized as a continuous at one end of which lie those who have all the physical, socio-cultural,

DELIMITATIONS: This study has covered life of the sports person from the childhood.This study has covered both the deprived and non-deprived groups including 50% rural and 50% urban.

LIMITATIONS: The personal activities of the subject were not touched upon and what related to the objective of the study, is dealt with

Deprivation and Performance: Some psychologists feel that the tests employed in studies measure performance and do not reveal differences in competence. One of the chief spokesmen of this view is Ginsberg (1972). He grants that children from poverty-environments score lower on standard tests and that they do badly in school, but he does not take this as evidence that they are fundamentally less skilled or less competent. Instead, he takes it as evidence that the tests have not measured the poor child's competence. He strongly argues that the tests measure performance, and the school measures performance; they do not necessarily tap the child's competence or fundamental ability.

METHODOLOGY

The details of procedure adopted to collect data for the study are outlined in this chapter. To gather valid and reliable information for the study, an integrated approach was used. The present research is undertaken in the perceptual framework. It is the correlation study within the ex-post-facto research design. To achieve the purpose of the study the means and methods in connection with the data is given below:

- Sample
- Selection of variables
- Research design
- Tool
- Pilot study
- Reliability of data
- Collection of data
- Statistical analysis
- **3.1 Sample:**

To measure the impact of socio-cultural deprivation on the level of achievement motivation of athletes and women athletes, the investigator has selected total 400 samples. Among them are 200 athletes and 200 women athletes including 50% Rural and 50% Urban both deprived and non-deprived groups. The distribution is given in a table below:

RESULTS AND DISCUSSION

The purpose of this study is to find out the intention to investigate the impact on achievement motivation and socio-cultural deprivation among the sports persons. To achieve this purpose the investigator intends to collect data by means of Questionnaire. The data collected were converted into standard scores as specified in the manual. The difference of impact assessed through this course was subjected to statistical analysis and the results are presented and discussed in this Chapter. **The Prolonged Deprivation Scale (PDS)** developed and standardized by **Mishear and Tripathi** was used in the present study. This scale consists of 96 statements with five alternative answers for each statement, measuring 15 areas of life situation and experimental domains. Where deprivation could occur, were

Table 2 shows the highest and lowest score secured by the socially non deprived sports person .

TABLE II

Highest And Lowest Scores Secured By Socially Non-Deprived Sports Persons.

Highest Score: 290 Lowest Score: 256

Frequency For The Non - Deprived Sports Persons.

SI	Frequency	Deviation	*fd*	fd^2
288-290	1	6	6	36
285-287	5	5	25	625
282-284	2	4	8	64
279-281	1	3	3	9
276-278	2	2	4	16
273-275	1	1	1	1
270-271	2	0	0	0
267-269	3	-1	-3	9
264-266	2	-2	-4	16
261-263	2	-3	-6	36
258-260	3	-4	-12	144
255-257	1	-5	-5	25
			17	981

DISCUSSION

To state these score in percentiles, based on the findings of the manual for deprived and non-deprived show more than 90% in favourable towards Physical education and sports programmes.

To test the significance of the differences of scores between these persons, the investigator applied‘t’ test between deprived and non-deprived sports persons in table IV. According to which the obtained‘t’ value of 5.39 is greater than the required value of 2.06 to be significant at 0.05 level of confidence. Hence the hypothesis that Non-deprived persons show more favourable attitude towards physical education and sports programmes than the deprived sports persons.

Conclusions:

Thus this study finds certain difference between socially deprived and non-deprived with mean score of 29.68.When the difference were subjected to statistical treatment, significant difference were found between deprived and non-deprived with the ‘t’ value of 5.39 which is better than the required table to be significant at 0.05 level confidence.

Recommendations:

Based on the conclusions and experiences of the investigator in this study, the following recommendations are made:Deprived sports person will have high opportunities to achievement motivation for the international and national sports level. This study reveals that non-deprived sports person should be given opportunities for training and other participations.Studies with larger samples covering larger areas shall prove the deviations between geographical areas and helpful to find whether the attitudes are differing from place to place, as this study was confined with the urban and rural sports person.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp29-32

A New Non-Exercise Based $VO_{2max.}$ Prediction Equation For College Students

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ABSTRACT
The study was aimed to establish prediction equation for $VO_{2max.}$ from age, BMI, % body fat, % skeletal muscle mass and body surface area (BSA) in young sedentary college level men students of West-Bengal, India. 625 College students of 18-30 years were recruited by simple random sampling from 9 different districts of West-Bengal. Physical parameters were measured and $VO_{2max.}$ of the subject was determined by Modified Queens College Step Test. Significant ($P<0.001$) correlation of $VO_{2max.}$ existed with age, BMI, % body fat, % skeletal muscle mass and BSA. The regression equation is $VO_{2max.}$ ($ml.kg^{-1}.min^{-1}$) = 16.43 + 0.23 Age (Y) + 2.26 BMI - 1.04 % Body Fat + 0.50 % Skeletal Muscle Mass - 16.38 Body Surface Area (m^2). The R^2 = 86.6% and R^2 (adjusted) = 86.2% which indicated that a high percentage of the variation in $VO_{2max.}$ can be explained by above mention independent variables. Therefore, the non-exercise based prediction equation derived in the present study is recommended for estimating $VO_{2max.}$ in college level men students.
Key words : $VO_{2max.}$, body surface area, step test, prediction equation.

INTRODUCTION

In the beginning of the 20th century, the interest of measurement and evaluation experts swayed away from anthropometry, muscular strength and muscular endurance to athletic ability testing and the cardiac function tests. Consequently, physical education become interested in testing the cardiovascular efficiency in light of the reported relationship between the body movements and condition of cardio-respiratory system. Traditionally, $VO_{2max.}$ has been interpreted as a measure of the maximum capacity of the cardio-respiratory system to acquire oxygen, circulate it to working muscles, where muscle can the extract and utilize oxygen in mitochondrial respiration to meet the energy needs of muscle contraction. $VO_{2max.}$ is the primary indicator of aerobic fitness, cardiovascular health and endurance performance (M.D. BALTIMORE, 2000; G.S. ANDERSON, 1992; L.P. ZWIREN, 1991). It also largely depends on physical parameters (MCARDLE W.D.; KATCH FI; KATCH V.L. 1986).

Basically there are three methods for measuring maximum oxygen uptake ($VO_{2max.}$): i. Maximum Aerobic Tests; ii. Sub-maximal Aerobic Tests; and iii. Non-exercise Models for Prediction of Aerobic Fitness.

i. Maximum Aerobic Tests: These are the laboratory tests of direct measurement of $VO_{2max.}$ from the analysis of expired air collected during a maximal aerobic exercise, given with full motivation carried up to exhaustion.

   The direct measurement of expired gas samples provides highly reliable and accurate data and is, therefore, considered the "gold standard" for determining $VO_{2max.}$ (B.A. FRANKLIN et al., 2000). This approach, however, often is not practical because it is time consuming, laborious, and requires high subject motivation (CHATTERJEE S. et al., 2004; UTH N, 2005; UTH N. et al. 2004). Since, these are based on exercise till exhaustion, therefore, also face a maximum accidental threats. It is not suitable for use when testing a large number of individuals. These tests are also not suitable for routine fitness testing.

ii. Sub-maximal Aerobic Tests: These are the field tests as well as some laboratory tests involving sub-maximal exercise in the form of stepping, running, cycling or swimming.

   This type of test also not suitable for the people who are not able to do exercise. It measure the limb specific $VO_{2max.}$ not whole body $VO_{2max.}$

iii. Non-exercise Models for Prediction of Aerobic Fitness: In this method individuals are not required to do any exercise. There are some predictive equations, in which we put the values, and then simply we calculate the $VO_{2max.}$ of that individual.

This type of techniques is more simple, less costly and easy to apply on the large population and favors the use of cardio-respiratory fitness (BLAIR S.N. et al., 1989; KOHL H.W. et al. 1988).

These facts have fostered the development of more simple methods, where the maximal and sub-maximal exercise tests have been replacer by multiple linear regression models to predict cardio-respiratory fitness from physical features.

$VO_{2max.}$ regression equations have been developed for various populations including adult men and women, teenage athletes (WELLS, C.L. et al. 1973), college students (GEORGE, J.D. et al. 1997), older adults (BLACKIE, S.P. et al. 1989), and healthy Malaysian and Indian men (SINGH, R. et al. 1989; VERMA, S.S.et al. 1998); however there has been no equation developed specifically for estimating $VO_{2max.}$ in healthy Indian college students. Thus, the purpose of this investigation was to establish the prediction equation for $VO_{2max.}$ from physical parameters of the Indian college level students.

MATERIAL AND METHODS

The present study was conducted on the students of nineteen (19) colleges located in nine (9) different districts of West-Bengal in India. Six hundred twenty five (625) male college students (age range 18-30 years) were randomly selected for this study. The subjects gave their written acceptance beforehand to act voluntarily as the subjects in this study. After selection of the subjects the anthropometric measurements such as height, weight, seven skinfolds in mm. (Pectoral, Axilla, Abdominal, Suprailiac, Subscapular, Triceps and Midthigh) and three muscle girths in cm. (Arm, Thigh, and Calf) were measured using standard procedures. The age of the subjects were calculated from the date of birth as recorded in their institution.$VO_{2max.}$ was also obtained using prescribed method by Modified Queens College Step Test. Following formulas were used to calculate BMI, % body fat, % skeletal muscle mass, body surface area, and $VO_{2max.}$:

- **Body Mass Index (BMI):**

  $BMI = [\text{Weight in Kg.} \div (\text{Height in mts.})^2]$

- **Body density as per Jackson and Pollock's (1978) equation:**

  $\text{Body density} = 1.112 - 0.00043499(\sum 7skf) + 0.00000055(\sum 7skf)^2 - (0.00028826(X_2)$

  Where, $\sum 7skf$ = sum of 7 skinfolds in mm i.e. Pectoral, Axilla, Abdominal, Suprailiac, Subscapular, Triceps and Midthigh. X_2 = Age in years.

- **% Body Fat as per Siri Equation (1956):**

  $\%\ \text{Body Fat} = [(4.95 \div \text{Body Density}) - 4.5] \times 100$

- **Measurement of Skeletal Muscle Mass (SMM) as per Poortman's Formula (2005):**
  $SMM\ (Kg.) = \text{Height}[\{0.0064 \times (CAG)^2\} + \{0.0032 \times (CTG)^2\} + \{0.0015 \times (CCG)^2\}] + (2.56 \times \text{Sex}) + (0.136 \times \text{Age})$
  Where – Height in m.; Age in Years; Sex (Male = 1 & Female = 0); CAG = Corrected Arm Girth in cm. (Arm Girth in cm. – Triceps skinfold in cm.); CTG = Corrected Thigh Girth in cm. (Mid-Thigh Girth in cm. – Mid Thigh skinfold in cm.); CCG = Corrected Calf Girth in cm. (Calf Girth in cm. – Calf skinfold in cm.)
- **Assessment of % Skeletal Muscle Mass (% SMM):**
  $\%\ SMM = [SMM\ (Kg.) \div \text{Body Mass (Kg.)}] \times 100$
- **Body Surface Area (BSA) as per Mosteller's Formula (1987):**

  $BSA\ (m^2) = [\{\text{Height (cm.)} \times \text{Weight (Kg.)}\} \div 3600]^{1/2}$

- **Modified Queens College Step Test was used for assessing $VO_{2max.}$:**
  $VO_{2max.}\ (ml.kg^{-1}.min^{-1}) = 111.33 - (0.42 \times \text{step test pulse rate, beats/minute})$

Statistical Analysis

Data were analyzed using SPSS Version 16.0 (Statistical Package for the Social Sciences, version 16.0, SPSS Inc, Chicago, IL, USA). Mean, standard deviation (SD), minimum value, and maximum values were obtained for all the selected variables. Multiple coefficients of correlations were performed to determine the relationships among the variables. Step-wise multiple linear regression equation was used to develop a standard prediction model. $VO_{2max.}$ was the dependent variable while age, BMI, % body fat, % skeletal muscle mass, and body surface area were the independent variables.

RESULTS AND DISCUSSION

Table- I. Descriptive Statistics of Physical Parameter and $VO_{2max.}$

	Mean	S.D.	SE Mean	Maximum	Minimum
Age (Y)	22.14	2.28	0.09	30.00	18.00
BMI	20.91	1.70	0.06	21.97	19.81
% Body Fat	13.06	3.47	0.13	22.41	6.13
% SMM	49.66	3.55	0.14	61.88	37.99
BSA	1.66	0.10	0.00	2.02	1.35
$VO_{2max.}$ ($ml.kg^{-1}.min^{-1}$)	42.56	4.65	0.26	54.29	33.00

Table-I indicate the descriptive statistics of age, BMI, % body fat, % skeletal muscle mass, body surface area and $VO_{2max.}$ of the college level students. Mean age and BMI of the subjects' ware 22.14 and 20.91 respectively. Mean, S.D., SE Mean of % body fat was 13.06, 3.47, and 0.13 respectively. Mean % skeletal muscle mass and body surface area of the subjects were 49.66 and 1.66 respectively. Mean, S.D., SE Mean of $VO_{2max.}$ of the subjects were 42.56, 4.65, and 0.26 respectively were as maximum and minimum value were 54.29 and 33.00 $ml.kg^{-1}.min^{-1}$ respectively.

Table- II. Inter-Correlation Matrix of $VO_{2max.}$ and Independent Variables

	Age (Y)	BMI	% Body Fat	% SMM	BSA	$VO_{2max.}$ ($ml.kg^{-1}.min^{-1}$)
Age (Y)	-					
BMI	0.22**	-				
% Body Fat	-0.05	0.28**	-			
% SMM	0.23**	-0.06	-0.16**	-		
BSA	0.10**	0.61**	0.24**	-0.24**	-	
$VO_{2max.}$ ($ml.kg^{-1}.min^{-1}$)	0.27**	0.27**	-0.49**	0.39**	-0.09*	-

** - Significant at 0.01 level * - Significant at 0.05 level

Table- II presents the inter-correlation matrix of $VO_{2max.}$ and independent variables. BMI was positively significantly (0.01 level) correlated with % body fat, BSA and $VO_{2max.}$ % Body fat was positively significantly (0.01 level) correlated with BSA; were as negatively significantly correlated with % skeletal muscle mass and $VO_{2max.}$ Positively significant correlation was found between $VO_{2max.}$ with age, BMI, and % skeletal muscle mass; were as $VO_{2max.}$ was negatively significantly correlated with % body fat (0.01 level) and body surface area (0.05 level).

Table- III. Prediction Based on Values of $VO_{2max.}$ Age, BMI, % Body Fat, % Skeletal Muscle Mass and Body Surface Area

Predictor	Coefficient	SE Coefficient	T	P
Constant	16.43	4.47	3.76	0.001
Age (Y)	0.23	0.08	2.82	0.005
BMI	2.26	0.14	16.61	0.001
% Body Fat	-1.04	0.05	-19.27	0.001
% SMM	0.50	0.05	9.29	0.001
BSA (m^2)	-16.38	2.23	-7.32	0.001
S = 4.41	**R^2 = 86.6%**	**R^2(adjusted) = 86.2%**		

The regression equation is
$VO_{2max.}$ ($ml.kg^{-1}.min^{-1}$) = 16.43 + 0.23 Age (Y) + 2.26 BMI - 1.04 % Body Fat + 0.50 % Skeletal Muscle Mass - 16.38 Body Surface Area (m^2).
Table- III indicates the prediction based on values of $VO_{2max.}$ age, BMI, % body fat, % skeletal muscle mass and body surface area of the subjects. R^2 = 86.6% and R^2 (adjusted) = 86.2% which indicated that a high percentage of the variation in $VO_{2max.}$ can be explained by above mention independent variables. Thus, this equation is reasonably reliable in predicting $VO_{2max.}$

CONCLUSIONS

From the present investigation it may be concluded that age, BMI, % body fat, % skeletal muscle mass, and BSA are good predictors of $VO_{2max.}$ in young sedentary college students of West-Bengal, India. More importantly multiple regression equations are also recommended for crosschecking the predicted value, whenever necessary.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp33-36

Influence Of Nutrition In Physical Fitness And Talent Development Among Students Of Physical Education

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ABSTRACT

The study was carried out by selecting 120 boys of B.P. Ed. from Indutai memorial College of Physical Education, Buldana (M.S.) for three consecutive academic years from 2009-2012. Nutritional status was assessed by computing BMI (Body Mass Index) using height and weight parameters. Physical fitness was assessed by the performance of respondents in track and field events viz., 100M, 400M and 1500M track events and Hop step jump, high jump and Discuss Throw as field events. Nutritional status ofs student respondents using BMI as recommended by WHO revealed that about 13.33 % of the respondents were below (<20) normal. 85.01 % were in normal (20-23) and about 1.66 % only were overweight. The Spearman's correlation coefficient was computed to see the relation between BMI and sport events such as track events and field events. The results revealed that, there was a positive correlation between all events except 100M, 400M run and BMI. Talent identification revealed using frequency and percentage showed that 28.33 % in 100M , 37.50% in 400M and 70.83% in 1500M track events. While talented students in field events were as 55.83% in Hop step jump, 54.16 % in high jump and 79.16% in Discuss Throw. The study proves that the nutrition has played a vital role in performance of track and field events for identification of talent.

Keywords: Nutrition, physical fitness, BMI

INTRODUCTION

Indutai memorial College of Physical Education, Buldana (M.S.) is under the jurisdiction of Sant Gadge Baba Amravati University, Amravati. This college is offering one year degree course of B.P. Ed in physical education. The students undergo vigorous physical activities through sports and games. During this process, the real talent of the students in sports and games performance is evaluated in academic year. They have to score a minimum 40% to get through these courses. The main purpose of offering these courses is to identify the talents as well as to cultivate the healthy life styles among the future generation. As it is found that, in the modern society, inactivity or low level of physical activity combined with changes in eating habits are believed to be the main reasons for the increased prevalence of overweight/obesity among adolescents, because physical activity is an important component in weight control and also associated with other major health benefits, its role in youth health is fundamental. Health, nutrition and physical development go hand in hand.

Nutritional anthropometry is concerned with the measurement of variations of the physical dimension and the gross composition of the human body at different age levels and degrees of nutrition. Body composition is an important indicator of health status in children and adolescents (Immink et al., 1992, Rolland- Cahera, 1995, Malina et al. 1998). Some useful information about the relationships between body composition and physical fitness in children from developed countries have been published (Malina, 1975, Beunen et al., 1983). These studies revealed that excessive fatness has a negative impact on performance tasks in which the body is projected through space as in long jump, sprint and on tasks in which the body must be lifted in space as in bent arm hang. In contrast with developed countries, little is known about the relationship between body composition and physical fitness in children, adolescents and adults also in developing countries. This relationship is relevant for public health because in developing countries low fatness can be seen as a result of under nutrition (Spurr, 1988, Malina and Roche, 1983). Under nutrition likely is an important risk factor for general health outcomes. From a public health perspective, improvement of both nutritional status and physical fitness can be seen an important tool for the improvement of the well being of the population and for prevent diseases. Although the improvement of nutritional status is the most

important, improving physical fitness can play an important additional role. As a result, it is important to investigate the determinants of physical fitness. Data on the interrelationship between BMI and physical activity are limited. A clear understanding of the effect of physical activity on BMI is lacking. Thus the present study aimed at the following objectives- ti assess the fitness of students of physical education in terms of track and field events, to assess the BMI using the weight and height parameters, to see the relationship between the BMI and performance of the students in track and field events to identify the talents among the students in sports and games.

METHODOLOGY: This was a cross sectional study carried out of 120 boys of B.P. Ed. from Indutai memorial College of Physical Education, Buldana (M.S.). For the study 40 students from each year for three consecutive years (2010-2011, 2011-2012 and 2012-2013) were taken. The age group of the students was 21-25 years. During the study, they were assessed for anthropometric measurements such as height and weight. These parameters were recorded for all the respondents. Though purposive sample was done, respondents were selected from normal population excluding those who were suffering from any disease and medical treatment.

Body mass index: Nutritional status of the respondents was assessed by computing the body mass index (BMI). Height and weight were recorded for each participant to determine their BMI. Body mass index was derived by Quetelet's index from body weight /(height)^2. It is one of the useful tools for diagnosing obesity or malnutrition. Height was measured on a scale marked to a wall and rounded down to nearest centimeter. Weigh balance, subject standing on it with minimum clothing and bear feet and was rounded up to nearest kilogram. Cut-off points according to WHO were used to define the prevalence of overweight.The body weight indicates the body mass and gives a rough estimate of body volume, while height gives a picture of nutritional status and deficit in height indicates chronic and prolonged under nutrition resulting often in permanently stunted physical status.

Measurement of physical fitness:

The physical fitness was assessed by measuring the performance of the respondents in track and field events. The field events such as Hop Step Jump, high jump, Discuss Throw and track events such as 100 m, 400m and 1500m were conducted. The norms for evaluation of performance of the athletic events for I year students of physical education using 1/100 stop watch and steel tape. The norms developed and standardized by Mr. Wilson Arnold(1995), Associate Prof. Physical Education, University of Agricultural Sciences, Dharwad for his M.Phil. degree, thesis submitted to Alagappa University, Karaikudi were used. Norms measured the performance and identified the students as talented. This tool was developed using the data from 15 years based on the performance of UAS, Dharwad students. These norms were standardized for each track and field events. These measurements were related to well nourished population and was standardized including 1200 students in the age group of 18-19 year boys and these measurements were taken on a cross sectional population, sampling procedures were reproducible and measurements were carefully made and recorded by trained people in anthropometric techniques using well tested, designed and calibrated equipments.

Statistical analysis: The results were analyzed using suitable statistical treatment using MS- Excel software. Descriptive statistics (averages, range, minimum and maximum) were computed. Karl Pearson's Correlation coefficient was computed for assessing the relation between BMI and performance of students in track and field events.

OBSERVATIONS AND DISCUSSION

Table 1 reveals that the students had an average height of 171cm, weight 60. kg and BMI 20.37. The average time taken to complete 100M run by the students was 13.77 sec., 400M run was 1.037 min., 1500M run was 4.82 min., Hop Step Jump was 11.39 m, high jump was 1.28 m. and Discuss Throw was 18.28 m. In general, the trend indicated that, the average performance was nearly equal to the norms and some time slightly higher than norms. But averages are not exclusive indicators of the performance and there was need for further research.

Majority of the students (85.01%) were in category of normal as per the WHO classification as shown in Table 2. It was depicted that only 2 % of the students were overweight but not obese. As per the classification given by James et al.(Table 3) also only 2.50 % of the students were suffering from chronic energy deficiency while 97.5 % students were either low normal or normal

categories. This indicates that most of the students of physical education are oriented for proper nutrition and exercise for physical fitness. Their nutritional status was optimum.

When the results were analyzed and compared with the norms for identification of talents, it was found that, 28.33 % of the students has talent in 100M run while highest per cent of the talented student was in Discuss Throw 79.16% followed by in Hop Step Jump 55.83% students were found talented. Broadly, the students of physical education were better in field event than in track events ig talent in n their college level.

Table1 Descriptive statistics of the parameter

Descriptive statistics	Height (cm)	Weight (kg)	BMI	100M (sec.)	400M (Min.)	1500M (Min.)	Hop Step Jump (m)	High Jump (m)	Discuss Throw (m)
Avg.	171	60	20.37	13.77	1.037	4.82	11.39	1.28	18.28
Max.	188	73	22.72	14.00	1.165	4.97	12.40	1.44	20.00
Min.	156	45	17.36	12.90	0.902	4.62	10.60	1.20	14.00

Table2 Classification of student's nutritional status of adults using BMI (WHO)

BMI	Nutritional grade	No. of students	% of students
<20	Under weight	16	13.33
20-23	Normal	102	85.01
23-30	Overweight	2	1.66
30-35	Obesity I	-	-
35-40	Obesity II	-	-
>40	Obesity III	-	-
	Total	120	100

*For Asian population

Table 3 Classification of student's nutritional status of adults using BMI

BMI	Nutritional grade	No. of students	% of students
<16	III degree CED	-	-
16-17	II degree CED	-	-
17-18.5	I degree CED	3	2.50
18.5-20	Low normal	37	30.80
20-25	Normal	80	66.70
25-30	Overweight	-	-
>30	Obesity	-	-
	Total	120	100

CED –Chronic energy deficiency

Table 4 Percentage of students identified as talented

Event	Criteria	No. of students qualified	Per cent
100M run	<13.7 seconds	34	28.33
400M run	< 61 seconds	45	37.5
1500M run	<296 seconds	85	70.83
Hop Step jump	>11.40 m	67	55.83
High jump	>1.26 m	65	54.16
Discuss	> 18 m	95	79.16

The correlation between track and field events with BMI revealed that, BMI was negatively correlated with 100M & 400M run while with all other events the correlation was positive. This indicates that, the events which required strength and endurance needed better BMI, while 100M & 400M run was short time and distance event was not much depending upon the BMI. With the better BMI showing talent in 100M & 400M run was not possible as they find difficulty with heavy body weight.

Table 5 Correlation between field and track events and BMI of the students

BMI with	Correlation coefficient
100M	-0.006
400M	-0.106
1500M	0.176
Hop Step Jump	0.0496
High Jump	0.140
Discuss Throw	0.295

CONCLUSIONS: The students were having normal height and weight with average BMI. Hence their performance in track and field events was satisfactory. Most of the students were belong to low normal and normal category. They were better in field events than track events. This indicated that, the students were better BMI who were fed with nutritious food were able to perform better in all these events field and track events. Influence of nutrition is very obvious in development of talent as well as identification.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp37-39

Comparative study of Fitness Variables among Team Games and Individual Games

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Abstract
Introduction: A success of any sports and games can be accredited to many factors, but training is the one of the most important factor. Different training methods have been commonly used to improve physical fitness and related standards of performance of athletes. Sport training is long, continuous, and systematic process or physical and mental hard work, to attend high level of performance in competitions at various levels by making the best use of the principles derived from the sports sciences (Singh Hardayal, 1993). The purpose of this study was to find out the significant differences of selected physical fitness variables among team games and individual games of male sports men **Method**: For this study a group of 60 sportsmen were selected randomly from the King Fahd University of Petroleum & Minerals, Saudi Arabia. The subjects were selected in two groups namely team games and individual games. Group-A (Team games subjects =30) and Group-B (Individual games subjects: N=30), the age group of the participants were between 18-22 years. The selected physical fitness test considered for this study was flexibility (sit & reach test), muscular endurance (push-up test 30 sec), speed (50 M.sprint), power (standing long jump) and cardio-vascular endurance (12 min run & walk test). To compare the mean differences between the two groups, mean, S.D and t-tests were computed by means of Statistica Software.**Results and Discussion:** An analyzing of the data reveals that the mean, standard deviation with regard to flexibility of team games subjects were (19.50, 6.20) and whereas for individual games subjects shows mean, standard deviation were (24.50, 4.31). With regard to strength endurance for team games and individual games the mean and standard deviation were (16.40, 3.73) and (19.23, 5.46) respectively. The data speaks an interesting results regard to sprinting performance for team games and individual games with mean and standard deviation were (7.65, 0.76) and (8.47, 0.99) respectively. The data for standing long jump for both the groups i.e. team games and individual games shows mean and standard deviation were (174.7, 23.9) and (184.1, 24.1) respectively. Team games and individual games with regard to 12 min run and walk had shows the mean and standard deviation were (1466.7, 200.6) and (1418.4, 218.4) respectively. **Conclusion**: It is concluded that the both groups differ significantly. It is concluded that individual games participants had significantly higher flexibility and muscular endurance. Moreover the team games group had shows greater performance with regard to power, sprinting performance and cardiovascular endurance compare to their counter part i.e. .individual games participants.

Keywords: Sport, Fitness, Athletes, Endurance, Training

Introduction

A success of any sports and games can be accredited to many factors, but training is the one of the most important factor. Different training methods have been commonly used to improve physical fitness and related standards of performance of athletes. High level of health and fitness are very vital aspect for sports men performance. Fitness emphasizes on the state in which an individual has sufficient energy to avoid fatigue and give best in his event. Sport training is long, continuous, and systematic process or physical and mental hard work, to attend high level of performance in competitions at various levels by making the best use of the principles derived from the sports sciences (Singh Hardayal, 1993). Fitness is a state of happiness that comprises sports and health-related components. Sports men experience various types of training to improve their performance and physical fitness. Human beings basically by the nature are competitive and determined for

fineness in sports performance. Training means a systematic and scientific schedule of conditioning exercises and physical activities designed to improve the physical fitness and skills of players (Fox, 1984). Sports performance of an athlete's in any event mostly depends on physical fitness level. Physical fitness comprises the following five motor abilities namely muscular strength, agility, power, speed, and cardiovascular endurance. This is evident that the sports performance of sportsmen in various sports and games depends on huge extent on fitness abilities, as athletes aged, needs lot of high level of fitness to continue their performance. The training schedule is designed to improve the skills and to increase the energy capacity of an athlete for a particular sport or game. Therefore training is essential for the development of physical fitness components (William & Sperryn, 1976). Sport training is a long, continuous, and systematic process or physical and mental hard work, to attain high level of performance in competitions or various levels by making the best use of the principals derived from other sports sciences (Hardayal Singh, 1993). Flexibility is the ability to achieve an extended range of motion without being impeded by excess tissue, i.e. fat or muscle (e.g. executing a leg split). Every individual needs some flexibility in order to perform activities in day to day life. Research suggests that flexibility is useful in preventing some type of muscle sprain, low back pain, (cady,L.D, 1979). Muscular endurance is an important fitness component and helps individuals in performing high performance. Muscular endurance is the ability of the muscle group to perform repeated contraction i.e. isotonic, iso-kinetic, or eccentric against a load or sustain a contraction isometric for an extended period of time (Fox, 1989). The training which improves the efficiency of the aerobic energy producing system and can improves respiratory endurance (Wilmore and Costill, 1999). Speed is the ability to perform rapidly successive movements over a short period of time in a given direction (Singh, 1991).The purpose of this study was to find out the significant differences of selected physical fitness variables among team games and individual games of male sports men.

Material and Method

For this study a group of 60 sportspersons were selected randomly from the King Fahd University of Petroleum & Minerals, Saudi Arabia. The subjects were segregated in two groups namely team games and individual games. Group-A (Team games subjects =30) and Group-B (Individual games subjects: N=30), age group between 18-22 years. The selected physical fitness test considered for this study was flexibility (sit & reach test), muscular endurance (push-up test for 30 sec), speed (50 M.sprint), power (standing long jump) and cardio-vascular endurance (12 min run & walk test). To compare the mean differences between the two groups, mean, S.D and t-tests were computed by means of Statistica Software.

Table-1

Team games Group-A	N=30	Individual games Group-B	N=30
Basket ball players	10	Badminton players	10
Foot ball players	10	Table tennis players	10
Volley ball players	10	Squash players	10

The table-1 shows the clear picture regards to the selected team game and individual game subjects details. It shows that team games consists of basketball players (N=10), football players (N=10), and volley ball players (N=10). Individual games comprises badminton players (N=10), table tennis players (N=10), Squash players (N=10).

Results and Discussion

Tables from 2 to 3 show the results of the study.

Table-2

Sl.no	Fitness Variables	Test
1	Flexibility	Sit & reach test
2	Strength endurance	Push-ups test (30 sec)
3	Speed	50 M.sprint
4	Power	Standing long jump
5	Cardio-vascular endurance	12 min run & walk

The table-2 shows the details regarding to the test items considered for this study, flexibility (sit and reach test), strength endurance (push-up test 30 sec), speed (50 M, Sprint), power (standing long jump) and cardio-vascular endurance (12 min run & walk test).

Table-3

Test Items	Team game N=30		Individual game N=30		t-value
	Mean	S.D	Mean	S.D	
Sit & reach test	19.50	6.20	24.50	4.31	3.86
Push-ups test (30 sec)	16.40	3.73	19.23	5.46	2.96
50 M. sprint	7.65	0.76	8.47	0.99	3.58
Standing long jump	184.03	24.07	174.6	23.91	1.51
12 min run & walk	1466.7	200.6	1418.4	218.4	0.89

The analyzing of data reveals that the mean, standard deviation with regard to flexibility (sit & reach test) of Individual games subjects were (19.50, 6.20) and whereas for individual games subjects shows mean, standard deviation were (24.50, 4.31). With regard to strength endurance for both the groups the mean and standard deviation were (16.40, 3.73) and (19.23, 5.46) respectively. The data speaks an interesting results regard to sprinting performance with mean and standard deviation were (7.65, 0.76) and (8.47, 0.99) respectively. The data for standing long jump for both the groups shows mean and standard deviation were (174.7, 23.9) and (184.0, 24.1) respectively. Regards to 12 min run and walk the data shows picture for team games and individual games with mean and standard deviation were (1466.7, 200.6) and (1418.4, 218.4) respectively.

Discussion: The analysis of data reveals an significant differences among both the groups. Both the groups differ significantly with regard to flexibility, and individual game participants group shows greater performance this is because of the nature and skills of their game which effects on the performance relate to flexibility. The variables of physical fitness like muscular strength, speed, Muscular endurance, flexibility and a variety of coordinative abilities are important for technique and tactical competency stated by (Mal, 1982). Both the groups differ significantly with regard to strength endurance, further more it shows that the individual game participants had shows greater performance. In respective demand of the game, each component of the physical fitness is necessary and important and should be developed as a result. Different body types have different level of fitness, which may change from day to day, place to place and time to time. Team game subjects had shows superior sprinting performance compare to their counter part, this apart it reveals that the team game subjects are having better sprinting performance due to their demand of skills develop in their training schedule and also during the play. The individual game subjects are mostly emphasizing on strength, power, strength endurance, and cardio-vascular endurance as their nature of game demands. Lastly with regard to power and cardio-vascular endurance performance both the groups differ significantly, and the team game participants had shown greater performance.

Conclusion: It is concluded that both the groups differ significantly with regard to flexibility (sit & reach test), and individual game participants group shows greater performance. Both the groups differ significantly with regard to strength endurance, further more it shows that the individual game subjects had shows greater performance. Sprinting performance shows that the team game participants had superior performance compare to their counter part. Lastly with regard to power and cardio-vascular endurance performance both the groups differ significantly, and the team game participants had shown greater performance.

Acknowledgement The Authors thank the authorities of King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia and the subjects for their help in the completion of this study.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp40

A Comparative Study Od Female Combative Athletes On Reaction

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ABSTRACTS: For the purpose of the study, 75 subjects twenty five from each game, (Judo=25, Boxing=25, Wrestling=25) were randomly selected from the Saurashtra University, Rajkot, Gujarat state. The reaction ability among the groups was measured by Ball Reaction Test (Hurtz, 1985). To observe the differences among three groups on their Reaction Ability, analysis of variance (ANOVA) was used at the significant level of 0.05 level. The results of the study have shown that the athletes of Judo and Boxing & Judo and Wrestling differed significant differences were found between boxing and wrestling players on their reaction ability.
KEY Words: Combative Athletes, Reaction Ability

INTRODUCTION: Coordinative abilities are pre-requisites of athletics performance; these are mainly coordinated by motor control processes. Athlete's coordinative abilities help them in learning and perfecting technical skills in the training period. The coordinative abilities determine the speed and quality of learning, stabilizing and applying the techniques in competition. In Judo, Boxing and Wrestling, the performance is significantly based on coordinative abilities including reaction abilities.

METHODOLOGY: The subjects for the present study were randomly selected from the Saurashtra University, Rajkot. The size of sample was 75 subjects, 25 from each game (25=Judo, 25=Boxing and 25= Wrestling). Ball reaction test was used to measure the reaction ability among the groups.

RESULTS AND DISCUSSION: To observe the difference among three groups of combative athletes on their reaction ability, Analysis of Variance (ANOVA) was used at the significant level of 0.05 level.

Table -1 Analysis of Variance of means of R.A. among three combat games

Source of variance	df	Sum of aquares	Mean square	F- value
Within groups	2	4496.92	2234.96	10.89*
Between groups	147	30160.34	205.17	

Significant at 0.05 level F 0.05 (2,147) = 3.06

It is evident from table-1 that significant difference exist among the combative athletes of three game as the F- value of 10.89 is higher than the tabulated value of 3.06 at 0.05 level of significance. Since, one way ANOVA was found significant in relation to react in ability, L.S.D. test was applied to find out as to which of the differences of the means amongst three different groups were statistically significant.

Table-2 Post-Hoc test for means of three game in relation to reaction ability

Judo	Boxing	Wrestling	Mean difference	Critical difference
18.75	19.67	-	0.92*	0.17
18.75	-	19.60	0.85*	
-	19.67	19.60	0.07	

Significant at 0.05 level

It is evident from table-2 that mean differences between judo and boxing, judo and wrestling were found to be significant at 0.05 level in relation to reaction ability. However, no significant difference was found between boxing and wrestling in relation to reaction ability. The obtainer 'F' ratio (10.89) was reported to be significant at 0.05 level.

CONCLUSION: The scores on R.A. presented in the tables and figures and suggested that the female athletes of judo and boxing & judo and wrestling differed significantly on reaction ability. In boxers and wrestlers did not differ significantly on reaction ability. The obtained mean values in the tables have suggested that Judokas have higher level of reaction ability followed by Wrestlers and Boxers. It may be conclude that the Judokas react quickly than the wrestlers and Boxers.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp41-45

Analysis Of Academic Achievement On Selected Motor Skill Related Performance Among The Eighth Grade Respondents

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ABSTRACT

The purpose of the study was designed to find out the analysis of academic achievement on selected motor skills related performance among the eighth grade respondents. During the academic year 2012 – 2013, 30 boys and 30 girls studying in government higher secondary school, Silattur, Erichi, Aranthangi, Pudukkottai, Tamilnadu, India were selected to achieve the purpose of the study. They were selected based on their academic achievement in the quarterly examination as above average, average and below average achievers making up a total of 60 respondents. The age of the respondents ranges from 12 to 14 years. The academic achievement of the respondents in the quarterly examination was considered as independent variables for this study. The criterion variables selected for the study are motor skills related performance such as shuttle run and stroke stand. The data were statistically analyzed by using Two Way (2x3) Analysis of Variance (ANOVA) for evaluating the influence of the two criterion variables. The obtained results have three F- ratio, two for main effect; the first F- ratio for rows (referring to gender) and columns (referring to academic achievement) and one for interaction (referring to the gender and academic achievement). The obtained F- ratio for column (referring to the gender and academic achievement) was significant. Scheffe's Test was used as Post Hoc Test separately for column to find out the significant difference between paired mean. In all the conditions, the significant level was fixed as 0.05 level, which was considered to be appropriate. The result reveals that there existed significant difference between the above average achievers and average achievers; above average achievers and below average achievers; and average achievers and below average achievers of gender on agility. Hence it also reveals that there was no significant difference between average achievers and below average achievers; and above average achievers and average achievers of gender on agility. Among the different academic achievement irrespective of gender, the results indicated that there was no significant difference on balance. Further, it also reveals that there existed no significant difference on balance among the gender at different academic achievement.

Key Words: Agility, Balance and Academic achievement.

INTRODUCTION

Educational task is to implant a desire and facilitate learning. It is an ability to evaluate information and to predict future outcome; it also helps to develop mental and physical skills, motor thinking, communication and social aesthetic.According to **Tanjea (1989)** the academic performance in a school is a standardized series of educational test and the performance is the action of a person or group when given a learning task. During that period of life it's referred to as that school learning is no longer casual. Children engaged in daily physical education show superior motor fitness, academic performance and attitude towards school as compared to their counterparts who do not participate in daily physical activity. Many students in a private school do not attend regular classes of physical education. We should insist them to engage the classes to make their body fit, so that it gives more confidence, healthy body and mind to boost academic achievement. Physical activity is essential in promoting normal growth and mental functioning. **Pollatschek.J and Hagen.F (1996).** The benefit of motor fitness is that it contributes to the improvement of posture appearance through the development of proper muscle tone, greater tone flexibility and a feeling of well being. **Willam Prentice (1994)**. A physical activity on the ground helps a child to develop certain physical attributes like good posture, movement, anticipation, improving hand and eye coordination **Kalyal Ashok (2011).**

MATERIALS AND METHODS: The purpose of the study was designed to find out the analysis of academic achievement on selected motor skill related performance among the eighth grade respondents. During the academic year 2012 – 2013, 30 boys and 30 girls studying in a government higher secondary school, Silattur, Erichi, Aranthangi, Pudukkottai, Tamilnadu, India were selected to achieve the purpose of the study. They were selected based on their academic achievement in the quarterly examination marks as above average, average and below average achievers to a total of 60 respondents. The age of the respondents ranged from 12 to 14 years. The academic achievement of the respondents in the quarterly examination marks was considered as independent variables for this study. The respondents who scored 60 percent to 70 percent in the quarterly examination were considered as above average achievers; respondents who scored 50 percent to 60 percent in the quarterly examination were considered as average achievers and respondents who scored 40 percent to 50 percent in the quarterly examination were considered as below average achievers. The following criterion variables selected for the study are motor skill related performance such as shuttle run and stroke stand. The data pertaining to the study were collected from the respondents with the help of standard test items mentioned in Table – I. The data were statistically analyzed by using Two Way (2x3) Analysis of Variance (ANOVA) which was used to evaluate the influence of the two criterion variables. The obtained results have three F- ratio, two for main effect; the first F- ratio for rows (referring to gender) and columns (referring to academic achievement) and one for interaction (referring to the gender and academic achievement). The F- ratio for rows tests the significant difference, if any, among the gender irrespective of academic achievement in each dependent variable. The F- ratios for column analysis tests the significant difference, if any, among the respondents of academic achievement irrespective of gender in each dependent variables separately. The F- ratio for interaction compares the means for gender of the selected dependent variables among the academic achievement and was selected for this study. The obtained F- ratio for column (referring to the gender and academic achievement) was significant. Scheffe's Test which was used as Post Hoc Test separately for column to find out the difference between paired mean were significant. In all the conditions, the significant level was fixed as 0.05 levels, which was considered to be appropriate.

Table – I
Selection Of Variables And Test Items

<table>
<tr><td colspan="5">Criterion Variables</td></tr>
<tr><td colspan="3">Independent variables</td><td colspan="2">Dependent Variables</td></tr>
<tr><td colspan="3">Gender</td><td colspan="2" rowspan="3">Motor skill related performance</td></tr>
<tr><td colspan="2">Boys</td><td>Girls</td></tr>
<tr><td colspan="3">Academic achievement</td></tr>
<tr><td rowspan="2">Above average achievers (Respondents those who scored 60 percent to 70 percent)</td><td rowspan="2">Average achievers (Respondents those who scored 50 percent to 60 percent)</td><td rowspan="2">Below average achievers (Respondents those who scored 40 percent to 50 percent)</td><td>Agility</td><td>Balance</td></tr>
<tr><td>Shuttle run</td><td>Stroke stand</td></tr>
</table>

STATISTICAL ANALYSIS

The data collected from the respondents on selected motor skill related performance and academic achievement was analyzed and presented in the following tables.

AGILITY

The data on agility were analyzed by Two Way Analysis of Variance (2x3) and the obtained results were presented in Table – II

Table – II
Summary Of Two Way Anova On Agility Of Gender At Above Average, Average Achievers And Below Average Achievers Of Academic Achievement

Source of variance	Sum of square	df	Mean square	F - Ratio
Rows (Gender)	11.983	1	11.983	18.034*
Columns (Academic achievement)	5.546	2	2.773	4.173*
Interaction (Gender and Academic achievement)	1.121	2	0.561	0.844
Within (Error)	35.882	54	0.664	
Total	55.056	59		

*Significance at 0.05 level of confidence.

(The Table value required for significance at 0.05 level with df 1& 54 is 4.02; df 2&54 is 3.18).

Table II shows that the F –ratio of Rows for gender irrespective of academic achievers is 18.034 against the table value 4.02 (df 1 and 54) which is significant at 0.05 level of confidence. It implies that there is significant difference between the boys and girls irrespective of academic achievement on agility.

From the above table it is inferred that the F- ratio of columns for academic achievement irrespective of gender is 4.173 against the table value of 4.02 (df 1 and 54) which is significant at 0.05 level of confidence. It implies that there is significant difference between the respondents of academic achievers such as above average achievers, average achievers and below average achievers irrespective of gender on power. Further, individual mean comparison among the respondents of academic achievement levels were also made for interpretation by using the Scheffe's Post Hoc Test was employed and presented in the Table –III.

The table II also reveals that the F- ratio of Interaction for gender and academic achievement is 0.844 against the table values 3.18 (df 2 and 54) which is not significant at 0.05 level of confidence. It implies that boys and girls at different academic achievers do not differ significantly on agility.

Table – III

Summary Of Paired Mean Difference Between The Different Levels Of Academic Achievement (Columns) Of Gender (Respondents) On Agility

Gender	Above average achievers	Average achievers	Below average achievers	Mean difference	C.I
Boys	18.08	18.44		0.36*	0.03
	18.08		17.41	0.67*	0.03
		18.44	17.41	1.03*	0.03
Girls	19.01	18.99		0.02	0.03
	19.01		18.62	0.39*	0.03
		18.99	18.62	0.37*	0.03

The above table indicates that the paired mean differences of gender on power between above average achievers and average achievers values was 0.36; above average achievers and below average achievers values was 0.67 and 0.39 and average achievers and below average achievers values was 0.37 respectively. The mean difference between above average achievers and average achievers; above average achievers and below average achievers; and average achievers and below average achievers was greater than the C.I values of 0.03. Hence it is inferred that there existed significant difference between the above pairs on agility. Further it is also indicated from the table that the paired mean difference of girls between the above average achievers and average achievers was 0.02 which was less than the table values of 2.92. Hence it is understood that the existed no significant difference among the above pairs on agility.

BALANCE

The data on balance were analyzed by Two Way Analysis of Variance (2x3) and the obtained results were presented in Table – IV

Table – IV

Summary Of Two Way Anova On Balance Of Gender At Above Average, Average Achievers And Below Average Achievers Of Academic Achievement

Source of variance	Sum of square	df	Mean square	F - Ratio
Rows (Gender)	10.239	1	10.239	0.036
Columns (Academic achievement)	29.616	2	14.808	0.052
Interaction (Gender and Academic achievement)	4.115	2	2.057	0.007
Within (Error)	15297.522	54	283.287	
Total	15340.696	59		

(The Table value required for significance at 0.05 level with df 1& 54 is 4.02; df 2&54 is 3.18).

Table IV shows that the F –ratio of Rows for gender irrespective of academic achievers is 0.036 against the table value 4.02 (df 1 and 54) which is no significant at 0.05 level of confidence. It implies that there is no significant difference between the boys and girls irrespective of academic achievement on balance.From the above table it is inferred that the F- ratio of columns for academic achievement irrespective of gender is 0.052 against the table value of 4.02 (df 1 and 54) which is not significant at 0.05 level of confidence. It implies that there is no significant difference between the respondents of academic achievers such as above average achievers, average achievers and below average achievers irrespective of gender on balance.The table IV also reveals that the F- ratio of Interaction for gender and academic achievement is 0.007 against the table values 3.18 (df 2 and 54) which is not significant at 0.05 level of confidence. It implies that boys and girls at different academic achievers do not differ significantly on balance.

DISCUSSION ON FINDINGS

From the analysis of data, it is found that there existed significant difference between the above average achievers and average achievers; above average achievers and below average achievers; and average achievers and below average achievers of gender on agility. **Feritas.D (2007)** suggested that there were positive correlation between the agility with academic performance. **Chandrasekaran.C (2012)** indicates that there is more positive significant difference between the agility and academic performance among the football players. **Hillman.C.H,Castelli.DM (2010)** suggested that from this study, the results showed that the regular practice of physical activity increases cognitive ability of third and fifth grade respondents. Hence, it also reveals that there was no significant difference between average achievers and below average achievers; and above average achievers and average achievers of gender on agility. The results indicate that there was no significant difference on balance among the different academic achievement irrespective of gender. Further, it also reveals that there existed no significant difference between gender irrespective of different academic achievement on balance and also no significant difference on balance among the gender at difference academic achievement. **Jimmy Byrd (2000)** suggested that there is negative relationship between the physical activity and academic achievement among elementary students. Hence, the researches show the results of the present study that girls and boys have equal motor fitness abilities with academic achievement. But particularly, there is more significant difference on agility when compared to balance of criterion variables.

CONCLUSION

1. There existed a significant difference between the above average achievers and average achievers; above average achievers and below average achievers; and average achievers and below average achievers of gender on agility.
2. There was no significant difference between above average achievers and average achievers of gender on agility.
3. There was no significant difference on balance among the different academic achievement irrespective of gender.
4. There was no significant difference between genders irrespective of different academic achievement on balance.
5. There was no significant difference on balance among the gender at different academic achievement.

RECOMMENDATIONS

Based on the findings of the present investigation the following recommendations were drawn.

1. Similar studies may be conducted on male and female respondents in academic discipline and at university levels.
2. Similar studies may be conducted taking the university semesters marks and school grades point marks.
3. A study may be conducted to select the most important independent variables in the order of priority towards criterion variables.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp46-48

Why Every Athlete Should Need Yoga

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Every athlete irrespective of sport or discipline has the potential to enhance their ability by adopting a consistent yoga practice. Today's top athletes have a unique ability to consistently perform at their highest potential in comparison to their competition. For high school, college and professional sports, most athletes are very similar in physical abilities, so how are some athletes able to consistently dominate their competitions.
The most important benefit of yoga is physical and mental health therapy. The ageing process which is largely an artificial condition, caused mainly by autointoxication i. e. self poisoning, can be slowed down by practicing yoga, by keeping the body clean ,flexible and well lubricated.
According to medical scientist, Yoga therapy is successful because of the balance created in the nervous and endocrine systems, which directly influences all other systems and organs of the body. Yoga acts both as a curative and preventive therapy. The very essence of yoga lies in attaining mental peace improved concentration powers. Through the practice of yoga we become aware of inter connectedness between our emotional mental and physical levels.

Yoga improving strength - Routine and consistent practice of the various yoga As*ana* helped to build strength and improve lean muscle mass. Most notably with respect to several muscle groups under-utilized in the athletic disciplines of swimming, cycling and running. These gains have enhanced core body stability and significantly impeded overuse injury by strengthening the supportive but otherwise under-developed muscles surrounding the more utilized muscles, creating a more balanced and optimally functional overall strength.Looking for a new way to get in your resistance work? You might be surprised to find that yoga makes a perfect companion for athletes of all sports as well as the "Jack-of-all-trade" fitness enthusiasts. Yoga can help you develop better a breathing technique while it improvises your balance, flexibility, core strength, and endurance.

Ref: 1. Yoga helps improve mental focus and Athletic performance
By Christina Geithner (Feb: 2010)
2. Benefits of yoga stretch beyond flexibility- By Jogi Bhagat
(Sept.2011)
3. Why yoga can benefit Endurance in Athletes- By Kellye mills

Prolonged Peak Physical Performance - A dominate athlete will perform at their highest physical ability, pushing their body to its limit, until the very end of their performance, and will do this consistently over each and every performance

Great Balance-Swimmer must have always been rather flexible. But the balance is historically horrible, through a consistent yoga practice, athletes coordination and balance have improved immensely. It is important that Better balance and coordination means enhanced control over how athletes move their body, which in turns leads to better technique and form the brass ring every athlete spends a career refining, whether your focus is a swim stroke, mallakamba twist, drafts and catches, shuttle and volley ball jump shots, wrestling moves, foot ball heading and Pele shot.

Ability to Prevent Serious Injury - A dominant athlete is able to avoid serious injury during each and every performance

Flexibility - Yoga invariably improves joint and muscular flexibility, which is crucial to the body's overall structural soundness. Enhanced joint and muscle pliancy translates to greater range of motion, or an increase in the performance latitude for a particular movement or series of movements. For example, a swimmer with supple shoulder and hip joints is able to capture and pull more water than a swimmer with a more limited range of motion. The result is more forward movement per stroke as well as enhanced muscular economy. In turn, this increased range of motion provides a greater ability to strength condition a particular muscle group due to the amelioration in overall force that can be exerted with each movement.

Great recovery: A dominant athlete is able to recover more quickly, both mentally and physically, over their competition. They are able to continually compete again, and even at higher mental and physical level than previously, as their competition get tougher and they move towards successful way.

Physical Benefits of Yoga:

Yoga Improves Breathing
Yoga Improves Balance
Yoga Increases Range of Motion
Yoga Improves Recovery Time
Yoga Strengthen Ankles & Knees
Yoga Strengthen Tendons & Ligaments
Yoga Decreases Injuries
Yoga Increases Body Awareness

Yoga exercises helps in mental (emotional) health –

When yoga is used as part of a regular exercise regime, there can be many benefits beyond flexibility or strength training. A lot of athletes use yoga exercises as a form of meditation to clear the mind before a game, but the benefits of yoga extend beyond cleansing the mind. If you are thinking about starting an exercise routine, you might consider using yoga, because there are many emotional benefits of using yoga regularly.

Strong Mental Focus - A dominant athlete is able to maintain a higher level of mental focus, awareness and concentration over his competition, some term this as performing "In the Zone".

Yoga Reduces Stress - One of the best emotional health benefits of yoga is the fact that yoga exercises can reduce stress, which is very important for an athlete. Often times, an athlete will become overwhelmed with an upcoming game or meet, and this can really cause a lot of stress for them, which will hinder athletic performance. Yoga exercises require a lot of concentration, and this means an athlete will be concentrating on the aim at hand, instead of thinking about a sport or game. When an athlete has the ability to concentrate only on the yoga exercises, it can help him reduce overall stress levels, which might increase athletic ability during the competition.

Yoga Increases Concentration-Another important emotional health benefit of yoga is that, it can increase overall concentration, which is very important for an athlete. The ability to concentrate is especially vital during conditioning, a game or an athletic meet, and it can really help them to succeed in sports. Yoga helps to increase concentration levels in an athlete because due to the concentration is needed during the yoga poses. When an athlete performs a yoga pose, he has to focus only on the pose and breathing techniques needed for that exercise, which requires a lot of concentration.

Yoga Relieves Depression - Yoga can also help relieve depression symptoms in an athlete, which can hinder athletic ability or cause them to feel like a failure. When an athlete performs yoga exercises, it can help get rid of the negative energy within the body, which is released through the various poses. If an athlete performs yoga exercises regularly, he will come to know that the depression starts going away, and he will feel overall more positive about life. Since yoga helps the mind and body connection, while also balancing hormones in the body, it is logical that it can relieve depression symptoms. Yoga exercises probably will not relieve an athlete of all their depression symptoms, so a doctor still might be needed for therapy, but it can help reduce the negative energy significantly. If an athlete continues with the yoga exercises through an extended period of time, they will notice better performance in sports, and their esteem will increase as well.

Yoga Increase Overall Mood and Happiness - Yoga is known to increase your overall mood and happiness, which can significantly help an athlete. If an athlete is in a bad mood or is not happy, this can hinder his or her athletic ability during a game. Yoga exercises help balance the hormones within the body, which are responsible for many things, such as mood and quality of life. When an athlete practices yoga, his nervous system will become balanced over time, leading to an increased outlook on life in general. Yoga also help to increase the awareness of the body, create a healthier feeling body, and can increase the mind and body connection, which will also help increase the overall mood of an athlete.

Various Mental Benefits of Yoga:

Presence of mind
Controlled Breathing & Heart Rate
Body and Mind Awareness
Control the Stress and Anxiety
Internal Discipline and Mind Concentration
Relaxation for Healing & Recovery

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp49-51

Effect Of Selected Kalaripayattu Skills Training Programme On Selected Psychomotor Variables Of High School Boys

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Abstract

The purpose of the study was to investigate the effect of selected Kalaripayattu skills training programme on selected psycho motor variables of high school boys. For the present study, forty students were randomly selected as samples from swami Shivanandha high schools, periyanaikanpalayam, Coimbatore. They were divided into two equal groups. Each group consists of 20 subjects. Group - I was underwent to Kalaripayattu skill training group (KTG), Group – II acted as control group. They didn't undergo for any specific training programme. The age of subjects were ranged from 13-15 years. The researcher had been selected the following variables for the present study: coordination and balance. The selected variables were assessed by using standardized test. The training programme was fixed for five days per week over a period of eight weeks. The total duration of the training session was fixed for sixty minutes. The data was collected before and after eight weeks of training programme. The collected data was analyzed by using depended t-test. The level of significance was fixed at 0.05. The findings of the present study have strongly indicates that Kalaripayattu skill training have significant effect on selected psychomotor variables i.e., coordination and balance of high school boys.

INTRODUCTION

Kalaripayattu means battlefield practices or training that takes place in an arena or a gymnasium of specific dimensions with mud flooring. This is an ancient traditional martial art form of Kerala, India. Basis of all martial art form like Karate, Kungfu was originally developed from Kalaripayattu. The northern styles of Kalaripayattu are characterized by high jumping and kicking techniques, low stances, blows and blocks delivered by arms and leg that are almost fully extended and a high level of energetic and acrobatic movement. Warming up gymnastic techniques is very strenuous (Chandran et.al. 2004).Coordination is the ability to carry out a series of movements smoothly and effectively. Such movements happen as a result of nervous system and muscular system working well together. It improves with practice very many of the toys we played with when we were young helped to develop our whole body coordination as well as hand-eye and foot-eye Coordination. With good coaching and plenty of practice we soon become well coordinated (Beashel and Taylor, 1997). Balance is an ability to maintain the center of gravity of a body within the base of support with minimal postural sway. When exercising the ability to balance, one is said to be balancing. Balancing requires concurrent processing of inputs from multiple senses, including equilibrioception (from the vestibular system), vision, and perception of pressure and proprioception (from the somatosensory system), while the motor system simultaneously controls muscle actions. The senses must detect changes of body position with respect to the base, regardless of whether the body moves or the base moves. The limit of stability may be described by an irregular conical envelope above the support base (Hutchinson & Karen, 1995).

Statement of the problem

The purpose of the study was to find out the effect of selected Kalaripayattu skills training programme on selected psycho motor variables of high school boys.

Hypothesis

It was hypothesized that the Kalaripayattu skills training programme shows significant improvement on selected psychomotor variables when compared to control group.

METHODOLOGY

For the purpose of the present study, forty students were randomly selected as samples from swami Shivanandha high schools, periyanaikanpalayam, Coimbatore. They were divided into two equal groups. Each group consists of 20 subjects. Group - I was underwent to Kalaripayattu skill training group (KTG), Group – II acted as control group. They didn't undergo for any specific training programme. The age of subjects were ranged from 13-15 years. The researcher had been selected the following variables for the present study: coordination and balance. In this study Kalaripayattu skills training acted as independent variable, coordination and balance were acted as depended variables. The selected variables were assessed by using standardized test. The training programme was fixed for five days per week over a period of eight weeks. The total duration of the training session was fixed for sixty minutes. The data was collected before and after eight weeks of training programme. The collected data was analyzed by using depended t-test. The level of significance was fixed at 0.05.

Training procedure

The data will be taken for both the groups before and after the experimental period of eight weeks. After the initial measurements the specially designed training programme was given to the experimental group. The training sessions were conducted five days a over a period of eight weeks. The total duration of the training session was fixed for sixty minutes with including warm-up and warm-down. The following drills will be used for this training namely, Near kaal, Kone kaal, Akam kaal, Veethu kaal, Puram kaal, Pakachakkal and Gaja vadivu. Every two weeks the mode of drills will be changed. The sets and repetitions will be fixed for eight weeks (i.e. 2set, 3 reps). The load intensity was kept low to moderate in first two week and increased progressively in proceeding week from moderate to high.

Analysis Of The Data And Result Of The Study

Table - I: Computation of 't ratio' of Coordination and Balance of Experimental Group

Variables	Pre mean ± S.D	Post mean ± S.D	Mean. Diff	Std. Error	't' ratio
Co-ordination	55.40 ±14.28	50.20 ± 14.16	5.20	1.00	5.21*
Balance	0.52 ± 0.04	0.75 ± 0.24	0.23	0.05	4.85*

*Significant at 0.05 level

Table – I indicates that the obtained't' ratio of selected psycho motor variables were 5.21 (Co-ordination) and 4.85 (Balance). It was greater than the table value of 2.09 for degrees of freedom 1, 19. It was observed that the mean gains and losses made from pre and post-test were significantly improved the eight weeks of kalaripayattu skill training.

Table - II: Computation of 't ratio' of Coordination and Balance of Control Group

Variables	Pre mean ± S.D	Post mean ± S.D	Mean. Diff	Std. Error	't' ratio
Co-ordination	56.85 ± 16.11	56.35 ± 15.59	0.50	0.39	1.27
Balance	0.53 ± 0.12	0.54 ± 0.12	0.01	0.01	1.05

*Significant at 0.05 level

Table – II indicates that the obtained't' ratio of selected psycho motor variables were 1.27 (co-ordination) and 1.05 (balance). It was lesser than the table value of 2.09 for degrees of freedom 1, 19. It was observed that the mean gains and losses made from pre and post-test were not significantly improved.

DISCUSSION ON FINDINGS

After collection of data, appropriate statistical analysis has been done. The results, in general, support the theory that kalaripayattu skill training improves selected psycho motor variables of high school boys. We found that experimental group improved significantly which is finding between pre to post test. From the findings it was evident that the treatment given to experimental group found to enhance the kalaripayattu skill training of high school boys in comparison to control group for pre to post (8weeks) test because the tabulated value was found approximately more than required value to be significant. It was observed that the kalaripayattu skill training significantly improved in above said variables coordination 9.39% and agility 44.23%,).

The results of this study support the use of high school boys have been exposed first time to kalaripayattu skill training programme which is highly scientific and systematic in nature because of which optimum adaptation and enhancement in psychomotor performance has been seen. It is proved even by the available literature by Kannan pugazhendi, (2008) has contribute a article on martial arts of South India in Jopess. Kalaripayattu is the ideal training for any Indian school child to develop all the motor qualities like speed, strength, power, agility, endurance, coordination, balance, timing and reflexes.

CONCLUSIONS

It was concluded that eight weeks of selected Kalaripayattu training has significantly improvement on co-ordination of High school boys.
It was concluded that eight weeks of selected Kalaripayattu training has significantly improvement on balance of High school boys.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp52-56

Information Technology For Sports Professionals

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ABSTRACT
Information technology as other technologies can be the relationship between hardware, software, networks and capabilities of these tools and measures that can be defined due. Technology crucial to production and services. New technologies and advanced methods of the past quickly outdated and will lead and support services are superior. Volume of information available to information technology organizations and individuals increases. Great sports institutions in the world is now one of the largest organizations are the way they as an indicator of advanced and developing countries have become. Economy suffered from changes made with a very large volume of trade and job creation as one of the phenomena of modern life and human life has become. Information technology had made played vital role in improving various parts of human being life. It had played unexpected role in physical education, sports and games for making it more significant among other professions.

Key word: IT, CT, LAN, WANS and Hawk-Eye

The Technological Revolution
We are living in the midst of one of those very unusual occurrences that come along once every few generations: a society wide paradigm shift. The close of the last millennium has seen a fundamental change that is moving society the age of industry to the age of information. The currency in this new society that is being formed is information and the medium of exchange is called IT (and sometimes computer technology - CT). IT is simply the tools and methods used for the identification, organization and manipulation of facts that we call data. IT has become the engine that is driving all sectors of today's economy be it industry, government, education or indeed, sports.
The most important piece of equipment that lies at the heart of the whole IT process is the computer. The computer and the software that it runs is an essential element in the new societal paradigm and it is a key to success for the modern sports manager. It is the piece of equipment that allows the sports administrator to maximize the return on scarce resources whether this is people, facilities and equipment or finances. In turn, it is also perhaps the single most important tool to the sports administrator to extend the reach of sport and recreational programming to as many potential participants as possible.
Just as money has been the currency and a source of power in the old paradigm, information is the currency and a source of power in the new paradigm. No where is the old saying "that knowledge is power" more true than in a society where information or data is the force that drives the new economy. The secret to managing knowledge and information is in the development and maintenance of computer databases.
A database is nothing more than an organized collection of common records that can be searched, accessed and modified. Database software is very widespread as most standard office computer software packages will typically have a simple database program in addition to word processing, spreadsheet and presentation applications.
There is, however, a far more powerful and useful kind of database for sport managers than the one that comes in the standard software suite: the relational database. A relational database is a data management system that stores information in a series of tables consisting of rows and columns of data. When the operator conducts a search, a relational database allows the individual to match data from one table with data from a second to produce a third table or a report.
An illustrative example is that of an individual charged with overseeing a complex sports competition, the details of which have been entered into a relational database. The time for a scheduled event can

be pulled from one table, a roster that has the names of qualified referees who can officiate the event from another table, their availability from a third table resulting in a report that lists all of the personnel who can undertake the officiating task at the appointed place at the appointed time. This task which could take hours of manual manipulation from paper records can be done in a fraction of the time from digital records. Similar event management software can assist the sports manager with a myriad of other tasks associated with the competition ranging from facility scheduling, equipment set up and knock-down, or even ordering soft drinks for the concession stand.

From the foregoing the value of using IT tools can be readily seen for the organization of a competition. These tools are even more important for the day-to-day operation of the sport organization as can be seen by the kinds of sport program information that can be contained within these databases:

First are athlete specific information such as team rosters that include biographic information including name, sex, age, contact information and even clothing sizes for team uniforms. The same database may also contain details on medical conditions, performance history, or other participation characteristics of the athletes.

Another common use is the development of rosters of program support personnel such as officials, timekeepers, drivers, or medical staff. Aside from details such as their addresses, a database of this type might also contain information about availability and reliability. For example, do they actually show up when they volunteer?

Money is always an issue for today's sport management professional. Databases are particularly useful for tracking donors or potential donors whether and they contribute money or in-kind services. In addition to the expected biographic information will be other keys to successful fund rasing such as the source of their motivation or affiliation and the frequency with which they give.

Databases are also essential for other types of administrative information. Examples include accounting and business records, employee files, equipment inventories or facility maintenance records. The organizational marketing information system (MIS) is also typically a database program in which are tracked information such as season ticket sales, gate receipts or merchandising sales. It is particularly useful if different software applications interface with each other seamlessly which is to say, "do the programs talk to each other?" Can, for example, the data entered in the MIS resulting from ticket sales be imported directly to the accounting program?

To be effective, databases can and should be regularly updated to record changes. Bear in mind that the passage of time presents a more comprehensive picture of most activities and the ability to record change and make sense of it is essential for long term survival. Further, there is nothing so constant as change, particularly in sports organizations, and a well thought out and maintained database is a great way to develop and maintain an "institutional memory"; a record of those changes and the impact they have had on the organization.

As great as databases are for effective sport program management, the real power of information technology comes when individual computers are tied together through the medium of a network. This is truly a case where there are synergies created as in 2 + 2 = 6. A computer network simply is the hardware and software required to connect two or more machines together so to allow the sharing of data and other resources. Most larger enterprises, use computer networks to link together their operatives in a common computing environment. All of the permeations and configurations available to the sports administrator are clearly beyond the scope of this presentation except to note that the most common configuration of these kinds of networks are of the client - server variety. This type of network is has a main server that houses most of the information and database files. The individual operatives access the server through their desktop terminals or workstations which are called clients.

Aside from sharing data, a network can share other resources as well. For example, a network can have any number of computers sharing a very good quality printer instead of a using a number of mediocre workstation printers. A powerful server can substantially increase computing speed and effectiveness throughout an organization. So what are the key issues to be addressed when considering the acquisition and implementation of an organizational IT system?

First and foremost, once the decision is made to introduce IT systems to the organization, the table of organization and staffing patterns will need to change. The new IT system cannot simply be "layered on" to the existing structure; it must be imbedded into the organizational processes. The adoption of a IT strategy and associated changes in procedures usually means extensive training for the staff.

The next consideration is that of hardware. What is the computer system configuration and computing capacity that the organization will need? Capacity should not be underestimated as a relational database can consume huge amounts of memory. So do other strategies that enhance organizational effectiveness such as moving data files off the hard drives of individual work stations and onto a file server on a computer network.

Another crucial decision revolves around operating software. Standard vendor prepared software packages are usually developed on the basis of the lowest common denominator for a group of potential clients. It is not uncommon that only about 80% of an organization's needs are met by an off-the-shelf product. So the sport administrator is left with the choice of writing their own software programs or adapting organizational operating procedures to some degree around the software package. The former can be hugely time consuming, very expensive and the end result is not always assured. Generally, the more extensive the modification required for a software product, the more expensive the product becomes and the more difficult it will be to accommodate software upgrades from the vendor.

The Internet

It is important to note that computer networks need not be limited to a single site or facility. Wide Area Networks (WANs) can link together sports administrators located throughout a country. For example, all of the regional offices of a national sports governing body such as the National Football Association can be linked together regardless of their geographic location. All of the operatives so linked can share administrative and programming information and communicate with each other cheaply and efficiently through the medium of e-mail.

The computer network with which the public is most familiar is the Internet and the World - Wide - Web, known simply as "the Web", is what most people think of when we say the "the Internet". While the Internet has been around for decades going all the way back to ARPAnet in the 1960s, the Web is a comparatively new innovation first introduced in the mid 1990s. It is a digital medium which presents information in text, audio and graphics in a simple hyper-text computer language readable by a browser. This medium has simply exploded and today there are more than 15 million web addresses called Uniform Resource Locators (URLs), many with hundreds of individual pages on their sites. Thousands or applications for new URLs are received every week.

The ways that the Web has changed society are almost too numerous to mention. Suffice to say it has become an extremely important medium of communication, education and commerce and its importance in these areas will only continue to grow in the future. In terms of communication, for example, USA Today which is the closest thing a national newspaper in America, gets more than three million visits per day. Some 60% of these visits are to its sports pages. In terms of education, the concept of "distributed learning" or "distance education" gains more adherents with every passing day. Through the U.S. Sports Academy, for example, one can do the entire course of study for an accredited Master of Sport Science degree through the Web without leaving their home. The same possibilities exist at the undergraduate level through the International Sports Academy.

But most significant at this juncture is the marketing and commerce applications of the web. There are virtually no professional sports teams in the United States that do not have a Website and most are linked together through networks of Websites coordinated through the various league offices. Just how tight these linkages are is driven in part by agreements between the league teams on activities such as revenue sharing for media broadcasting rights and merchandise sales.

The Web is currently used by professional sports teams in ways that the developers of this technology never envisioned. For example, there are no English language radio broadcasts in Montreal for the Montreal Expos professional baseball team. Fans wanting hear the play-by-play in English can only do so by calling up the team's Website and listen to it coming across as an audio feed. Another example of how deeply the Internet has penetrated professional sports is how some pro hockey teams now require their players to have e-mail addresses as a means to interact with both the team administration and their fans.

These examples lie at the heart of how the Internet will affect sports in the future: through the changing of the way that the sports fan will consume the sport product. Where in its infancy sport marketing did not extend much beyond putting out a sign on the side walk saying "Game Today", now sports teams have well developed and extensive Websites to more effectively market to their customers. The trend in this regard is also clear. What will emerge is networks of teams and users bound together by a common interest and driven in part by advances in information technology.

These developments are not limited to the upper end of the sports hierarchy. Compared to the extremely high cost of traditional television broadcast, the comparatively low cost of "webcasting" will bring to sports fans events that could never before be seen on traditional broadcast media. A simple example of how this can occur is an annual sailboat race from Mobile to Tampico across the Gulf of Mexico. Last summer the skipper of a local boat participating in the event took photos every four hours with a digital camera of the race activities and uplinked them by a satellite phone to his own website. Thus his friends in the community, or anyone else in the world who stumbled onto the website, could participate in this event as they never could before. Sports events of a distinctly local

flavor without the mass appeal that make them economical for television broadcast can so be distributed through the web to anyone with an interest. The web is not constrained by the limited availability of broadcast channels and high production costs. And while bandwidth is currently an issue for the web, this will resolve itself in the near future with the introduction of broadband technologies.

E-Commerce

It is also appropriate to briefly examine how the web will change the sale and distribution of sporting goods which is central to running sport programs. The relative cost for sports equipment can be an issue for the profession, particularly in terms of trying to broaden the appeal of sport to the greatest number of participants. E-commerce through the Internet holds the potential for containing costs for sports equipment as illustrated by the following example.

In the traditional model of manufacture and distribution through a sporting goods store, it is not uncommon for a tennis racquet which cost $40 to manufacture to be marked up as much as 300 to 400% to as much as $160 as it moves through various wholesalers and retailers in the distribution chain to a tennis player. With an e-commerce arrangement whereby the manufacturer can reach the player directly without going through middlemen, the mark-up in distribution can be reduced to as little as 50% of the traditional retail price resulting in a sale price to the end user of about $80. Very simply, the more middle men in a distribution chain, the greater the benefit derived to the end user from using e-commerce distribution.

E-commerce is well on its way to becoming a force in the world economy as it serves to remove barriers both natural and artificial. The barriers that will vanish include those of time and space as well as national borders both physical and ideological. That this will occur is underscored by the fact that this year e-commerce will employ more than 2 million people and create a turnover in excess of $500 billion. By next year, the turn over is expected to pass $1 trillion.

Assisting the Umpires / Referees

Most professional sports in the United States have long used instant replay and other high-tech aids to help referees make the right call. Gridiron has used video replay systems to check referees' calls for many years. Basketball referees use replay systems to make sure players are shooting within the time allotted by the shot clock. In international cricket, the third umpire has been used, one sitting off the ground with access to TV replays of certain situations (such as disputed catches and boundaries) to advise the central umpires. The umpires out on the field are in communication via wireless technology with the other umpire. The third umpire is also asked to adjudicate on run out decisions, which he makes without consultation with the two central umpires. One sport that has resisted the use of high-tech assistance is soccer/football. Replays could be used to decide off-side decisions, whether a ball passes over the goal line, and clarify penalty decisions.

Soccer Goal Line Technology: There has been a need for goal line technology in soccer, particularly as TV replays are showing in retrospect wrong decisions by the referee. The International Football Association Board (IFAB) has laid down four criteria that they want to see in goal-line systems:

- The technology should only apply to goal-line decisions.
- The system must be 100 per cent accurate.
- The signal sent to the referee must be instantaneous.
- The signal is only communicated to the match officials.

A promising prospect has been a "smartball" loaded with an computer chip, jointly developed by German companies Cairos Technologies and the Fraunhofer Institute for Integrated Circuits, an engineering research and software development company, along with the Adidas athletic clothing and shoe company. The companies' technology uses a network of receivers around the field designed to track the ball's precise position in real time - including exactly when it has fully passed the goal line. That information would be relayed in less than a second to a watch-like device worn by the referee. However, this system has had its setbacks, and another system using, The Hawk-Eye, is being looked at. See more about Technology and Football and Technology in AFL.

Hawk-Eye Technology
Hawk-eye is the name of a computer and camera system which traces a ball's trajectory. It is being used in international cricket and tennis, and many other sports are also looking at making use of this technology. The system is also being trailled in soccer. The Premier League of Football in the UK has agreed to the introduction of goal-line sensors after being given approval by football's rule-makers. The system being developed by the UK company Hawk-Eye, would give a definitive decision on whether the ball had crossed the line. The Hawk Eye uses a camera taking 600 frames a second on the goal-line. The information is analyzed by computer and sent to the referee's headset or a device on his wrist.

Computer Software
There are numerous software packages that are designed for fitness and nutrition professionals to organize data and produce reports, ideal for visitors to this site. Here are a couple of packages that come recommended by Topend Sports.

- Team Beep Test — the most versatile and useful software for conducting and recording results of the bleep / beep test, with results recorded directly onto your computer.
- BodyByte — a universal standalone computer software program specially developed to comprehensively organize and manage all the information associated with nutrition, training and fitness.

Conclusion:
The world of sport is continually changing over the years, and the use of technology is just one of those areas that has made an impact on many sports in the modern day. One criticism of the use of technology is that it can slow down the speed of the game, but on the other hand for many people it makes watching it more enjoyable to see the correct decisions being made. Information technology had made played vital role in improving various parts of human being life. It had played unexpected role in physical education, sports and games for making it more significant among other professions.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp57-59

Yoga And Physical, Mental, Spiritual Health

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Abstract
Health is the basic requirement to enjoy life and have peace. Peace and satisfaction in life can be fulfilled by practicing Yoga. Yoga is not only curative, but precautionary also. It refreshes and relaxes our body. Yoga aims at complete self –development and total self realization. Health play very important role in modern life. Today a man is called healthy only when he is to fit. Fitness includes the realms of mental ,moral, social, emotional fitness as well. Health and fitness both aspects can be attained by proper exercise. Practicing yoga and Physical exercise in the fresh air and sunshine, sleep well-chosen food and proper care of the body , all these helps us to maintain our health fitness This paper explain the role of Yoga and physical exercise in making everyone healthy which will be useful for self development. It also explain the benefits of various types of Asana.

Introduction
Aim of yoga is the attainment of the physical ,mental and spiritual health .Yoga relieves so many aches and pains, physically and mentally. Whatever depth you are seeking, yoga offers a solution. Just concerned about your body? No other exercise system offer this breath and depth. A good yoga class stretches and strengthens all of the major muscle groups in the body making you both stronger and more flexible. It massages the internal organs, increasing blood flow, thereby, bringing more oxygen and nutrients and taking away more toxins. It makes blood arteries more elastic, allowing them to stretch and carry more blood without raising blood pressure.
Do you Concerned about stress and other aspects of the mind? Yogic breathing is the perfect answer. We breathe more deeply and slowly in yoga - in a more relaxed manner. With the deep breathing, the breathing slows down. The relaxation response kicks in. Carry the breathing outside of your practice into your daily life and feel the powerful effect that something so apparently simple as breathing can have on your perspective of the world around you and the problems you deal with each day. Yoga has the tools to assist you in achieving that peace that goes beyond the body, beyond the mind and the intellect. Yoga gives you what you really need. Regular practice of Yoga – frees us from depression. Our relationship with the persons around brings to us joy and pain together. Being intolerant towards others and getting irritable unnecessarily spoils our mind, if we can be aware of our reactions towardsOthers and develop a habit of giving positive response to even a negative situation, that is emotional development. Geeta says that the art of doing work in excellent way without expecting fruit is Yoga. Everybody feels that he or she should become a happy and successful person. Yoga assures us that our dream can be fulfilled provided that we acquire certain attitudes and habits of thinking and living.

Pranayama - Breathing Control In Yoga : Two Sanskrit words are combined in the word 'Pranayama' - Prana and Ayama. 'Prana' means life or life force. 'Ayama' means development or control. Therefore Pranayama is the development and control of life force. It is a form of breathing exercise , very important in yoga. It goes along with the asanas or exercise. Breath is the life force that sustains life. Nobody can survive more than a few minutes without air. When the breath stops, life ends. The Forefathers of Yoga developed a special system- 'Pranayama' to increase, develop and control this life force. Normal breathing use only a fraction of our potential respiratory capacity. Pranayama helps to control this life force in a superior and extra ordinary way to reap maximum benefits. There are various types of Pranayama. Some of the popular forms are Ujjayee, Shitali, Viloma, Kapalabhati, Anuloma, Suryabhedana, Bhastrika etc. There are variations in performing different Pranayamas. Some of them can be done in a sitting position while others in a standing line or sitting position. Some of the Pranayama are difficult and complicated to perform while others are easy. Pranayama can be mastered only gradually.

Yoga and Asanas

Asanas begin with the 'Surya Namaskar' or sun salutation. It is a series of gentle flowing movements synchronized with the breath. This excellent warm up exercise consists of a sequence of positions that move the spine in various ways and promote flexibility in the limbs. It is of special benefit to beginners, to stiff people, and to the elderly, since it helps the body to gain flexibility. It also regulates the breath and focuses the mind.

Utthan Pada Asana

In Utthan Pada Asana, both the legs are lifted upwards. This asana gives excessive strain to the spine. In case of any spinal injury this asana can be practiced by lifting one leg at a time.

Benefits : Strengthens the spinal code and corrects disorders of the back. Reduces paunch and removes constipation, indigestion

Bhujanga Asana (The Cobra Posture)

Bhujanga or Cobra posture is a popular asana and it is always practiced as the first in a series of backward bending movements. In this asana the spine is arched backward gently promoting flexibility.

Benefits : Increases flexibility, rejuvenates spinal nerves and brings a rich blood supply to the spinal region. Activates and energizes the upper areas of the body like the chest, shoulders, neck, face and head, giving a youthful appearance. Corrects various abnormal troubles like constipation, indigestion and increases appetite. It has some special benefits for women. Helps relieve problems of the uterus and ovaries and menstrual problems. A regular practice of this asana makes child birth easy.

Sarvanga Asana (The Shoulder Stand)

The Sarvanga Asana is one of the most treasured asanas, said to benefit the whole body. In this asana the whole body weight rests on the shoulders and the neck and upper back regions are stretched to the limit. Beginners should practice the sarvanga asana in a moderate way and gradually attempt the full posture.

Benefits : Strengthens and balances the function of the thyroid which supervises the other glands, in a most effective way. As a result of the reverse blood circulation due to this asana, it brings youthfulness, strength and nourishes the inner cells, tissues and all the organs. It cures impotency, frigidity, lack of sexual power and gives vitality to the practitioner. Centralizes the blood supply in the spinal column and stretches the spine helping to keep it strong and elastic.

Physical Fitness :

Physical fitness is the result of regular physical activity, proper diet and nutrition, and proper rest for physical recovery. Mental and emotional health as an important part of overall fitness. This is often presented in textbooks as a triangle made up of three sub-sections which represent physical, emotional, and mental fitness. Hence, one may be physically fit but may still suffer from a mental illness or have emotional problems. The "ideal triangle" is balanced in all areas. Physical fitness provides more than just the ability to do something. People who are fitter are healthier and lead better lives. Many of the leading causes of death are lifestyle diseases that can be cured by simple exercise. Exercise can also offer other benefits, including strengthened muscles, increased flexibility, and stronger bones.

Regular activity also promises mental-health benefits, like relieving stress and anxiety. It can help you sleep better and renew your energy. If exercise could be bottled, it would be a best-selling potion at the local pharmacy. Virtually everyone can get health benefits from activity. But every few years, surveys confirm the well-known fact that most people aren't active enough. Unfortunately, we pay for it. The American Heart Association attributes about 250,000 deaths a year in the US - about 12 percent of total deaths - to lack of regular physical activity. Most of us have jobs where we sit most of the time, so chances are limited to be physically active at work. We also rely heavily on modern, labor-saving devices - cars, appliances, and power tools - to spare us manual effort. But there's another reason why many people, especially the overweight, avoid activity. Check out the firm, supple bodies shown exercising on television or on magazine covers. They give the impression that exercise is sweaty, strenuous work best reserved for the young, super-fit, and athletic. But the latest research is proving that picture false: Benefits can be gained even from low-intensity activity, like gardening. If you burn more calories than you consume, then you'll shed pounds. For every extra 3,500 calories you spend, you'll drop one pound. Do strenuous exercise, and you'll burn calories in a hurry. And you

can burn the same number of calories with gentler activity: If you're not familiar with the number of calories burned during exercise, you may be discouraged when you first learn about it. For instance, if you weigh 150 pounds and go on a brisk, 1-mile walk for 20 minutes, you'll expend about 100 calories, considerably short of the 3,500 calories needed to drop a pound.

But such efforts add up. If you expend an extra 300 calories a day through activity and reduce your dietary intake another 200 calories, then by the end of a week, you'll have a calorie deficit of 3,500, comparable to a one-pound weight loss. This is precisely the kind of gradual success that experts recommend for long-term weight management. Exercise also has other body-slimming effects. It builds muscle and displaces fat. A given volume of muscle weighs more than the same bulk of fat. So your bathroom scale may not record dramatic changes, but your clothes will be looser, and you'll have a trimmer body shape. Because exercise builds muscle, it may also help counter a problem caused by dieting. When you reduce calories, your body metabolism may slack off and burn calories more slowly. This makes further weight loss more difficult. But some research suggests regular activity helps correct this slowdown and makes it easier to keep shedding pounds. The more active you are, the more calories you'll burn, which can help with weight loss. And exercise also promotes fat loss and builds muscle. This, in turn, increases your body's metabolic rate, the rate at which you burn calories, even after you've finished exercising. Weight loss by reducing your calorie intake without activity can have just the opposite effect: It can cause your body to break down muscle, which ultimately lowers your metabolic rate and makes losing weight even harder. The problem of reducing your calorie intake without exercise is compounded when people go off their diets. Because they've lost muscle, they tend to regain their weight quickly and then some. A better approach is to increase activity, which builds muscle, at the same time that you're cutting back on excess calories from food. Physical activity can also reduce stress and regulate your appetite, making it easier to curb the urge to overeat.

Conclusion :

The forgoing discussion elaborates the importance of Yoga, Asnas and physical exercise . If one does the regular practice of asanas, yoga will result the self development mentally, physically and socially.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp60-63

Prediction Of 100 M Speed Performances In Relation To Anthropometric Measurements And Specific Fitness Tests

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Abstract:The purpose of the study was to develop the regression equation for the prediction of 100 meter performance of male athletes and also to determine the correlation between the selected anthropometric and specific fitness tests. The ridge regression and product moment methods were used to develop regression equation and for calculation of correlation respectively. The study was conducted on twenty two 100m male sprinters who were preparing for various competitions in Sports Authority of India southern centre Bangalore and various SAI training centers. In addition to 100m competition performance, various selected specific fitness and anthropometric measurements were taken on each athlete by using standard instruments, following standardized techniques.From the results it was found that 100 meter performance is highly correlated with 30m and 60m, 300 m, body weight, height Lean Body Mass, body fat, Standing Broad jump, 10Boundings and 4kg overhead backward throw variables. A non-significant correlation was found between 100m performance and trunk flexibility.From this it is clear that, an increase in the readings of body weight, height Lean Body Mass, Standing Broad jump, 10 Bounding and 4kg overhead backward throw will increase the performance of 100 sprinters.We can also make out that a decrease in the BF% will increase the performance. Similarly, decrease in time taken to cover 30m and 60m will enhance the performance of 100 meter runner.It has been also found that almost all the selected anthropometric and specific fitness variables were significantly inter correlated, except for Forward bend and reach variable.

INTRODUCTION:

Sports' training is a long term training process and for best results it has to be controlled and regulated. Without effective control of sports training the desired results cannot be achieved. On the basis of test results one can conclude nature and amount of training to be carried out in future training cycle.Analysis of training of the world's best track sprinters indicate that top performance in short distance events are not an outcome of training of one or two years. An intensive training with specific objectives over many years is the main reason for getting to the top **(Schmolinsky1978, Arthur 1981, Bauersfeld 1998)**.

Chauhan et. al (2003) conducted study on school boys of Haryana in relation to their anthropometric measurements and sprinting ability. It was found that body composition variables, lean body mass and fat weight have significant and negative correlations with sprinting performance (100meter run). This clearly shows that negative correlation with lean body mass and fat weight with performance decrease the time to complete the 100 meter sprint. **Singh et.al (2009)** Conducted study on effect of plyometric drills executed in vertical and horizontal plane on running speed. He concluded that various jumping exercises executed in vertical and horizontal plane, leads to improvement in running speed. **Jain (2004)** indicated in his study that there are many components in the body, which also play an important role called body composition, include muscle mass , bone mass and fat mass. Higher lean body mass (muscle mass and bone mass) and lower fat mass is an indicator of good health by means of scientific back up because fat mass is less metabolically active than lean body mass. To keep body physically fit as well as mentally fit the higher the lean body mass and the lower the fat mass, greater the fitness.

Jossen et.al. (2007) conducted study on 60 boys 11 to 15 years age group to identify the relationship between thigh girth , leg strength , leg length and flexibility on sprinting performance. It was found that among 11 and 12 years boys, there was positive and significant relationship between sprinting performance and thigh girth ,leg strength and leg length. It was also found that there was no

significant correlation between ankle flexibility and sit and reach to sprinting performance. When partial correlations were computed, there was significant correlation between sprinting performance and leg strength. But in the age group between 14 and 15 years boys there was significant correlation between sprinting performance and leg length and no significant correlation between thigh girth, leg strength, ankle flexibility and sit and reach. When partial correlation was computed, leg length had significant correlation to sprinting performance. Sprinting performance had no significant relationship with thigh girth, leg strength, ankle flexibility and sit and reach. **Dare et.al. (1998)** suggested below mentioned tests to find out the sprinting ability of the athlete.

- 30m flying start To measure speed
- 30m crouch start To measure acceleration
- 60m crouch start To measure speed endurance (Alactic)
- Standing long jump To measure leg power

The sprint is determined by the ability to accelerate, the magnitude of maximum velocity and the ability to maintain velocity against the onset of fatigue. Sprint performances depend on various fitness and body constitutional parameters. Improving one of these parameters may improve the whole performance. The sprinters are requiring more then just the finish time, to evaluate and prepare properly their racing proficiency. Selection of cyclic and acyclic exercises for the development of various competition performances or performance determining factors is very complex and it should be done very carefully. Various studies in the field of competitive sports suggest specific exercises to develop competition performance in a particular event/sports discipline **(Singh et. al., 2003).** Several research studies conducted by many scientists, i.e Clarke (1957); Tanner (1964); Chauhan (2003); Singh et. al. (2003); Ranawat and Kang (2010) have given the characteristics of various sportsmen for specific events and relationship of body measurements with physical fitness of specific games and sports, to assist in the talent selection of sportsperson. They have also emphasized that top level performance in particular event demands particular fitness and anthropometric characteristics.

Considering the above mentioned studies, one can conclude that various selected specific fitness and body constitutional parameters are very important for achieving high level of performance in sprinting events.

Therefore, in this study an attempt is made to find out the relationship of selected fitness and anthropometric parameters with performance of elite 100m male sprinters during the process of developing the equation of prediction.

METHODOLOGY: The present study was conducted on twenty two 100m male elite sprinters, who were preparing for various domestic meets, Asian and Commonwealth competitions at SAI, Southern centre Bangalore and other south sub training centers.

The standard testing procedure were applied to measure selected anthropometric and specific fitness variables like height, body weight, body fat%, lean body mass, 30m, 60m, 300m, Standing Broad Jump (SBJ), 10 bounding and Forward bend and reach(FBR) and Over head backward throw of 4 kg shot (OHBT) . 100m performance was recorded either during the domestic trial or domestic and international competitions.

To have a feel for the data, some descriptive statistics like Mean, SD and Standard Error (mean) were computed for the above said variables. They are given in table -1 and table- 2.

Further to meet the main objectives of the present study, Pearson's Product moment correlation coefficient and multiple linear regression statistical tools/techniques were used. During the process of developing regression equation passing through the origin, we came across the inter dependency of the independent variables, which is evident from the correlation matrix given in table no.3. In statistical literature this is called as multicollinearity problem. To tackle this problem, we have used ridge regression estimation technique. After the multicollinearity problem was solved, since there were many predictors in the equation, we have used backward variable selection method to select only those predictors which are significantly contributing to the model. The above work was carried out using the statistical packages SPSS (version 11.5) and R.

RESULT AND INTERPRETATION

Table-1
Mean, SD and Std Error (Mean) values of 100m performance and selected specific fitness variables

Variables	100m (Sec)	30 m (Sec)	60m (sec)	300m (sec)	S.B.J (cms)	10 Boundings (mts)	4kg OHBTh (mts)	FBR (cms)
Mean	10.773	3.7809	6.8036	35.8136	290.3182	28.9636	15.76	13.8636
SD	0.310	0.11731	0.1565	1.24223	17.45576	3.41079	2.31459	2.47455
SE mean	.0662	0.025	0.0334	0.2648	3.7216	0.7272	0.4935	0.5276

Table-2
Mean, SD and Std Error (Mean) of selected Anthropometric variables

Variables	Height (cms)	Body weight (kgs)	Body Fat (%)	Lean body Mass (kgs)
Mean	172.3636	66.8968	10.15	60.1764
SD	5.64249	6.88585	2.17382	6.31084
SE mean	1.203	1.4681	0.4635	1.3455

Table-3
CORRELATION COEFFICIENT AMONG 100M PERFORMANCE AND SELECTED ANTHROPOMETRIC VARIABLES

Variables	Ht	Wt	BF%	LBM	30m	60m	300m	SBJ	10B	4kg	FBR
100m	-.50*	-.67**	.50*	-.75**	.67**	.79**	.68*	-.89**	-.88**	-.87**	0.08
Ht		.83**	.01	.80**	-.43*	-.39	-.44*	.57**	.35	.61**	-.01
BWt			-.03	.98**	-.45*	-.56**	-.46*	.62**	.49*	.68**	-.06
BF%				-.24	.42	.46*	.39	-.58*	-.66**	-.53*	.14
LBM					-.51*	-.64**	-.54*	.72**	.62**	.76**	-.10
30m						.71**	.35	-.75**	-.71**	-.68**	-.11
60m							.61*	-.80**	-.74**	-.72**	.07
300m								-.66**	-.68**	-.63**	-.00
SBJ									.86**	.86**	-.11
10B										.76**	-.12
4kg											.07
FBR											

** Correlation is significant at the 0.01 level.
* Correlation is significant at the 0.05 level.

The results presented in Table-3 show the relationship of 100M performance with selected specific fitness and anthropometric variables.

The results show significant relationship between the 100m performance and other variables considered in the study, except for forward bend and reach variable. **Jossen et.al. (2007)** concluded similar findings in their study on 11 to 15 year old children.A highly positive correlation of 100 meter performance values with 30m, 60m and 300m indicates that shorter the 30 meter, 60 meter and 300 meter timings better the performance in 100 run i.e. decrease in 100 meter time. On the other hand a negative correlation of 100 meter performance with body weight, height, lean body mass variables shows that an increase in the values of these test variables lead to decrease in the 100 meter timing i.e. improvement in 100 meter sprint performance. Further, 100M performance is positively correlated with body fat%. From this it is clear that, a decrease in the body fat % will lead to increase in 100 meter performance by causing decrease in the 100 meter performance values.

Chauhan et. al (2003) concluded that body composition variables, lean body mass and fat weight have significant and negative correlations with sprinting performance (100meter run). This clearly shows that negative correlation with lean body mass and fat weight with performance decrease the time to complete the 100 meter sprint.Similarly a high negative correlation of 100 meter performance with standing broad jump, 10 bounding and 4kg over head backward throw variables shows that an increase in the values of strength tests lead to decrease in the 100 meter timing i.e. improvement in 100 meter sprint performance. Similar conclusions were drawn by **Jossen et.al. (2007)** in their study on young children. We also found that almost all the selected anthropometric and specific fitness variables were significantly inter correlated, except for Forward bend and reach variable. It shows that trunk flexibility measured from standing position does not affect the values in running speed, leg strength, shoulder strength and selected anthropometric variables.

In addition to above given findings we have also observed that, there exists a significant correlation among the predictors.

Table:4 Multiple Correlation and Regression Equation for prediction of 100M

Dependent Variable (y)	Selected Independent Variables	Regression Coefficients	Coefficient of Multiple Regression	Coefficient of Determination of Multiple Regression
100M performance (secs)	Body Weight (Kg)	0.020 (β_1)	0.999	0.9998
	Lean Body Mass (%)	- 0.023 (β_2)		
	30m (secs)	1.209(β_3)		
	300 m (secs)	0.117 (β_4)		

The multiple regression analysis was carried out to develop the equation of prediction of 100 M performance (Y) based on the selected Specific Fitness and Anthropometric variables given in tables 1 and 2 and the resulted regression equation is as given below:

$$y = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4$$

i.e., $$y = 0.020\, x_1 - 0.023\, x_2 + 1.209\, x_3 + 0.117\, x_4$$

where, Y: 100 M performance, X_1: Height, X_2: LBM %, X_3: 30m, X_4: 300m

Hence in simple words, the above equation of prediction is given by

100 M performance = 0.020 Height - 0.023 LBM % +1.209 30m +0.117 300m

The proportion of variation in 100m performance explained by Height, LBM %, 30m and 300m is 0.999 (R^2 i.e., Coefficient of Determination).

Conclusions

A decrease in 30m and 60m and 300 m timings leads to improvement in 100 meter performance value.An increase in the test values of height, body weight, lean body mass, standing broad jump, 10 bounding and 4kg overhead back throw variables leads to improvement in 100 meter run timing. An increase in the 100 meter performance value is possible by decreasing the body fat % value. Trunk flexibility showed statistically insignificant correlation with 100M performance and other independent variables.The regression equation can be used for the prediction of 100M performance based on the predictors: Height, lean body mass %, 30m run and 300m run test values.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp64-66

Study Of 400 Meter Performance In Relation To Seleceted Fitness And Anthropometrical Parameters

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Abstract:The purpose of the study was to analyze the selected anthropometric and fitness parameters of 400M male sprinters in relation to competition performance. The study was conducted on twenty five 400m male sprinters who were preparing for various competitions in various SAI, centers. In addition to fitness and anthropometric test scores the competition performance was also recorded. From the results it was found that all the selected variables show a significant relationship with 400 meter performance accept Body fat %. The results further revealed that running speed and power related variable show a significant relationship with 400 meter performance at .1% level where as anthropometric variables and bend and reach test show a significant relationship at .5% level.So, it was concluded that an increase in the reading of height, body weight, forward bend and reach, standing broad jump, 10 bounding, 1 R.M. bench press, 1 R.M. Half squat and 4 kg over head back throw and a decrease in the reading of 30mts flying start, 30m, 60m and 300m will enhance the performance of 400m runners.

INTRODUCTION:

Athletics is a competitive sports activity made up of several separate events which are divided into two categories that is track events and field events. Track events include sprints, middle and long distances events of cyclic activities and field events consist of throws and jumps of acyclic activities. Sprint events consist of 100 to 400 meter distance runs. The 400 meter is a familiar sprinting event in Track and Field competitions. It was featured in the athletics programme at the Summer Olympics during 1896 for men and 1964 for women. The current men's world record is held by American Michael Johnson, with a time of 43.18 seconds. The current men's National record is held by K.M. Binu with a time of 45.48 seconds.

100m, 200 m and 400m are some of the sprint events which demands supreme efforts, excellent physical fitness, sufficient strength and speed (**Tiwari et.al. (2012).** Maximum sprint speed capability is a significant contributing factor to success in the event, but athletes also require substantial speed-endurance and the ability to cope well with high amounts of lactic acid to sustain a fast speed over a whole lap. Whilst considered to be predominantly an anaerobic event, there is some aerobic involvement and the degree of aerobic training required for 400 meter athletes is open to debate**. (Shepard, 1978).**

Singh et. al. (2003) in their study on 400 meter runners and found that 30mts, 60mts, 200mts, 300mts, 500mts showed high correlation with performance in 400mts event except 2000mts run test. None of the selected distance from 30mts to 500mts showed significant relationship with 2000mts run test. **Chauhan et. al (2003)** conducted study on school boys of Haryana in relation` to their anthropometric measurements and sprinting ability. It was found that body composition variables, lean body mass and fat weight have significant and negative correlations with 100 meter sprinting performance. **Jossen et.al. (2007)** in a study on boys of 11 to 15 years age found that a positively significant relationship exists between sprinting performance and thigh girth, leg strength and leg length in 11 and 12 years boys. But in the age group between 14 and 15 years boys the only significant relationship was found between leg length and sprinting performance. A non significant correlation was found between ankle flexibility and trunk flexibility to sprinting performance. **Singh et.al (2009)** Conducted study to find out the effect of plyometric drills executed in vertical and horizontal plane on running speed. He concluded that various jumping exercises executed in vertical and horizontal plane leads to gain in leg strength, causing improvement in running speed. **Dare et.al. (1998)** suggested 30m flying start to measure speed, 30m crouch start to measure acceleration, 60m

crouch start to measure speed endurance (Alactic), Standing long jump to measure leg power find out the sprinting ability of the athlete. Several research studies conducted by many scientists, **i.e Clarke (1957); Tanner (1964); Chauhan (2003); Singh et. al. (2003); Ranawat and Kang (2010)** have given the characteristics of sportsmen for specific events and emphasized that top level performance in particular event demands particular fitness and anthropometric characteristics.
Considering the above mentioned studies, an attempt has been made to find out the relationship of selected fitness and anthropometric parameters with performance of 400m male sprinters.

METHODOLOGY:

The study was conducted on twenty five 400m male sprinters, who were preparing for various competitions at various SAI training centers.
The standard testing procedure were applied to measure selected anthropometric and specific fitness variables like height, body weight, body fat %, lean body mass, 30m, 60m, 300m, Standing Broad Jump (SBJ), 10 bounding, Forward bend and reach(FBR), and Over head backward throw of 4 kg shot (OHBT). 400m performance was recorded during the domestic meets and time trials for the forth coming competitions.
IBM SPSS Statistics (version 20) was used for computation of Mean, standard deviation and 'r' values to meet the main objectives of the study.

RESULT AND DISCUSSION:

Table-1
Mean and SD values of 400m performance and selected fitness variables of 400m sprinters. (N-25)

S.No.	400m and selected fitness variables	Mean	SD
1	400M performance (Secs)	48.64	1.47
2	30M Standing Start (Secs)	3.75	0.05
3	30M Flying Start (Secs)	2.87	0.15
4	60M Run (Secs)	6.80	0.05
5	300M Run (Secs)	33.70	0.66
6	Standing Broad Jump (Cms)	275.78	82.71
7	10 Boundings (Mts)	30.48	1.59
8	1 R.M. Bench Press (Kgs)	99.80	9.73
9	1 R.M Half Squat (Kgs)	139.60	7.81
10	4 Kg Over head back throw (Kgs)	18.29	1.09
11	Forward bend and reach (Cms)	16.43	1.41

Table-2
Mean and SD values of selected anthropometric variables of 400m sprinters. (N-25)

S.No.	Anthropometric variables	Mean	SD
1	Height (cms)	176.21	4.82
2	Body weight (kgs)	66.52	4.91
3	Body Fat (%)	8.95	1.29
4	Lean body mass (kgs)	60.58	4.66

Table-3
RELATIONSHIP BETWEEN 400M PERFORMANCE AND SELECTED ANTHROPOMETRIC PARAMETERS

Sr. No.	Anthropometrical variables correlated with 400m performance	Co-efficient of correlation "r"
1	Height	-.419*
2	Weight	-.361
3	Fat%	.290
4	Lean Body Mass	-.402*

*. Significant at 0.05 level**. Significant at 0.01 level

Table-4
RELATIONSHIP OF SELECTED FITNESS PARAMETERS WITH 400M PERFORMANCE

Sr. No.	Fitness variables correlated with 400m performance	Co-efficient of correlation "r"
1	30M Standing Start	.727**
2	30M Flying Start	.652**
3	60M Run	.618**
4	300M Run	.728**
5	Standing Broad Jump	-.695**
6	10 Boundings	-.706**
7	1 R.M. Bench Press	-.793**
8	1R.M. Half Squat	-.727**
9	4Kg over head back throw	-.814**
10	Forward bend and reach	-.459*

*. Significant at 0.05 level**. Significant at 0.01 level

Mean, SD of 400m performance and selected anthropometric and specific fitness variables are presented in table No. 1 and 2. The results presented in Table-3 and 4 show the relationship of 400M performance with selected fitness and anthropometric variables.

The results presented in table -3 shows a significant relationship of body height, weight and lean body mass with 400 meter performance. A non significant but positive correlation of Body fat% with 400m performance indicates that fat mass is not a prerequisite for speed performance.

The results presented in table-4 reveal that 400 meter performance is significantly correlated with 30m flying start, 30m run, 60m run, 300m run at 1% level. It indicates that 400 meter performance is a summation of reaction ability, acceleration ability, speed endurance and locomotor speed ability. **Jossen et. al (2007)** and **Singh (2003)** concluded the similar findings in their studies on 11-15 year old children and 400mts elite athletes respectively.

Standing broad jump, 10 bounding, 1R.M. Bench press, 1 R.M. half squat and 4 Kg overhead back throw tests have been found significantly correlated with 400m performance at 1% level. Jumping exercises executed in vertical and horizontal plane, leads to improvement in leg strength causing improvement in running speed (**Singh et.al , 2009). Jossen et.al. (2007)** have drawn similar conclusions in their study on young children.

So, the results reveal that an augment in the values of height, body weight, forward bend and reach, standing broad jump, 10 bounding, 1 R.M. bench press, 1 R.M. Half squat and 4 kg over head back throw and a decline in the values of 30mts flying start, 30m, 60m and 300m will boost the performance of 400m runners.

Conclusions

In track and field there is a need to evaluate the parameters, which facilitate 400 m performance success. Such parameters as leg strength, shoulder strength, stature, running speed, body weight and lean body weight play important role, need to be further evaluated and if required developed and parameter like stature need to be given weightage while selecting the talent.

There is a significant relationship between 400m performance and under distance tests i.e. 30m flying start, 30m standing start, 60m and 300 m.

There is a significant relationship of lower and upper extremity strength tests with 400m performance i.e. standing broad jump, 10 bounding, 1 R.M Bench Press, 1 R.M. Half squat and 4kg overhead back throw variables.

There is a significant relationship between 400 m performance and body height, weight and lean body mass.

Body fat % shows statistically insignificant correlation with 400m performance.

Trunk flexibility showed statistically significant correlation with 400M performance.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp67-70

The brain's own dopamine: Anandamide

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ABSTACT
Neurotransmitter, Anandamide which has a structure very similar to that of *tetrahydrocannabinol* [THC], the active constituent of cannabis. Anandamide is synthesized enzymatically in the areas of the brain that are important in memory, thought processes and control of movement. The brain had its own morphine-like molecule, and the receptors were meant for them - morphine just happened to 'look like' the brain's molecule and so had a similar effect. *Anandamide is a short-lived, fragile molecule*, and does not produce a dramatic natural high, unlike a surge of endorphins, or dopamine. Anandamide acts as a chemical messenger between the embryo and uterus during implantation of the embryo in the uterine wall. The presence of Anandamide is detected in chocolate. Levels of Anandamide are found to be elevated in schizophrenics. During the sports, CB_1 receptors are activated by Anandamide.
Key words: Anandamide, THC, Dopamine.

Introduction:

Anandamide is a molecule which acts as a neurotransmitter, and which has a structure very similar to that of tetrahydrocannabinol [THC], the active constituent of cannabis. It is messenger molecule that plays a role in many bodily activities, including appetite, memory, pain, depression, and fertility. Anandamide,also known as N-arachidonoylethanolamine or AEA,isan endogenous cannabinoid neurotransmitter. The name is taken from the Sanskrit word "ananda", which means "bliss, delight", and amide.[1][2] Anandamide's discovery may lead to the development of an entirely new family of therapeutic drugs. Some studies have linked Anandamide release as a mechanism of analgesic effects induced by exercise, particularly by running.[3] Anandamide was isolated and its structure first described in 1992 by WA Devane, Lumir Hanus et al who were working in a team led by Raphael Mechoulam at the Hebrew University.

Lock and key:
Nerve cells communicate by releasing special 'key' molecules that are intercepted by other nerve cells downstream. There are many different types of molecular keys, each with its own distinctive shape. The surfaces of the target nerve cells are studded with receptors, which are like locks to fit the keys. When the key fits into the receptor, the surface of the nerve cell changes in some way. The keys must be removed again from the lock somehow, or the nerve cell will be permanently prevented from firing. Certain enzymes are produced that remove (by degrading and destroying) the keys after a certain amount of time, so that the nerve cell can go back to work.

Tetrahydrocannabinol:
The brain had its own morphine-like molecule, and the receptors were meant for them - morphine just happened to 'look like' the brain's molecule and so had a similar effect. These morphine-like molecules were eventually discovered, and called enkephalins, the body's natural painkillers.
Drugs that have a powerful effect on the central nervous system often mimic natural molecular keys. For example, morphine is a potent pain killer that was found to lock into an 'opiate receptor' present on nerve cells. Scientists began to look for receptor sites to explain the action of other drugs and toxins in a similar way. In 1988, specific receptors were discovered for THC (Tetrahydrocannabinol , the active ingredient in marijuana).
Tetrahydrocannabinol (THC), isn't found naturally in the body. The existence of a specific 'bliss receptor' for THC implied that it was actually just a forgery of a hitherto unknown natural molecular key. The key was isolated by Israeli scientist Raphael Mechoulam in 1992: arachidonyl ethanolamide, later called 'Anandamide'.

Anandamide:

Anandamide has a streamlined three-dimensional structure that THC mimics, and both molecules slipped easily across the blood-brain barrier. Anandamide is a short-lived, fragile molecule, and does not produce a dramatic natural high, unlike a surge of endorphins, or dopamine—or the THC in a joint. It appears that marijuana increases dopamine and serotonin levels through the intermediary activation of opiate and GABA receptors. It is evident that Anandamide has effect on movement and cognition.

Anandamide is increased in the bloodstream at ovulation and also during copulation. Anandamide is necessary for the implantation of early stage embryos onto the uterus. Real marijuana may have a similar effect. Both Anandamide and marijuana stimulate the appetite and that is where it is lifesaving to infants but a problem to obese adults.

Anandamide has a long hydrocarbon tail which makes it soluble in fat and allows it to easily slip across the blood-brain barrier. Its 3-dimensional shape strongly resembles that of THC. However, THC is a relatively robust molecule, whereas Anandamide is fragile and breaks down rapidly in the body. That is why Anandamide doesn't produce a continual 'natural high'.

Fig.1.The structures of ananadamide (left) and tetrahydrocannabinol (right)

Anandamide is synthesized enzymatically in the areas of the brain that are important in memory, thought processes and control of movement. Research suggests that Anandamide plays a role in the making and breaking of short-term connections between nerve cells, and this is related to learning and memory. Animal studies suggest that too much Anandamide induces forgetfulness. This suggests that if substances could be developed that keep Anandamide from binding to its receptor, these might be used to treat memory loss or even to enhance existing memory. That implies that Anandamide's function is not just to produce bliss.

In 1996, researchers discovered Anandamide in chocolate. They also detected the presence of two substances that might mimic the effects of Anandamide, N-oleoylethanolamine and N-linoleoylethanolamine.

Connections between nerve cells are associated with learning and memory. Nerve cells can make new connections and break old ones. Repeated use of a connection makes it grow stronger; lack of use can cause the connection to be lost. Some biochemical evidence suggests that Anandamide plays a role in the making and breaking of short term neural connections. And animal studies suggest that Anandamide induces forgetfulness. Substances that keep Anandamide from binding to its receptor might be used to treat memory loss.

The human body synthesizes Anandamide from N-arachidonoyl phosphatidylethanolamine (NAPE), which is itself made by transferring arachidonic acid from lecithin to the free amine of cephalinthrough an N-acyltransferase enzyme.

In the mother's womb:

Outside the brain, Anandamide acts as a chemical messenger between the embryo and uterus during implantation of the embryo in the uterine wall. As such, it's one of the first communications that occurs between mother and child.

The highest concentrations of Anandamide in the body were not in the brain, but in the uterus just before embryo implantation (at least, in the animal studies done so far). The concentration of Anandamide changes as the uterus becomes more receptive to embryo implantation. The researchers were able to locate a definite target for the uterus' Anandamide signal: mouse embryos contain more Anandamide receptors than any tissue known, including the brain.

For example, the brain's own cannabis may help women "forget" the pain and stress of childbearing, allowing them to concentrate on the immediate needs of the newborn. Other animal research suggests that the uterus grows Anandamide receptors in heavy concentrations before embryo implantation. Still other studies show that newborn kittens and monkeys have more marijuana receptors in the cortex than adults do, so it is possible that Anandamide may play some role in setting up the development of cortical function in infants.

Chocolate and Anandamide:
Three compounds that strongly resemble Anandamide were found in dark chocolate by Daniele Piomelli and co-workers at the Neurosciences Institute in San Diego. They also found compounds (N-acylethanolamines) that block the breakdown of Anandamide. Piomelli speculates that part of the pleasure of chocolate comes from Anandamide and the Anandamide-preserving N-acylethanolamines. "We are talking about something much, much, much, much milder than a high", he says.The Nature article has been used by some to equate the effects of chocolate and cannabis to bolster arguments about the legalization of marijuana. "It is not that simple," Piomelli says. The response to THC and to the chocolate Anandamides are not at all the same, even if the concentrations could be made comparable.

Schizophrenia:
Schizophrenia is a severe brain disorder resulting in a number of debilitating symptoms. According to the National Institute of Mental Health, schizophrenia affects around 1.1 percent of the general population. Several factors, such as genetics and environments, can exacerbate symptoms of schizophrenia, but the exact cause is still unknown. Researchers have found that levels of Anandamide are elevated in schizophrenics. It appears that this compound is released by the brain in an attempt to control psychotic symptoms, although further research is still needed to confirm this effect.

Neuropsychopharmacologiests examined the levels of Anandamide in cerebrospinal fluid of eight acute paranoid-type schizophrenic patients. The results found that Anandamide levels were eight times higher in these patients than in healthy controls. The researchers also found that Anandamide was negatively correlated with psychotic symptoms in unmedicated schizophrenics, concluding that Anandamide may be an adaptive mechanism used by the brain to combat psychosis.

In Sports:
Runners have long noted that euphoria and sense of well-being are often felt during and after a hard run. Indeed, this mental and physical reward is the reason many runners exercise. The ability to run quickly and for long distance is obviously an important evolutionary advantage, as in the capability to catch food or not.
The “high” experienced by runners and others exercising vigorously has long been explained by endorphins and the opioid receptor system. But since this explanation came the discovery of the endocannabinoid regulatory system consisting of receptors on nerve and other cells and natural cannabinoids that activate these receptors,. For nearly a decade many have thought that this system better explains the mental lift and euphoria people often feel during and after robust exercise.
A small protein cannabinoid receptors operating in the walls of nerve cells in the brain reward exercise. This unlocks a key to voluntary exercise, and perhaps ways to promote it. The endocannabinoid system, especially CB_1 receptors in certain parts of the brain, reward our bodies and minds with pleasurable sensations. This research was with mice, not humans, but the physiology and responses are very similar. Lack (or blockage) of these receptors caused a sharp drop in the amount of exercise control mice were willing to do.
For one to continue to exercise, rather than stopping, depends a lot on how individual feel. If tired and uncomfortable one might well stop; if exhilarated and “in the zone,” to continue. How a person feels during exercise, it turns out, depends much on how much of the feel-good substance, dopamine, our brains produce and receive. Dopamine levels, are controlled in part by our endocannabinoid systems and CB_1 receptors in certain parts of the brain. CB_1 receptors are activated by our natural endocannabinoids such as Anandamide.
Dopamine is an organic chemical produced in several areas of the brain. Many brain functions involve dopamine, especially learning, voluntary movement, reward and motivation. We feel higher dopamine levels as enjoyment and are rewarded by the experience, making us want to continue or repeat. Drugs like cocaine increase and prolong dopamine levels. Study shows dopamine producing nerve cells in the brain’s ventral tegmental area (VTA) known to play an important role in motivation. By working with mice with CB_1 receptors present or absent or blocked, they found marked difference in how much running wheel time the rodents would spend.
Exercise promotes endocannabinoid activation of CB_1 receptors and this activation encourages continued exercise. If we exercise enough to allow them, our bodies reward us for the physical activities that are so good for us. So, “runner’s high” is likely a function of endocannabinoids, along with the endorphins.

The researchers felt, “Thus, a neurobiological reward for endurance exercise may explain why humans and other cursorial mammals habitually engage in aerobic exercise despite the higher associated energy costs and injury risks, and why non-cursorial mammals avoid such locomotor behaviors.”

Conclusion:
There is a key difference between Anandamide and other cannabinoids, such as THC, however. Although they have substantially similar structures, the fact that one is naturally occurring and the other is introduced from outside the brain makes all the difference. While Anandamide is carefully measured out by the brain to regulate certain processes and make them run more smoothly, THC and other marijuana-related cannabinoids interfere with the brain’s chemical balance. Where Anandamide might smooth the coordination of emotions and movement. Where Anandamide inhibits, or limits, the formation of short-term memories during the sleep cycle, THC blocks the formation of short-term memories *while the user is awake*. Clearly, being structurally similar on a molecular level does not make the two substances identical. The brain is deeply complex, mysterious, and delicately balanced. Any chemical added to its mix disrupts its normal functions.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp71-75

Study On Psychological Aspects Among The Semi Finalist Team At South Zone Volleyball Tournament

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Abstract
In sport the psychological aspects of are playing serving as deterministic factor specifically in high level completions Among the psychological aspects anxiety is one of the most predictor since it is related to psycho physiological functions of a player. Such a theoretical construct was impelled the researcher to study the cognitive anxiety, somatic anxiety and self-confidence on teams played before the quarterfinals since all inter-university tournaments are league based.

Methods: To achieve the purpose of the present study as samples players belong to selected teams those who were entered in to semi fnlas at All India Inter University Volleyball tournament totally 48 were selected in the age group of 18-24. Since anxiety has been focused specifically as a psychological determinant and one of the first order performance its related components have to be considered as variables in the present study, Thus the selected variables are : cognitive anxiety, somatic anxiety and self-confidence. To measure these variables Competitive State Anxiety Inventory – 2 (CSAI-2 Martens et al. 1990) was used. The collected data were analyzed be one way analysis of variance to test the hypotheses formula in the present study. **Results:**The results of the present study were: significance mean difference was observed among the teams rankings of semi finals (winner, runner, third and fourth places) on cognitive anxiety, somatic anxiety and self confidence. In cognitive anxiety and somatic anxiety it was observed that winning team has fewer in cognitive anxiety and somatic anxiety as compared to third and fourth place, whereas winning team is not differ significantly. In self confidence, winning team has more self confidence as compared to third and fourth place, whereas winning team is not differ from team secured second place significantly. **Conclusion:** Based on the results the following conclusions have been made: The psychological aspects of cognitive anxiety, somatic anxiety and self confidence are significantly related to the level of performance as the given variables were found to be statistically significant among the teams of semifinalists
Key words: Cognitive anxiety, Somatic anxiety, Self confidence, semi finals,
Nature of the Study: Volleyball is a sport, as its object during the game situation each team has to send the ball regularly over the net to ground it on the opponent's court, and to prevent the ball form being grounded on its own court. In general, keeping the ball within the playing area either in the own court or in the opponent court during the competitive playing conditions player should and must have both physical and mental toughness. Any how because of some internal and external pressures players have to loose their stability in matches' specifically during semifinals. In the above said situations players are more prone to frequent thinking because of pressures from the internal such as enter into league, getting job opportunity, attempt to satisfy the interest of coach or keeping the earlier achievements. It places them under stress which tends to disturb the homeostasis of the body. The common denominator in all of these is fear about the loss of familiarity which breeds anxiety. Thus the issue of anxiety is an important aspect of performance via changes in the body, which can be identified by certain indicators. Such a theoretical construct was impelled the researcher to study on selected psychological aspects s uch as cognitive anxiety, somatic anxiety and self-confidence on teams played before the quarterfinals since all inter-university tournaments are league based.

Purpose of the study : The purpose of the present study was to find out the significant variations if any on selected psychological aspects such as cognitive anxiety, somatic state anxiety and self-confidence among the players belong to the teams of Semi finalists at South –Zone Inter University Volleyball tournament.

Hypotheses :Significant mean difference may exist among the teams of semi finals on selected psychological aspects such as cognitive anxiety, somatic anxiety and self confidence.

Significance of the study :The significance of the present study is as follows.
1.It helps the players to know the level of their competitive anxiety, cognitive anxiety, somatic anxiety and self-confidence while they are in the state of league basis.
2.Since the variables used in the present study are highly a performance related, the coaches and physical directors have to be aware of cognitive anxiety, somatic anxiety and self-confidence not to deviate from the optimum level in order to overcome their negative influences
3.Matches winning in the semi finals are a deciding factor to be a winner or runner. So the league is prestigious one for all teams since it assures any one place on the concerned tournament. This state of condition fostering the players to think about all means and methods needed to win and a source to place under high stress. So findings on criterion measures among the players of semi finalists would help both players and coaches to act positively in the future course of action.
Following the significance of the study, the reviews related to the present study were given here.

Review of related literature: Studies related to the area of the present study have been summarized here whichWould enable to identify its nature and trend
Burton (1988) investigated on psychological aspects as used in the present study of cognitive anxiety, somatic anxiety and self confidence in order to study the impact on Performance. In his study he found that anxious swimmers generally perform slower Times and cognitive anxiety showed a stronger relationship to performance decline than the somatic component. Better performing sprinters tended to control their somatic anxiety better than poorer performers.
Martens (1977) reported that competitive A-trait anxiety)is a good predictor of state anxiety, but state anxiety alone does not adequately predict motor performance. As implication he stated as follows. Persistent anxiety is likely to precipitate Situational (state) anxiety. However, state anxiety even when measured on a sport specific test is not significantly related to motor performance. In the view of Predicting the athletic success Renger (1993) collected the profile of mood states (POMS)in the prediction of athletic success. The POMS is used frequently to assess the trained states of athletes. It is often reputed to be indicate a) when a stale or over strained state exists, and b) profiles that differentiate successful and unsuccessful athletes.
Sonstroem and Bernardo(1982) had argued that intra-individual measure of anxiety and performance should be used to avoid differences in anxiety and performance levels between subjects confounding results. Consequently. Gould et al., (1984). Standardized each individual's set of performance and anxiety measures before conducting their analysis. Further they suggested that the fine neuro-muscular control which was required by their performance task would be particularly sensitive to changes in physiological arousal and that such changes would be reflected in the somatic, rather than the cognitive component of anxiety. Gould et al., (1987) explained the inverted – U, result for somatic state anxiety and performance in terms of a type of analysis used and b) the performance task being assessed. The findings of this study explained that level of anxiety is a significant predictor of performance.
Following the reviews, the methodology adopted in the present study to derive the purpose is briefed as follows.

Methodology The methodology used in the present study is as follows:To achieve the purpose of the present study as samples, the players belong to selected teams those who were entered in to semi finals at All India Inter University Volley ball tournament totally 48 were selected. The samples were in the age group of 18-24. For better sampling, the nature of the tournament was analyzed with various factors such as degree of competition and importance of tournament. To study the psychological aspects of the selected samples as variables related competitive pressures were selected. Anxiety as a psychological determinant and one of the first order performance related component has to be considered in the present study with its related dimension. Thus the selected variables are; cognitive anxiety, somatic anxiety and self-confidence. The selected variables were measures by competitive state anxiety inventory – 2 (Martens et al., 1990) that was used to assess to criterion measures (Cognitive anxiety, somatic anxiety and self confidence) in this study, it is a standardized tool and well-established one, Cronbach's Alpha coefficient of CSAI – 2 for all these components are ; 0.79 (Cognitive Anxiety) 0.82 (Somatic Anxiety) and 0.88 (Self confidence), Before collecting the data from the subjects, with the view to get accuracy in quality of data, the steps were taken to get voluntary response from the subjects. For that the nature and purpose of the present study were clearly informed to them. further the degree of competition and nature of the tournament were also considered in connection with the quality of data. Administering the CSAI-2 questionnaire three hours before the competition tested the subjects.Following this, the collected data were tested by one –way analysis of variance to test the significance of the mean difference among the teams ranked winner,

runner, third and fourth on criterion measures of cognitive anxiety, somatic anxiety and self-confidence. Further, in case of significant mean difference if any on the variables used among them, to find out which pair of group grown up, as post-hoe test the shcefee test was applied. It is the stringiest form of post hoc test. To test the derived results as level of significance 0.05 was chosen. The derived results from the one way analysis of variance on cognitive anxiety, somatic anxiety and self confidence among the teams of among the teams ranked winner, runner, third and fourth at inter university volleyball players were presented in the following tables 1-6 with interpretations.

Table -1 Analysis of variance on cognitive anxiety

Source of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-ratio
Factor	240.41	3	80.13	18.41
Error	191.50	44	4.35	

(table value 2.81 for df 3,44 at 0.05),

Table-1 reveals that the f-value was 18341. The observed F. value (18.41) was found as significant at 0.05 level of confidence since the observed f-value was found to be higher than the required critical value(2.81). It confirms the significance of mean difference exist among the selected teams of semi finals on cognitive anxiety. From the results, it was inferred that cognitive anxiety has significant influence on varied rankings of team that are entered into semi finals. Further to find out which team is grown up for such significances as post-hoc test schefee test was applied. The results of schefee test was given in table-2

Table-2 Schefee test on Cognitive Anxiety

Winner	Runner	Third	Fourth	Mean Difference	Critical value
23.25	24.41	****	****	1.16	2.01
23.25	****	20.16	****	3.09	2.01
23.25	****	****	26.33	3.08	2.01
****	24.41	20.16	****	4.25	2.01
****	24.41	****	26.33	1.92	2.01
****	****	20.16	26.33	6.17	2.01

From the table -2 , it was observed that winner as compared to third and fourth places they were less in cognitive anxiety whereas no difference was observed between the winner and runner. Further when comparing the runner with fourth place they were less in cognitive anxiety whereas cognitive anxiety between runner and fourth difference is not significant. Further in comparing the third and fourth places difference is significant

Table 3 Analysis of variance on somatic anxiety

Source of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-ratio
Factor	316..50	3	105.56	13.97
Error	332.16	44	7.54	

(table value 2.81 for df 3,44 at 0.05),

Table-1 reveals that the f-value was 13.97. The observed F. value (3.97.41) was found as significant at 0.05 level of confidence since the observed f-value was found to be higher than the required critical value(2.81). It confirms the significance of mean difference exist among the selected teams of semi finals on somatic anxiety. From the results, it was inferred that cognitive anxiety has significant influence on varied rankings of team that are entered into semi finals. Further to find out which team is grown up for such significances as post-hoc test schefee test was applied. The results of schefee test was given in table-4

Table -4 Post-hoc test results on Somatic anxiety

Winner	Runner	Third	Fourth	Mean Difference	Critical value
22.58	23.0	****	****	0.41	2.65
22.58	****	19.25	****	3.33	2.65
22.58	****	****	26.55	3.97	2.65
****	23.0	19.25	****	3.75	2.65
****	23.0	****	26.55	3.55	2.65
****	****	19.25	26.55	7.3	2.65

Table -4 explained the results on comparing the somatic anxiety among the teams ranked winner, runner, third and fourth at inter university volleyball players. From the results, it was observed that winner as compared to third and fourth places they were less in somatic anxiety whereas no difference was observed between the winner and runner. In comparing the runner with

third and fourth place they were less in somatic anxiety. Further in comparing the third and fourth places difference is significant.

Table 5 Analysis of variance on Self confidence

Source of variation	Sum of squares	Degrees of freedom	Mean sum of squares	F-ratio
Factor	444.75	3	148.5	57.98
Error	112.5	44	2.55	

(the table value 2.81 for df 3,44 at 0.05),

Table – 5 reveals that the f-value was 57.98.The observed F. value (13.97) was found a statistically significant significant since the F-value was found to higher. It confirms the significance of mean difference exist among the selected teams of semi finals. Further to find out which team is grown up for such significances as post-hoc test schefee test was applied. The results of schefee test is as follows.

Table 6 Results of Post hoc test on Self confidence

Winner	Runner	Third	Fourth	Mean Difference	Critical value
22.75	26.0	****	****	3.25	1.54
22.75	****	24.75	****	2.00	1.54
22.75	****	****	18.0	4.75	1.54
****	26.0	24.75	****	1.25	1.54
****	26.0	****	18.0	8.0	1.54
****	****	24.75	18.0	6.75	1.54

From the results(Table – 4.6) of post-hoc test, it was observed that the performance of winner as compared to runner was statistically significant, third and fourth places they were high in self confidence. In comparing the runner with third and fourth place, significant mean difference was found with fourth place whereas no significant mean difference was found with third place. Further in comparing the third and fourth places difference is significant in self confidence.

Findings : In the criterion measures used in the study, significance mean difference was observed among the teams rankings of semi finals (winner, runner, third and fourth places) on cognitive anxiety, somatic anxiety and self confidence. In cognitive anxiety and somatic anxiety it was observed that winning team has fewer in cognitive anxiety and somatic anxiety as compared to third and fourth place, whereas winning team is not differ significantly. In self confidence, winning team has more self confidence as compared to third and fourth place, whereas winning team is not differ from team secured second place significantly

Testing Hypothesis:Based on the findings of the present study the hypotheses formulated on cognitive anxiety, Somatic anxiety and self confidence was accepted.

Discussion on findings: In the present study the team entered into semi finals was tested on cognitive anxiety, somatic anxiety and self confidence. Of them the significant mean difference was observed that the among the rankings of winner, runner, third and fourth places on cognitive anxiety, somatic anxiety and self confidence. In the post hoe test results it was observed that winning team is less with anxious conditions compared to low rankings team. The reason for this might have been arise from the nature gained on their previous matches and not having the at par competition. Epical research indicates that successful athletes who interpret their anxiety as being facilitative is characterized by high scores on self confidence and low scores on somatic and cognitive anxiety, been found to exert a powerful influence on performance. Krance, et al.,(1994) in higher levels of cognitive- anxiety. Clearly the cognitive interpretation an individual gives to a situation exerts an exerts an effect. Besides studies on elite group of swimmers explained that anxiety intensity levels were higher in subjects who interpreted their anxiety as debilitative as those who reported it as being facilitative (Jones, Hanton, & Swain, 1994). This has ben found to be true of gymnasts(Jones, Swain & Hardy, 1993) as well as basket ballp layers (Swain& jones, 1996). Gould, Petrchlikoff, and Weinberg(1984) have reported that the strongest predictor of cognitive anxiety was years of experience such that the more experience an individual had the lower the level of cognitive anxiety.
For comparatively less in cognitive anxiety and somatic anxiety, that the players of low level rankings, the experience of the players may be one of the causes early mentioned. It has also been substantiated by research conducted with a group of tennis players. Advanced subjects (individuals who had been participating in the sport for an extended period of time) reported more facilitative interpretations of their anxiety than novices (Perry & Williams, 1998).

Further when discussing the results on self confidence in which the winner has higher in the level of confidence than the low level ranking players. It has been confirmed theoretically that in the level of individual performance, self confidence has been found to account for a greater proportion of variance in performance that cognitive or somatic anxiety (Hardy, 1996). Further the results of the present study have been supported by the earlier studies as the amount of self-confidence that an individual possesses has been found to differ among elite and novice athletes. Perrry & Williams (1998) in his study he found that the advanced players had significantly higher levels of self-confidence. This has been found to be true of gymnasts (Bejek & Hagyet,1996) as well as swimmers(Jones, Hanton & Swain, 1994).

Conclusion: The following conclusion has been made in the light of the findings of the present study.In the criterion variables used in the study, significance mean difference was observed among the teams rankings of semi finals (winner, runner, third and fourth places) on cognitive anxiety, somatic anxiety and self confidence. In cognitive anxiety and somatic anxiety it was observed that winning team has fewer in cognitive anxiety and somatic anxiety as compared to third and fourth place, whereas winning team is not differ significantly. In self confidence, winning team has more self confidence as compared to third and fourth place, whereas winning team is not differ from team secured second place significantly. From the results, it was concluded that level of cognitive anxiety, somatic anxiety and self confidence have significant influence in the level of performance. Further the obtained results pertain to third and fourth place, they were found to be similar in the level of cognitive anxiety, somatic anxiety and self confidence.

Suggestions: The following suggestions have been made from the findings of the present study.

1. Players with high anxious can be treated with stress management training such as anxiety management training, inner mental training, yoga, hypnosis, meditation and visual Motor Behavioral Rehearsal.
2. Psychological skills training can be added into the existing training system.
3. Periodical evaluation of players on psychological state would help both players and coaches to function easily at high-level stressful situations.
4. The government, sports associations, sports promoters and universities should concentrate on psychological preparation of players.
5. As far as anxiety is concerned, every individual has possessed both state and trait. But it is differ in the ratio. So evaluating the players to which they belong whether they are dominated in state form or trait form whereby the trainers or coaches ca accommodate to the situations.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp76-79

A Comparative Study Of Hand Eye Coordination Between Sportsmen And Non Sportsmen

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ABSTRACT
The aim of this study was to find out the hand eye coordination between Sportsmen and non Sportsmen. Only one hundred male College students from different Physical Education Training College offering B.P.Ed Degree and General College students (50 Sportsmen and 50 non Sportsmen) whose age range between 22 to 27 years were randomly assigned to training. Mirror drawing test and Finger dexterity test were used for the measurement of hand eye coordination. The Statistical 't' test was applied to investigate the existence of significant difference between Sportsmen and non Sportsmen. . In conclusion Sportsmen performed better in Hand eye coordination tests then non Sportsmen and the difference was statistically significant. Exercise not only gives healthy life style but also improve your Hand eye coordination. so regular exercise is strongly recommended.

KEY WORDS: Hand eye coordination, exercise.

INTRODUCTION

Eye hand coordination is the ability of the eyes and hands to work together as a dynamic whole. The process involves sharing information regarding the progress of one sub movement with the centers controlling another sub-movement, ensuring that the second happens in appropriate relation to the first (Haggard, 1997). Movement in response to stimulus during a game is almost one of the most important features of a good Sportsman. If the athlete is unable to dodge a ball, pass and catch a ball , manoeuvre around a squash court or react to spin ball, then they will not succeed in their sports. Since sports is typically performed under temporal constraints and varying levels of physiological stress/fatigue attempts should be made to examine visual function under more realistic test conditions(Williams and Horn, 1995)The coordination of eye and hand movements to visual targets is fairly well understood. Following the appearance of the peripheral target the saccadic eye movement is typically initiated first and the hand movement second (Biguer et al. 1984). Because of the ballistic nature of saccades the eye fixates on the peripheral target well before the hand movement is completed (Carnahan and Marteniuk 1991). As a result, the retinal and extraretinal information derived from the saccade is thought to contribute to the accurate guidance of the hand to the target. The fact that hand movement accuracy is systematically modulated when eye movements are restricted (Bock 1986) or perturbed in some manner (Binsted and Elliott 1999; de Graaf et al. 1995; van Donkelaar 1997) is consistent with this idea.Hand eye coordination is use of vision to guide movements of the hand for many human activities like eating, sports, using tools etc. (Goyen et al., 2006). To aim at a target location or, reach and perform a task, each sequence of events requires a complex integrated coordination of the hand movement and eye (Rand & Stelmach, 2010). Normal hand eye coordination involves synergistic function of several sensor motor systems vision, touch, motor control, attention, and memory all contribute to even the simplest tasks involving, hand eye coordination (Crawford, medendorp, & Marotta, 2004). The mechanism is dauntingly complex and can potentially involve much of the brain, as well as many recurrent feedback loops (Crawford et al., 2004). However, the brain must implement certain fundamentals transformations in a certain sequence, and it appears to do so in a modular fashion (Crawford et al., 2004).Hand eye coordination is one of the more salient and vital human capabilities and can disrupt various aspects of daily life including school, activities of daily living and social interaction (Goyen et al., 2006).Hand eye coordination is one of the salient skills that form the basis of perceptual motor functions associated with activities of daily living, sports skills, and various other movement based tasks. Perceptual motor skills can be disrupted in various pathological conditions like stroke, TBI, Parkinson's disease, autism, cerebral palsy, developmental disorders, and many others. For the developing child, disruptions of perceptual motor skills can make everyday tasks more and more difficult (Goyen et al., 2006).

Examples of this impact include school-based tasks like learning to write, functional activities including dressing and using cutlery, and engaging with peers in play (Goyen et al., 2006). Beyond the realm of typical motor development and daily activities, hand eye coordination has its implication on the acquisition of sport skill and coaches need to be aware of the developmental sequences of the children. There is also a need to identify effective training techniques to improve the perceptual motor skills to acquire the required sport skill and to enhance performance of those skills when the occasion arises.Hand eye coordination is use of vision to guide movements of the hand for many human activities like eating, sports, using tools etc. (Goyen et al., 2006). To aim at a target location or, reach and perform a task, each sequence of events requires a complex integrated coordination of the hand movement and eye (Rand & Stelmach, 2010). Normal hand eye coordination involves synergistic function of several sensor motor systems vision, touch, motor control, attention, and memory all contribute to even the simplest tasks involving, hand eye coordination (Crawford, medendorp, & Marotta, 2004). The mechanism is dauntingly complex and can potentially involve much of the brain, as well as many recurrent feedback loops (Crawford et al., 2004). However, the brain must implement certain fundamentals transformations in a certain sequence, and it appears to do so in a modular fashion (Crawford et al., 2004).Hand eye coordination is one of the more salient and vital human capabilities and can disrupt various aspects of daily life including school, activities of daily living and social interaction (Goyen et al., 2006).Hand eye coordination plays a significant role in the process of acquiring sports skills. The rate of the skill development varies for each individual but skills are attained in a sequential manner like other milestones (Stricker, 2002). For example, the skill of tracking moving objects and judging velocity often has not fully matured until the age of 6 or 7. From ages 10- 12 strategies like selective attention and use of complex memory mature allowing the individuals of this age to participate in sports that require complex hand eye coordination.Vision is one of the several sensory organs which receive information from the external environment and for years it has been recognized that many sports place demands on vision and particular visual skills. The earliest proponent of this concept was Galen, a Roman Physician who in the second century believed that there is a relationship between ball sports, body and visual status (HITZEMAN &BECKERMAN, 1993). Inspite of this early recognition of visual importance in sports it stood neglected for many years and it was not before the middle of 20th century that new scientific opinions were developed and the thought, “sports being a multidisciplinary approach” came into picture (JAFARZADEHPUR & YARIGHOLI, 2004).There are evidences which support the claims of vision playing an important role in the perceptual ability of an athlete relating proportionately to his/her motor response. Revien & Gabor (1981) stated that visual abilities affect sports performance and the acquisition of motor skills, which can be improved with training. Supporting the same Quevedo et al. (1999); stated that sports vision training is conceived as a group of techniques directed to preserve and improve the visual function, with the goal of incrementing sports performance through a process that involves teaching the visual behavior required in the practice of different sporting activities.

Defination Of Terms

Coordination

The word coordination was first recorded in 1605, it meant "orderly combination" (Barnhart Dictionary of Etymology, 1988). Though the basic meaning of coordination has not changed over the centuries, the contemporary meaning of coordination has become increasingly associated with harmonious and skilful movement: To wit, in Webster's New World Dictionary (1988) coordination is defined as the "harmonious adjustment of action, as of muscles in producing complex movements.

Coordination has been defined as the "harmonious movement of independent body parts" (Dictionary of the Sport & Exercise Sciences, 1991); "the ability to integrate muscle movements into an efficient pattern of movement" (Schurr, 1980), and "the use of muscles in such a manner that they work together smoothly and effectively rather than hinder one another" (Hunter, 1966). Roget's association of coordination and skilful movement was echoed by Schurr: "Coordination makes the difference between good performance and poor

performance."

Method And Materials

Subject: One hundred male college students (50 sports men 50 non sports men) were selected randomly for this study, whose age range from 22 to 25 years. These subjects were selected from different places in West Bengal.

Test/Tool

Finger Dexterity Test: An instrument will be placed before the subject. The S is to insert pins in its wholes, which are to be inserted in two conditions- 1) By Right Hand, 2) By Left Hand. Instructions for Right Hand- keep the pins to the Right Hand side of the S, so that the S may not face any trouble in

picking up the pins. The correct condition of insertion of pins is to start insertion from right side of the S if work started by the right Hand; and then from left to right repeating in the same way till the work is finished. Instruction for Left Hand- keeps the pins to the Left Hand side of the S, so that the S may not face any trouble in picking up the pins. Insertion of pins may be started from left Hand side to Right Hand side and then from Right Hand side to left Hand side repeating it till the work is finished.

Counting of errors in the Finger Dexterity board is very important. The time is noted by the stop watch. Errors are committed when the pins are not inserted correctly or are slanting or otherwise, or are fallen. Insertion of 100 pins in 100 wholes will count one trail. Here Errors are not counted, only time is considered. Minimum times (Seconds) indicate better result.

Mirror Drawing Test

The experiment will be done by pre test post test design. This will be done in three conditions. In the first pre test condition the subject will be given three trails in which he will trace the Star Pattern viewing its image in the Mirror with his Left Hand in the Clockwise direction. In the Second Condition the Subject will learn to trace the path with his Right Hand in the Anti clockwise direction. In this practice/ learning condition he will be given as many till reaches the pre set Criterion of three Errorless consecutive trails. Finally in the Third Condition the subject again traces the Star Patterns three times with his Left Hand in the Clockwise direction.

On hearing 'START' 'S' traces the Star pattern with a Pencil or a Pen viewing its IMAGE in the Mirror. As the 'S' touches or crosses the inner or outer boundaries of the Star Pattern an Error is committed. As the 'S' touches or crosses the inner or outer boundaries of the Star Pattern an Error is committed. The 'S' is advised not to touch or cross the boundaries of the Star Pattern. All the Errors in each trail are marked and Counted by the experimenter manually. And the time taken in each trail is recorded by means of a Stop Watch. The time taken and Errors Committed in each trail are recorded in the data collection table. Alternatively tracing paper is used with the Printed Star Patterns for each trail. Star pattern with tracing paper above it is mounted on the Wooden Base Board and or on elevated aluminium platform with the help of U Pins. All the Errors are marked on the Tracing paper and counted by the experimenter manually. Time taken is recorded as usual employing a Stop Watch. Here Errors are not counted, only time is considered. Minimum times (Seconds) indicate better result.

STATISTICAL PROCEDURE

The Statistical 't' test was applied to investigate the existence of significant difference between Sportsmen and non Sportsmen of their Hand eye coordination.

TABLE -1

Comparison Of Mean Sd And T' Ratio Between Sportsmen And Non Sportsmen In Finger Dexterity Test

VARIABLES	GENDER	NUMBER	MEAN	S.D.	' t'
FINGER DEXTERITY TEST	SPORTS MEN	50	186	31.06	3.84*
FINGER DEXTERITY TEST	NON SPORTS MEN	50	207	26.86	

*Significant at 0.05 level

't' value required to be significant at 0.05 level of confidence with 98 degree of freedom was 1.98

TABLE -2

Comparison Of Mean Sd And T' Ratio Between Sportsmen And Non Sportsmen In Mirror Drawing Test

VARIABLES	GENDER	NUMBER	MEAN	S.D.	' t'
MIRROR DRAWING TEST	SPORTS MEN	50	100.94	11.91	6.92*
MIRROR DRAWING TEST	NON SPORTS MEN	50	121.08	10.29	

*Significant at 0.05 level

't' value required to be significant at 0.05 level of confidence with 98 degree of freedom was 1.98

DISCUSSION AND FINDINGS

This study aimed to compare the Hand eye coordination of sportsmen and non sportsmen. It was found from the above statistical calculation that sportsmen performed better in Hand eye coordination then non sportsmen and the difference was statistically significant. Sedi Akarsu et. al. (2009) supported the present study. The results show that there was an improvement in the subjects that were exposed to the physical exercise. Christenson et al (1988) expressed Visual performances were found to be significantly better in the athletic population compared to non athletes. Ishigaki H et al (1993) reported that the dynamic visual acuity of athletes was superior to that of nonathletic (2) and athletes were faster than non-athletes. Sedi Akarsu et al (2009) proposed that sport activities are beneficial to both eye-hand reaction time and visuospatial intelligence. According to AJPHERD (2010) it can be seen that there was an improvement in the visual skill performance of the players who were

exposed to specific physical exercises. Sports Vision as such includes specific visual determinants which precisely coordinates a player's activity during the game. It has been seen that successful athletes generally have better skill, accuracy and spatio-temporal constraints on visual information acquisition. As such if two similar athletes meet in competition and one has a better trained visual system, the athlete with enhanced visual system will perform better (Loran & Griffiths, 2001). Sport activities often have a close relationship between perception and action therefore temporally constrained sport tasks require that players extract the most valuable source of visual information and use this information to quickly anticipate the opponent's movement outcome (Shim et al. 2006).

Hand-eye co- ordination is the ability of the eyes, hands and body to work together. Co- ordination occurs when the motor system composes complex actions by combining simpler sub-movements. The process involves sharing information about the progress of one sub-movement with the centres controlling another sub-movement, to ensure that the second movement happens in appropriate relation to the first (Haggard, 1997). The visual system should lead to stronger muscle fibers and more efficient neuronal response (Zupan et al., 2006). Exercise not only gives healthy life style but also improve your Hand eye coordination. so exercise is strongly recommended.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp80-82

Nutritional Status and Prevalence of Anaemia among Collegiate Sportswomen in Hyderabad

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Abstract
The general objective of this investigation was to assess the extent of prevalence of anaemia and to study its related symptoms and complications among collegiate sports women from the city of Hyderabad. Accordingly a total of 348 sports women of the age group 17-24 years as available from all the women's colleges, affiliated to Osmania University, Hyderabad and having district, university, state, national or international level representation were selected. Nutritional status of all the 348 collegiate sports women were assessed which included anthropometric measurements (height, weight and BMI), food consumption pattern, haemoglobin levels and clinical symptoms for anaemia. Findings revealed that there was a high prevalence of anaemia (86.2%) among the sports women studied which is reflective of their iron deficiency status The intake of all the nutrients also were far below the recommended daily allowance(RDA) which is reflective of the inadequate dietary pattern and poor nutritional status existing among college students especially adolescent girls. The prevalence state of anaemia among these sportswomen signifies it as a public health problem, calling for sustainable strategies to ameliorate the same for better nutrition, health status and improved sports performance.

Key words: Anaemia, Iron deficiency, Body Mass Index (BMI), Nutritional Status, Recommended dietary Allowance

Introduction

Sports nutrition has emerged as one of the strong decisive factor and an important tool in enhancing sports performance. Women are entering the sports arena and competing equally with men. The number of women participating in recreational and competitive sports has increased dramatically over the last century (Grandjean, 2000). Females who are involved in regular sporting activities will have greater nutritional need and it is very important to maintain the right level of nutrients to prevent any nutritional disorders. Consequently, sports anaemia is most commonly seen in sports women due to their increased requirements. This condition can lead to impaired work performance due to decreased haemoglobin level which reduces the oxygen carrying capacity of the blood for the working muscles. The term "sports anaemia" is commonly used to describe iron depletion and consequent reductions in haemoglobin to anemic levels (Boyadjiev and Taralov, 2001). Athletes may be at risk for developing iron deficiency because of sweat losses, intestinal losses, increased demand for total body haemoglobin, menstrual losses in female and poor dietary intake (ADA, 2003). True anaemia exist in athletes if the haemoglobin level is under 13g/dl in man or 12g/dl in women (Clark, 1998). Thus chronic iron deficiency that results from consistently poor iron intake can negatively affect health, physical and mental performance, and warrants prompt medical intervention and monitoring (Cowell et al., 2003). In this study an attempt has been made to elicit detailed information on the extent of prevalence of anaemia among collegiate sports women and its related complications.

Methodology

All the women's Degree and PG colleges in the city of Hyderabad under Osmania University were selected for the study A total of 348 sports women of the age group 17 to 24 years as available from the above institutions and having district, university, state, national or international level representation were selected. A detailed 25 point questionnaire was formulated, and the data was collected from all the selected sports women. Nutritional status of all 348 sports women was assessed by obtaining their anthropometric data (height, weight and BMI), food and nutrient intake pattern and clinical symptoms .A 24 hour dietary recall method (Kinard et al., 1991) was employed and the food and nutrient intake was computed. Blood haemoglobin levels of all the participants were estimated by using Cyanmethaemoglobin method (NIN, 1983).

Results and discussions

Table 1 give the percentage distribution of BMI values of sports women under study.

TABLE I
Percentage Distribution Of Bmi Values Of Selected Sports Women(N=348)

BMI	BMI Classification*	No.	%
< 16	CED Grade III	16	4.6
16 – 17	CED Grade II	26	7.5
17 – 18.5	CED Grade I	67	19.3
18.5 – 20.0	Low weight - normal	79	22.7
20.0 – 25.0	Normal	118	33.9
25.0 – 30.0	Overweight – I degree obesity	33	9.4
> 30.0	Obese – II degree	9	2.6

*NNMB (2002)

Chronic Energy Deficiency (BMI <18.5) was seen among 31.3 percent of sports women. Of this 19.3 percent belonged to CED Grade I and 7.5 percent to CED Grade II and 4.6 percent to CED Grade III respectively which shows that they are underweight which a clear reflection of their poor nutritional status .

Food and Nutrient Intake of Selected Sports WomenThe mean nutrient intake of selected sports women is given in Table 11

TABLE II
Mean Nutrient Intake Of Selected Sports Women

Nutrient	RDA	Mean intake	% RDA
Energy (Kcal)	2225	1345	60
Protein (g)	50	36	72
Iron (mg)	30	11	37
Calcium (mg)	400	335	84
Ascorbic acid (mg)	40	25	63

The intake of all the nutrients also were far below the recommended daily allowance (RDA) which is due to the inadequate dietary pattern existing among college students especially adolescent girls. Iron intake was extremely low with a mean intake of 11mg per day meeting only 37 percent of the RDA amounting to an extreme deficit of 63 percent. These results are indicative of the improper dietary habits like skipping of breakfast and imbalanced food intake by college students

Anaemic status

Mean haemoglobin levels of selected sports women are given in Table III and fig 1

TABLE 1II
Percentage Distribution Of Haemoglobin Levels Of Sports Women(N=348)

Hb levels (g/dl)	*Grades of anaemia	Sports women	
		No.	%
Less than 8	Severe	53	15.20
8 – 9.9	Moderate	113	32.50
10 – 11.9	Mild	134	38.50
12 and above	Normal	48	13.80
	Total prevalence of anaemia	300	86.20

There was a high prevalence of anaemia (86.2%) among the sports women which was really a matter of concern. Only 13.8 percent had haemoglobin values above 12g/dl which was considered to be normal for women according to FAO/WHO (1992). This could be an outcome of their poor dietary practices, imbalanced diet, inadequate intake of iron rich foods and lack of nutritional knowledge

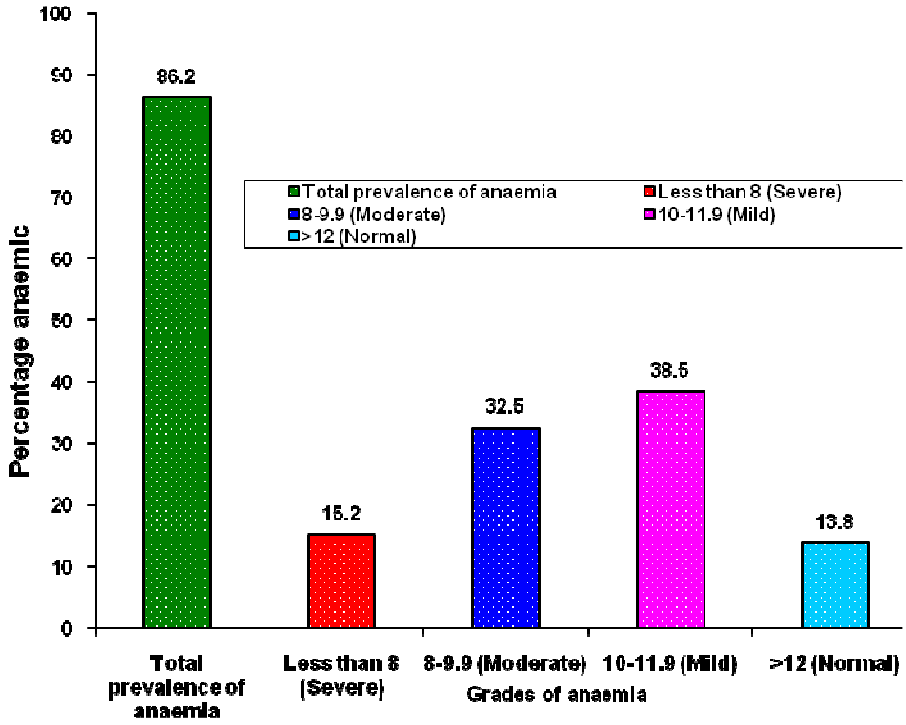

Fig 1 PERCENTAGE DISTRIBUTION OF HAEMOGLOBIN LEVELS OF SPORTS WOMEN

Prevalence of Clinical Symptoms of Anaemia

Many of the sports women expressed that they experienced having more than one symptom, but majority complained about tiredness and fatigue (48.3 percent) and 32.2 percent had reduced stamina. Similar observation was made by Kimberly (2006) where he found an early onset of fatigue during exercise to be common complaint among athletes, especially female athletes which was attributed to a lack of iron in the blood which leads to anaemia. Twenty one percent of the sports women complained about extreme weakness and 14.4 percent reported dizziness and giddiness all of which can be related to symptoms of severe anaemia.

Conclusion

This clinical picture in combination with the haematological profile discussed earlier denotes the prevalence of anaemia among the population studied to be of high magnitude. Nutritional profile of the 348 selected sports women studied was far from satisfactory. From the above observations it is evident that anaemia to the tune of a public health problem was prevalent among the population of sports women studied irrespective of their age, and sports events and requires appropriate nutrition intervention strategies. This picture needs to be reversed especially from the point of view of prevalence of anaemia, if satisfactory sports performance is to accrue from the collegiate sports women.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp83-85

Awareness of Secondary School Students towards Health and Hygiene –A Study

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Introduction

World health organization (WHO) defined health as a state of complete physical, mental and social well being and not merely an absence of disease or infirmity. An analysis of the mortality and nutritional indicators from the pre-school, primary, secondary and senior secondary levels shows that under- nutrition and communicable diseases are the major health problems faced by majority of the children in this country. Therefore, the curriculum for this area has to address these aspects at all levels of schooling with attention to vulnerable social groups and girl children. It is proposed that the mid day meal programme and medical checkups must be a part of this subject and health education must be related to the needs of the children and also address the age specific concerns at different stages of development. Health education must be introduced from the primary level onwards and even at this level, through the medium of play; concepts from other subject areas can be reinforced. Formal introduction of asana and Dyana should begin only from class sixth onwards. Even health and hygiene education must rely on the practical and experimental dimensions of children's lives. This subject must be compulsory until the tenth class, after which it can be an elective subject.

Statement of the problem:

Awareness of Secondary School Students towards Health and Hygiene –A Study

Objectives of the study

1) To study the awareness of secondary school students on health and hygiene.
2) To find out the influence of gender, class, management, parents' educational status, parents' occupation, community and family income on the awareness of secondary school students about health and hygiene.

Hypotheses of the study

- There is no significant difference in the awareness of secondary school students on various aspects of health and hygiene with regard to their gender.
- There is no significant difference in the awareness of secondary school children on the various aspects of health and hygiene with regard to their class.
- There is no significant difference in the awareness of secondary school students on various aspects of health and hygiene with regard to their school management.

Methodology

To study the present problem the investigator selected the method "Normative Survey Method". Based on Normative survey method the investigator made a survey on 120 secondary school students who were studying in both Government and private management schools. The date was collected from the secondary school students studying in Vempalli town, about their awareness of health and hygiene.

Construction of the Research Tool

An assessment need not involve the use of highly sophisticated tests and lengthy procedure but the assessment should be reliable and valid information. One of the major objectives of the study is to assess the awareness of students on health and hygiene. So when selecting a tool, one must ensure that whether the test is appropriate for students. Keeping this in mind, the investigator developed an awareness scale to study the awareness of students on health and hygiene at secondary school level.

Sample of the Study

For the purpose of the study, the investigator selected Vempalli town. Vempalli town consists of 10 secondary schools for the sample of the study. In the second stage, from each school 15 above children were selected randomly, to make a total sample of 200 students for purpose of the sample.

Data Collection: The students were met independently by the investigator and were explained the purpose of the study. The investigator read each statement in the tool and sought the reply from the students in the form of yes or No. While collecting the data the students were kept comfortable and data collected according to their convenience

Scoring procedure: The awareness schedule to assess the awareness of students on health and hygiene was supplied to secondary school students personally and they were requested to give responses on them. To quantify the responses; a uniform scoring procedure has been followed. Against each item two responses have been provided in the awareness assessment interview schedule i.e. 'Yes' or 'No'. The scoring for each awareness statement was 1, 0 respectively for positive statements and negative statements.

Statistical Techniques used in the Study

For the statement of the data the following statistical techniques were used.

Frequency distribution of the total sample on the environmental awareness.

Descriptive statistics like mean and standard deviation were computed.

To study the inference of independent variables on the different variable of the students t-test and F - ratio was used.

To calculate the item analysis Non-Parametric test i.e., Chi-square (χ^2) test was used.

Testing of Hypothesis

To know the significant difference, if any in the awareness of students on health and hygiene due to variations in their gender, class, school management, 't' – test and 'F –ratio have been carried out. Wherever there are two groups involved in a variable, 't' – test has been applied and 'F'-ratio is used wherever more than two groups are involved in the variable.

Students' Awareness on Health and Hygiene Based on Their Gender.

Table – 1: Table showing Mean, SD and't' values of awareness of boys and girls on health and hygiene.

S.No.	Gender	N	Mean	SD	Calculated 't' value
1	Boys	100	21.62	5.15963	0.259@
2.	Girls	100	21.42	5.74927	

Note: @- Not significant at 0.05 level.

The above table shows that the mean score of health and hygiene for boys is 21.62, with a standard deviation of 5.15963 and the mean score of girls is 21.42, with a standard deviation of 5.74927.The calculated't' value 0.259 is less than table value of 1.97 at 0.05 level. Hence the formulated null hypothesis stating that "There is no significant difference in the awareness of secondary school students on the various aspects of health and hygiene with regard to their gender" is accepted. Therefore, gender does not influence the awareness of students on health and hygiene.

Students' Awareness on Health and Hygiene Based on Their Class.

Table – 2: Table showing Mean, SD and't' values of 8^{th} class and 9^{th} class students' awareness on health and hygiene.

S.No.	Class	N	Mean	SD	Calculated 't' value
1	8^{th} class	100	20.5273	6.02702	2.901**
2.	9^{th} class	100	22.7333	4.38281	

Note: ** - significant at 0.01 levels.

The above table shows that the mean score of health and hygiene for 8^{th} class students is 20.52, with a standard deviation of 6.27and the mean score of 9^{th} class students is 22.73, with a standard deviation of 4.38.The calculated' value 2.90 is greater than table value of 1.97 at 0.05 level. Hence the formulated null hypothesis stating that "There is no significant difference in the awareness of secondary school students on the various aspects of health and hygiene with regard to their class" is rejected. Therefore the alternative hypothesis stating that "There is significant difference in the awareness of secondary school students on the various aspects of health and hygiene with regarded to their class" is accepted. More over students of 9^{th} class students are possessed with awareness than the 8^{th} class students.

Students' Awareness on Health and Hygiene Based on Their School Management

Table-3: Table showing Mean, SD and't' values of government and private school students' awareness on health and hygiene.

S.No.	Management	N	Mean	SD	Calculated 't' value
1	Government	80	20.2250	6.32451	2.79**
2.	Private	120	22.383	4.60760	

Note: ** - Significant at 0.01 level

The above table shows that the mean score of health and hygiene for government school students is 20.22 with a standard deviation of 6.32451 and the mean score of private school students is 22.3833 with a standard deviation of 4.60760.
The calculated't' value 2.907 is greater than table value of 2.60 at 0.01 level. Hence the formulated null hypothesis stating that "There is no significant difference in the awareness of secondary school students on the various aspects of health and hygiene with regard to their school management" is rejected.

Findings and Conclusions:

1. The students of this study are homogeneous and they have high awareness on health and hygiene.
2. More than 60% of the students are not aware of the aspect that play ground of their school is so wide and clean.
3. More than 55% of the students are not aware of the aspects that nutritional food improves the growth.
4. More than 55% of the students are not aware of the aspects that balanced diet improves the immunity power and also the schools should have separate toilets for boys, girls and teachers.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp86-87

Comparative Study Of Self Confidence Between Male And Female Volley Ballplayers

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ABSTRACT

The purpose of the study was to measure the self confidence of male & female volley ball players from Warangal district of Andhra Pradesh. With the help of random sampling technique .researchers selected n= 21 male n= 21 female from University college of physical education Kakatiya university Warangal A.P. All male and female players are participated different competitions and Inter collegiate Tournaments. SCI was administered before Inter Collegiate tournaments. Researcher conducted two psychological tests on them. Self confidence Inventory (SCI) test to measure their confidence label and all scores of the test were analyzed with the help of criteria of these test and with the help of descriptive statistics conclusions are drawn. In this study the result showed that there was a significant difference between male and female volleyball players. Particularly male volley ball players got higher self confidence then female volleyball players Hence it is suggested that there is a need for to psychological preparing for the female volleyball players

Key Words: Self confidence, male and female Volleyball players

INTRODUCTION

The Socio-Psychological concept of Self Confidence relates to self-assuredness in one's personnel judgment, ability power, etc. sometimes manifested excessively, Confidence results from the comparison an athlete makes between a the goal and their ability. The athletes will have self – confidence if they belive they can achieve their goal. (Comes back to a quote to mine "you only archive what you believe") When an athlete has self confidence they will tend to persevere even when things are not going to plan, show enthusiasm, be positive in their approach and take their share of the responsibility in success and fail. To improve their self confidence, an athlete can use mental imaginary to

- Visualize previous good performance to remind them of the look and feel
- Image various scenarios and how they will cope with them

Good goal setting (challenging yet realistic) can bring feelings of success, if athletes can see that they are archiving their short term goal and moving towards their long term goals them confidence grows.Confidence is a positive state of mind and a belief that you can meet the challenge a head a feeling of being in control. It is not the situation that directly affects confidence, thoughts assumption and expectations can build or destroy confidence.

High self confidence

- Thoughts –positive thoughts of success
- Feelings –excited anticipation.calm.elationprepared
- Focus-on self ,on the task
- Behaviors –give maximum effort and commitment willing to take chances positive reactions to setbacks open to learning, take responsibility for outcomes

LOW SELF CONFIDENCE

- Thoughts –negative , defeat or failure , doubt
- Feelings-tense ,dread , fear , not wanting to take part
- Focus-on others , unless relevant factors (coach, umpire , conditions)
- Behavior – lack of effort likely to give up ,unwilling to take risks (rather play safe)blame others or conditions for outcome

METHODOLOGY

For the purpose of this study twenty four volley ball players (male-21, female-21) to represent in the Inter Collegiate tournaments Kakatiya University Warangal(2010-2011-201) were randomly selected as the subject there age range from 17to 28 year . Self confidence measured white the help of self confidence Inventory (SCI)

Result

The data those collected were statical manipulated by computing mean, standard deviation and t-test to find out significant differences between to examine groups of psychological parameter that is self confidence

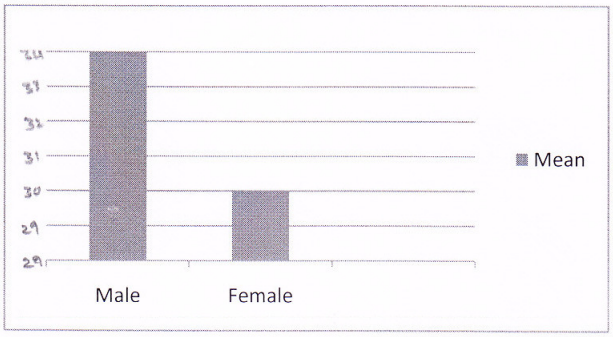
Table -1

Descriptive Statistics Level of self confidence among the Male & Female Volley Ball Players

VARIABLE	MALE			FEMALE			DF	T	Sig
	N	MEAN	SD	N	MEAN	SD			
SELF CONFIDENCE	21	33.47	7.27	21	29.85	8.38	40	3.34	0.03

In this study the result showed that there was a significant differences between male and female volley ball players on self confident Table -1 showed that SCI test was administered on both groups, The male volley ball players that out 21 male volley ball players eleven volley ball players have low self confidence, averaged self confidence four has low self confidence. In female volley ball players out of 21 Nine students have low self confidence out of which six has very low self confidence and three has high self confidence

Fig-1 Comparison of self confidence in men's and women volley ball players



CONCLUSION

In this study the result showed that there was a significant difference between male and female volley ball players on self confidence. Particularly male volleyball players got higher self confidence then female volley ball players. Hence it is suggested that there is a need for to psychological preparing for the female volley ball players

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp88-89

A Study Of Stress And Anxiety Among Sportsmen And Non Sportsmen In Warangal District Of Andhra Pradesh

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The purpose of the study was to search the stress and anxiety among sportsmen and non-sportsmen .The researchers was carried out an sample of 80 respondents (40 sportsmen and 40 non-sportsmen .The age of the subjects ranged from 18-25 years .The sportsmen mean age was 22.37.and that of the non-sportsmen21.56.a were collected from Warangal district of Andhra Pradesh. Hypothesis of the study is there will be significantly difference between sportsmen and non-sportsmen with respect to stress and anxiety .Singh personal stress source Inventory(SPSSI) Inventory is developed and standardized by Arunkumar singh and sinha's Comprehensive anxiety test (SCAT-SDS test was constructed and standardized by a K.P Sinha and L N K sinha was used the study

INTRODUCTION

Stress is considered a reaction to something that occurred and anxiety typically refers to a general feeling of fear and or apprehension of something which might happen (miller,2010) However , these terms are used interchangeably because chronic stress may lead to anxiety and both can have similar effects on one's physical and mental state . Stress and anxiety have been defined as an unpleasant emotional state or reaction that can be distinguished from others. By a unique combination of experiential qualities and physiological changes .to can include feelings of tension apprehension, nervousness, worry and activation of the autonomic nervous system

According to the American psychological association (APA) about 1\3 of American's are dealing with extreme stress (Bethune & Palener, 2007) when a person is dealing with too much stress. The quality of their lifestyle may be disrupted, stress is pervasive and ongoing in many p[people . sadly stress can lead to illness a disruption in a person's sleeping and eating habits , strained relationships , and can even impact a person's focus and work productivity .Today for more than half of Americans, money and work are considered to be two of the leading causes of stress(Bethune&palener 2007)

Most athletes associate stress and anxiety with injuries. However stress and anxiety can infiltrate athlete's world. An athlete can feel pressure to succeed, pressure of failing, fear of injury, fear of reinjure or anxiety about overcoming an injury , Some athletes have to overcome the fear and anxiety associated with returning to sports. The major sources of stress that have been reported by sports performers include fear of failure, concern about social evolutions by others (particularly the coach) lack of readiness to perform, and loss of internal control over one's environment.

METHOD

The research was carried out on a sample of 80 respondents (40 sportsmen and 40 non sportsmen. The age of the subjects ranged from 18-25 years. The sportsmen mean age was 22, 37, and that of the non-sportsmen 21-56 the data were collected from Warangal district of Andhra Pradesh.

VARIABLE

Independent variable **Respondent 1**. Sportsmen 2) Non-Sportsmen
Dependent Variable **1.** Stress 2.Anxiety

Statical Analysis And Discussion Sportsmen And Non-Sportsmen Shows The Mean S.D And T- Value Of Stress And Anxiety

Dimensions	Sportsman			Non-Sportsman			Df	T
	Mean	Sd	N	Mean	Sd	N		
Stress	28.61	4.26	40	22.46	3.87	40	78	6.76**
Anxiety	74.95	6.45	40	65.89	5.77	40	78	6.62**

RESULTS

Mean of stress of sportsmen is 28.61 and non-sportsmen mean 22.46 difference between the two mean t (78) =6.76 p <0.01 Null hypothesis is rejected and alternative hypothesis is means sportsmen have significantly high stress than the non-sportsmen.

Mean of anxiety of sportsmen is 74.95 and non-sportsmen, mean is 65, 89 difference between the two mean t (78) =6, 62 p<0.01 .Null hypothesis is rejected and alternative hypothesis is means sportsmen ha e significantly high anxiety than the non-sportsmen. It is essentially need of stress and anxiety level for sports performance

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp90-92

Good health and good food for healthy living

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INTRODUCTION

Health is a basic human right health is mans natural condition his birth right. It is the result of living in accordance with the natural laws pertaining to the body, mind and environment Metabolic processes that occur in the cells of the healthy human body are complex, orderly, and efficient. A great variety of chemical compounds are involved in these reactions of metabolism. Those chemical compounds that come into the body as food and participate in metabolic processes are called nutrients. Nutrients that are essential for life and health include proteins that contain specific amino acids, fats that contain specific fatty acids, carbohydrates, several vitamins, many mineral elements, and water. Proteins, fats carbohydrates, and water are also important in determining the quality characteristics of prepared foods. A food may be defined as any substance that, when taken into the body, will perform one or more of the following functions.

- Build new tissues and maintain or repair old body tissues.
- Provide energy.
- Regulate body processes.

The principal constituents of foods used for the building and maintenance of tissues are proteins, minerals, and water. Vitamins play an important role, probably regulatory, in growth processes but enter also into the structure of somebody components such as the visual-purple pigment of the eye.
Common foods are mixtures of nutrients. Some highly processed foods, such as table sugar, shortenings and oils provide a single nutrient, and in some foods one or two nutrients predominate. Generally, however, each food may be expected to contribute to the diet in several ways. The nutrients in foods are affected by various practices of handling and preparation.

SIGNIFICANCE OF THE STUDY

The health is a vital principle of bliss. The study is significantly provides good health and good food is a major factor in our happiness and our ability to work productively for healthy life style. Health has a very significant role to play as if comprises health knowledge, health habits and health attitudes. It can improve the individual, family and community life for bright and prosperous future.

HEALTHY LIVING

Health is a state of physical, mental, emotion and social well being. Good health enables people to enjoy life and to have the opportunity to achieve the goals they have set for themselves. The real purpose of health is to develop and maintain vigor and vitality, to acquire interests and habits in ways of living that are whole some and to meet the demands put upon the individual efficiently, with energy and satisfaction.

Definition by J.F.williams, “Health is the quality of life that enables an individual to live most and serve best.” Health can be achieved maintained and improved by supplying the basic physical, mental, emotional and social needs in proper proportion. In fact health is the key to education, success, good citizenship and a happy life. Now days health and its maintance is being considered as a major social investment and it is being felt that health involves individual, state and international responsibility.

COMPONENTS OF GOOD FOOD FOR GOOD HEALTH

Food provides us provides us with the energy we need for growth, physical activity and for basic body functions such as breathing, thinking, temperature control, blood circulation and digestion etc. food also supplies us with the materials. To build and maintain the body and to promote resistance to disease. Thus, there different functions are made possible by the nutrients contained in food.

Carbohydrates

Carbohydrates, which are composed of the elements carbon, hydrogen, and oxygen, are either sugars or more complex substances, such as starch, which are formed by combining many sugars together. The simplest sugar carbohydrates are called monosaccha-rides, saccharide referring to their sweetness and mono to the fact that they are a single unit. Three simple sugars or monosaccharide's that are of importance in food preparation are glucose, fructose, and galactose.

Proteins

Proteins are unique because in addition to containing the elements carbon, hydrogen and oxygen, they also contain nitrogen. Sulfur is often present in proteins. Proteins are large molecules made up of a small amino acid molecules joined together in a special linkage called peptide linkage. These linkages produce long chains that then coil or bend into shapes that are characteristic for a particular protein. Some proteins are generally round or globular in shape whereas others are long and fibrous. Approximately twenty amino acids are commonly included in the structure of proteins.

Fats

Fats are composed of the same elements as are carbohydrates that are carbon, hydrogen, and oxygen. However, fats have much more carbon and hydrogen and much less oxygen than do carbohydrates. Because of this, fats are a more concentrated source of energy. The oxidation of 1 gram of pure fat in the body produces 9 kilocalories where as the oxidation of 1 gram of pure carbohydrate yields 4 kilocalories when protein is used by the body cells for energy.

Minerals

Carbon, hydrogen, oxygen and nitrogen make up about 96 percent of the human body composition. The remaining 4 percent is composed of mineral elements or inorganic nutrients. Minerals are needed in the body for hard tissues, such bones and teeth, and also for soft tissues and body fluids, not all minerals that have been found in the body are known to be essential, but many have been definitely shown to be necessary. Minerals may act as building materials in both hard and soft tissues of the body and also as body regulators.

Vitamins

Vitamins are organic chemical compounds that are required in the diet in only very small amounts but are vital for normal growth and health. The early differentiation of vitamins was by letters of the alphabet, but as chemical identification has become clear, the tendency is to use the chemical name instead. Vitamins are primarily regulatory substances, as a group they promote growth and the maintenance of health and vigor. They bring about these effects usually by their roles as catalysts in chemical reactions throughout the body.

Daily requirements of vitamins

Sl.No	Vitamin	Men	Women	Pregnant mothers	Boys (16-18 years)	Girls (16-18 years)
1.	Thiamine (mg)	1.4	1.1	1.3	1.4	1.1
2.	Riboflavin (mg)	1.7	1.3	1.5	1.7	1.3
3.	Niacin (mg)	19	15	17	19	15
4.	Folic acid (µg)	100	100	300	100	100
5.	Cyanocobalamine(µg)	1	1	105	1	1
6.	Vitamin C (mg)	40	40	40	40	40
7.	Vitamin A (µg)	750	750	750	750	750
8.	Vitamin D (IU)	100	200	200	200	200
1µg = 1/1000th of a gram. 1µg = 40 IU; IU = International Unit.						

Vitamins are classified into two groups.

Vitamin	Chemical Name	Deficiency	Present in
Water soluble vitamins			
B1	Thiamine	Beri-beri and loss of appetite	Cereals like wheat, oilseeds like ground nut, milk, meat, fish,eggs and vegetables.
B2	Riboflavin	Glossitis, cracking of mouth at angles	Milk,eggs,liver,kidney and green leafy vegetables
B3	Niacin	Pellagra	Kidney,liver,meat,poultry,fish,legumes and groundnut.
B6	Pyridoxine	Anaemia,hyperirritability,disorders of nervous systm	Milk,liver,meat,egg yolk,fish,whole grain cerals, legumes and vegetables.
Folic acid	Folic acid	Anaemia, diarrhoea, loss of leucocytes	Liver,meat,eggs,milk,fruits,cereals and leafy vegetables.
B12	Cyanocobalamine	Pernicious anaemia	Not found readily in foods. Bacteria present in the instestine synthesise this vitamin and supply to our body.
Pantothenic Acid	Pantothenic acid	Burning feet	Fresh vegetables, liver, kidney,yeast,egg yolk, meat, sweet potatoes and ground nuts.
Biotin	Biotin	Muscle pains, nervious disorders, fatigue	Pulses,nuts,vegetables,liver and kidney.
C	Ascorbic acid	Scurvy	Fresh fruits,green leafy vegetables,tomatoes and germinating pulses.
Fat soluble vitamins			
A	Retinol	Night blindness, xeropthalmia, rupture of cornea, scale formation on skin	Liver,eggs,butter,whole milk, fish, meat, cod liver oil and shark liver oil, spinach, amaranthus, carrots, tomato, pumpkin, papaya and mango.
D	Calciferol	Rickets fragile bones	Liver, egg yolk, butter, cod liver oil and shark liveer oil.
E	Tocoferol	Sterility ini males, abortions in females, reduced life span of red blood cells.	Fruits,vegetables, germinating seeds, meat, egg yolk and sunflower oil, cotton seed oil.
K	Phyllo quinone	Delay in blood clotting	Green leafy vegetables and milk.

FINDINGS AND DISCUSSION

The enjoyment of food is one of life's pleasures for those who have an adequate food supply, eating is about far more than survival eating together is an important part of daily family life and of social events, celebrations and festivals. In addition to the enjoyment it provides, food is, of course, essential for life. Obtaining the nutrients the body needs depends of the amount and variety of food locally available. This varies widely in different parts of the world. Hence the study says the people have their individual food tastes and eating habits. All foods can be enjoyed as part of a nutritious diet, form a nutritional point of view, a particular food is either 'good' or 'bad' of itself. What matters is how well a given food complements or combines with other foods to meet persons or an individual's energy and nutrient needs. The best advice is that one should try to eat a wide variety of foods and to spread consumption over the day.

CONCLUSION

Food is, hence the only one of the factors affecting growth and health. We know that lasting food health is impossible without good nutrition, but we also know that not all well-fed persons are healthy. Many other factors, such as heredity, various di**s**ease conditions, environmental stress, general habits of living, rest and recreation, emotional problems and exposure to infections, play a part in the maintenance of normal health and may sometime counter balance the effects of a good diet.

Food has many meaning in addition to its role in sustaining life and nourishing the body. But finally, all of the roles of food are channeled into its major purpose of providing for life and health. Good food adds to the joy of living, by both contributions to buoyant health and the pleasure of eating. Food, appropriately prepared looks good and tastes good and is good for us. With the development of a greater variety of manufactured and convenience foods and their availability to the consumer, it is important that both the food scientist and consumer carefully consider the nutritional a quacy of the consumers usual diet patterns.

SUGGESTIONS

- Food should be eaten up at a fixed time every day.
- Without appetite we should not eat anything.
- We should not drink excessive amount of water along with food.
- Food should be chewed many a time, so that it could be converted into chyme.
- While eating food we must avoid talking.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp93-95

Comparative Study of Unforced Errors and Mental Toughness of Winners and Losers Male Squash Players

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ABSTRACT:
The present study was to find out the relationship between mental toughness and unforced errors of winners and losers male squash players. For this purpose 200 squash players was selected from All India Inter University squash Tournaments, National squash Championships and other Invitational squash Championships. The age of the subjects was limited between 18 to 25 years. In this particular study it was found that Mean scores on mental toughness of winner squash players were found to be higher than the loser whereas Mean unforced errors committed by winner squash players were less than the losers. Here significant difference in mental toughness and unforced errors were found between winners and losers squash players but there was no significant relationship between mental toughness and unforced errors of winners and losers male squash players.

Key words:-Mental toughness, Unforced errors, Questionnaire, Statistical

Introduction:-
The sport of squash was started in the England as a game called “rackets”. It was played against a wall but rackets itself is believed to have its origins in a game invented by English prison inmates to amuse themselves. In 1893, the name “squash “was first mentioned in a book with some set of rules. The first squash court was constructed in Quebec City, Canada. Today, Canadian squash is clearly growing rapidly across the country.
In every athletic contest there is always a winner and a loser, a winning squad or a losing one. The winner may experience a broad range of emotions in varying degrees of intensity. He may feel satisfied, confident, superior, haughty, happy, relaxed in every manner whereas a loser may feel like a failure, depressed, angry, resentful, sad, anxious, frustrated, inadequate, cheated. The loser experiences his own wide array of emotions from distraught. There are two terms that influences the winning and losing the game i.e. Mental toughness and Unforced errors. Unforced errors result basically from ‘lack of care, concentration, technique or tactical awareness’. Unforced Errors made by a player not because of opponent’s good play but his own bad play.
Mental Toughness proposed by Middleton, Marsh, Martin, Richards and Perry (2005). These authors defined 'mental toughness' as "an unshakeable perseverance and conviction towards some goal despite pressure or adversity" .which is an individual's ability to cope with stress and anxiety associated with high pressure competition. Finally the purpose of the study was to analyze unforced errors and mental toughness of winners and losers in squash Players.

Procedure and Methodology:-
Selection of sample
All the 200 male squash players was selected from All India Inter University squash Tournament, National squash Championship and other Invitational squash Championship of Various States,. Age of the subjects was ranged between 18 to 25 years. Those squash players who played singles matches for their teams were considered to serve as subjects for the purpose of collection of data.
Collection of data
The total numbers of unforced errors committed by the winner and loser players in singles play were scored separately by each of the three experts of squash independently. The average of the total number of unforced errors was constituted the score of the player.

Statistical Procedure

The data was analyzed and compared using statistical procedures in which arithmetic mean, standard deviation (S.D.), Coefficient of correlations, t-test using graph pad software.

Analysis of Data and Results:-

Table-1 Means and standard deviations of winners and losers male **SQUASH** players on mental toughness

	Winners (N=100)	Losers (N=100)
Mean	43.31	32.63
Standard Deviation	5.46	5.68

Table-2 Comparison of means between winners and losers male squash players on mental toughness ('t' 0.05 (198) =1.96)

	N	Mean	Mean Difference	t
Winners	100	43.31	10.68	13.55*
Losers	100	32.63		

Data reveals (Table-2) that there was significant difference between winners and losers male squash players on mental toughness, since the calculated't' value 13.55 was found to be more than tabulated value 1.96 at 0.05 level of significance. Thus, data provides sufficient evidence to ensure that the mean mental toughness of winners male squash players is significantly higher than the mean mental toughness of losers male squash players.

Table-3 Means and standard deviations of winners and losers male **SQUASH** players on unforced errors

	Winners (N=100)	Losers (N=100)
Mean	7.84	17.5
Standard Deviation	3.527	4.745

Table-4 Comparison of means between winners and losers male SQUASH players on unforced errors ('t' 0.05 (198) =1.96)

	N	Mean	Mean Difference	t
Winners	100	7.84	9.66	16.34*
Losers	100	17.5		

Results presents in (Table-4) reveals that there was significant difference between winners and losers male squash players on unforced errors, since the calculated't' value 16.34 was found to be more than tabulated value 1.96 at 0.05 level of significance. Thus, data provides sufficient evidence to ensure that the mean unforced error of losers male squash players is significantly higher than the mean unforced errors of winners male squash players.

Table-5 Coefficient of correlation of mental toughness between winners and losers male **SQUASH** players

S. No.	Variable Correlated	Coefficient of Correlation
1.	MENTAL TOUGHNESS	-0.23

'r' 0.05 (98) = 0.195

The obtained value of r=-0.23 (Table-5) clearly indicates no significant correlation between mental toughness scores of winners and losers male squash players in different tournaments as the required value at 0.05 level of significance with 98 degrees of freedom is 0.195.

Table-6 Coefficient of correlation of unforced errors between winners and losers male **SQUASH** players

S. No.	Variable Correlated	Coefficient of Correlation
1.	UNFORCED ERRORS	-0.05

'r' 0.05 (98) = 0.195

The obtained value of r=0.05 (Table-6) clearly indicates no significant correlation between unforced errors scores of winners and losers male squash players in different tournaments as the required value at 0.05 level of significance with 98 degrees of freedom is 0.195.

Discussion:- Results from the analysed data it is very much evident that, winners and losers male squash players of different tournaments differed significantly (H_0 rejected) in mental toughness scores as the obtained t-value 13.55 was higher than the tabulated $t_{0.05}$ (198) = 1.96. This could be attributed to the fact that winners squash players are mentally tougher than the losers squash players. They can handle the competitive pressures and concentrate better in difficult competitive situations.Significant difference was also found (H_0 rejected) between winners and losers male squash players in unforced errors as the obtained t-value 16.34 was higher than the tabulated $t_{0.05}$ (198) =1.96. This may be because of winners usually committing less number of unforced errors than losers. Players have to be more mentally tough than in rally point scoring system being implemented on experimental basis and thus commit less unforced errors to win.To analyze the mental toughness and unforced errors of winners and losers male squash players in different tournaments were also correlated by product moment correlations.Low negative coefficient of correlations of mental toughness scores -0.23 was observed, between winners and losers male squash players which was not significant (H_0 accepted) as the value required to be significant at 0.05 level of significance with 98 degrees of freedom is 0.195.Coefficient of correlation of unforced error 0.05 between winners and losers male squash players was observed, which was not significant (H_0 accepted) as the value required to be significant at 0.05 level of significance with 98 degrees of freedom is 0.195. This is because of mentally tough players commit less number of unforced errors. However only unforced errors may not be responsible for winning or losing a singles match but unforced errors may contribute a lot in winning or losing in rally point system.

Conclusion:-

Mean scores on mental toughness of winners male squash players were found to be higher than the losers.

Mean unforced errors committed by winner's male squash players were less than the losers.

Significant difference in unforced errors was also found between winners and losers male squash players.

Significant difference in unforced errors was also found between winners and losers male squash players.

There was no significant relationship between mental toughness and unforced errors of winners and losers male squash players.

Recommendations:

1. The coaches can develop specific mental toughness program for squash players in accordance with the findings of the study.
2. Coaches can use the results of this study as an aid for screening and selection of players at different levels of performance in squash.
3. Physical education teachers and squash coaches can use the result of this study as guidelines to analyze unforced errors and mental toughness of winners and losers squash players.
4. A similar study may be undertaken in other individual and combat games and sports.
5. A study may be undertaken on winners and losers squash player's different age groups and sex to find out the difference and relationship of mental toughness and unforced errors.

Acknowledgement:-

It is real pleasure that, we record our indebtedness to Dr. Balwinder Singh, Dr. Bheemraj patel, Dr. M. S.Chundawat for their valuable counsel and guidance during the preparation of this research paper. We are also grateful to Dr. Pramod Singh, Principal of D.D Dalmia College of Physical Education, Jamdoli, Jaipur (Rajasthan) for his valuable support. For all the suggestions offered an encouragement given to us. Our thanks are due to all the students who acted as a subject for the study. With their voluntary and wholehearted support could not have been completed.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp96-99

Effect Of Different Intensities Of Core Training Package On Selected Physical And Physiological Variables AmongClub Cricket Players

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Introduction: Cricket is a game which came under intermittent sports category as it involves both Aerobic and Capacity. Playing Cricket involves all types of Activities like jogging, sprinting and agility. As the Twenty-twenty version of cricket has taken the charm of playing cricket to higher levels anaerobic activities like sprinting, throwing, hitting the ball has taken an upper hand during the game. Anaerobic capacity is required the most to maintain the performance levels at high intensities. Hence the scholar has chosen up the research work on comparing the significant effect of Strength and power to transfer power from lower body to upper body by comparing the effects different intensities of core training on cricket players.

TRAINING: Sports training is the process of sports protection based on scientific and pedagogical principles for higher performance. (Hardyal Singh, 1991)

CORE TRAINING: Core training is a form of exercise that is used for a variety of training, with the sole focus on the core muscles. Core training has been used for

- Weak core therapy, when someone has weak core muscles core training is used as therapeutic training to strengthen the core muscles.
- General core health, core training has been recognized by many specialist as fundamentally the most important type of training that should be done on a regular basis.
- Athletic skill, athletes use core training to get an edge in sport over their opponents. Specific sport core training is when an athlete trains core muscles specifically for the sport.

The biggest benefit of Core Training is to develop functional fitness - that is, fitness that is essential to both daily living and regular activities.

EFFECTS OF CORE TRAINING: 1. Improve Posture and prevent deformities,**2**.More stable Centre of Gravity and control during dynamic movements,**3**.contribute to optimal movement patterns,**4.**breathing efficiency,**5**.Distribution of forces and absorption of forces,**6.**Reduce stress on joint surfaces and pain,**7.**Injury prevention and rehabilitation

REASON FOR THE SELECTION OF THE TOPIC AND THE VARIABLES

The researcher scholar has special interest in Physiology as he himself is a Exercise Physiology student. Though the number of studies has been taken on Physiological variables, no attempt has been taken to find out the effect of different intensities of Functional and core strength Training on Club Cricket players.

STATEMENT OF THE PROBLEM : The purpose of the study was to find out the effect of different intensities of core training selected physical and physiological variables among club cricket players.

DEPENDENT VARIABLES- PHYSICAL VARIABLES: 1. Core Strength, 2.Explosive Power

PHYSIOLOGICAL VARIABLES: 1. Serum Creatinine, 2.Serum Inorganic Phosphate

INDEPENDENT VARIABLES: 1. High Intensity core Training 2.Low Intensity core Training

METHODOLOGY: EXPERIMENTAL DESIGN: The study was formulated as a true random group design consisting of a pre and post test the subjects (n=45) were randomly assigned to three equal groups of 15 subjects. The group was assigned as experimental group I, II and control group respectively. Pre test was conducted for all the subjects on selected physical and physiological variables such as Core Strength, Explosive Power, Serum Creatinine, and Serum Inorganic Phosphate the experimental groups participated in their vary is club cricket players in Chennai district level for a period of six weeks. The post test was conducted on the above said dependent variables after a period of six weeks in the respective treatments. The training program was scheduled at 6.00 a.m. to 6.45 a.m. on six weeks respectively.

Computation Of Analysis Of Covariance And "Scheffe's Post Hoc" Test

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

TABLE-I-COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE

OF CORE STRENGTH OF EXPERIMENTAL AND CONTROL GROUP

	HIG	LIG	CG	Sum of variance	Sum of squares	Df	Mean square	F
Pre test mean	47.13	48.20	44.20	BG	128.71	2	64.356	0.40
				WG	6788.53	42	161.63	
Post test mean	62	58.73	48.33	BG	1528.04	2	764.02	4.98*
				WG	6438.27	42	153.29	
Adjusted mean	61.43	57.19	50.44	BG	910.52	2	455.26	23.94*
				WG	779.795	41	19.02	

Table value for df 2 and 42 was 3.21. * Significant at 0.05 level Table value for df 2and 41 was 3.22.

DISCUSSION ON FINDINGS OF CORE STRENGTH

The results presented in Table I proved that the obtained F value on pre test scores was less then the required F value and the difference were not significant.The obtained F value on adjusted mean value was 23.94, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity core training and low intensity core training significantly altered core strength of the club cricket players. Since there was significant results obtained post hoc analysis was done and it was found that high intensity core training and low intensity core training significantly altered core strength of the club cricket players compared to control group.Comparing between the treatment groups, high intensity core training and low intensity core training, it was found that high intensity core training was better than low intensity core training group in increasing the core strength.

RESULTS ON EXPLOSIVE POWER

TABLE-II- COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCEOF EXPLOSIVE POWER OF EXPERIMENTAL AND

CONTROL GROUP

	HIG	LIG	CG	Sum of variance	Sum of squares	Df	Mean square	F
Pre test mean	9.03	9.01	8.75	BG	0.77	2	0.384	0.14
				WG	116.45	42	2.77	
Post test mean	10.52	9.73	8.84	BG	21.36	2	10.68	3.36*
				WG	133.46	42	3.18	
Adjusted mean	10.42	9.65	9.02	BG	14.67	2	7.34	17.99*
				WG	16.722	41	0.41	

DISCUSSION ON FINDINGS OF EXPLOSIVE POWER: The results presented in Table VII proved that the obtained F value on pre test scores was less than the required F value and the difference were not significant.The obtained F value on adjusted mean value was 17.99, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity and low intensity core training significantly altered the explosive power of the club cricket players. Since there was significant results obtained post hoc analysis was done and it was found that high intensity and low intensity core training significantly altered the explosive power of the club cricket players compared to control group.Comparing between the treatment groups, high intensity and low intensity core training, it was found that high intensity core training was better than low intensity core training group in increasing the explosive power.

RESULTS ON SERUM CREATININE

TABLE-III

COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCEOF SERUM CREATININE OF EXPERIMENTAL AND CONTROL GROUP

	HIG	LIG	CG	Sum of variance	Sum of squares	Df	Mean square	F
Pre test mean	0.89	0.91	0.86	BG	0.02	2	0.009	0.65
				WG	0.56	42	0.01	
Post test mean	1.031	0.95	0.83	BG	0.29	2	0.15	15.30*
				WG	0.40	42	0.01	
Adjusted mean	1.03	0.94	0.85	BG	0.23	2	0.12	23.05*
				WG	0.205	41	0.01	

DISCUSSION ON FINDINGS OF SERUM CREATININE: The results presented in Table IX proved that the obtained F value on pre test scores was less than the required F value and the difference were not significant.The obtained F value on adjusted mean value was 23.05, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity and low intensity core training significantly altered serum creatinine levels of club cricket players. Since there was significant results obtained post hoc analysis was done and it was found that high intensity and low intensity core training significantly altered serum creatinine levels of club cricket players compared to control group.Comparing between the treatment groups, high intensity core training and low intensity core training, it was found that high intensity core training was better than low intensity core training group in increasing serum creatinine levels.

RESULTS ON SERUM INORGANIC PHOSPHATE

COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE OF

SERUM INORGANIC PHOSPHATE OF EXPERIMENTAL AND CONTROL GROUP

	HIG	LIG	CG	Sum of variance	Sum of squares	Df	Mean square	F
Pre test mean	3.484	3.47	3.46	BG	0.01	2	0.003	0.01
				WG	13.84	42	0.33	
Post test mean	4.09	3.82	3.55	BG	2.19	2	1.09	6.89*
				WG	6.67	42	0.16	
Adjusted mean	4.08	3.82	3.56	BG	2.08	2	1.04	14.81*
				WG	2.879	41	0.07	

DISCUSSION ON FINDINGS OF SERUM INORGANIC PHOSPHATE

The results presented in Table X proved that the obtained F value on pre test scores was less than the required F value and the difference were not significant.The obtained F value on adjusted mean value was 14.81, which was greater than the required F value to be significant at 0.05 level. Hence, it was proved that six weeks treatment through high intensity core training and low intensity core training significantly altered serum inorganic phosphate levels of club cricket players. Since there was significant results obtained post hoc analysis was done and it was found that high intensity core training and low intensity core training significantly altered serum inorganic phosphate levels of club cricket players compared to control group.Comparing between the treatment groups, high intensity core training and low intensity core training, it was found that high intensity core training was better than low intensity core training in increasing serum inorganic phosphate levels.

DISCUSSION ON FINDINGS

The result of Table I, II, III, IV indicated that High Intensity core training had significant influence among cricket players.

CONCLUSIONS

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

1. It was concluded that the core strength was significantly increased due to the influence of six weeks practices of high intensity core training and low intensity core training to comparing the control group. But particularly the high intensity core training group has significantly increases in core strength when compared to the low intensity core training group.

2. It was concluded that the explosive power was significantly increased due to the influence of six weeks practices of high intensity core training and low intensity core training to comparing the control group. But particularly the high intensity core training group has significantly increases in core strength when compared to the low intensity core training group.

3. It was concluded that the serum creatinine levels significantly increased due to the influence of six weeks practices of high intensity core training and low intensity core training to comparing the control group. But particularly the high intensity core training group has significantly increases in core strength when compared to the low intensity core training group

4. It was concluded that the serum inorganic phosphate levels significantly increased due to the influence of six weeks practices of high intensity core training and low intensity core training to comparing the control group. But particularly the high intensity core training group has significantly increases in core strength when compared to the low intensity core training group

8. It was concluded that comparing the high intensity core training and low intensity core training, high intensity core training has significant improvement on core strength, explosive power, serum creatinine and serum inorganic phosphate. So research hypothesis was accepted and null hypothesis was rejected.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp100-103

A Study on the effect of Plyometric Exercises on Performance ability and Speed among Long Jumpers of Osmania University in India

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Abstract
Plyometric exercises are a vital component for Long Jumpers for obtaining the maximal strength,speed and force during the Long Jump and should be included in any conditioning program of Long Jumpers. This event has been an Olympic medal event since the first modern Olympics in 1896 (a event for women since 1948) and has a history in the Ancient Olympic Games.
Methods: The purpose of the present study to find out the effect of plyometric exercises for the development of performance ability and speed in Long Jump. The sample for the present study consists of 50 Male Long Jumpers of Osmania University out of which 25 are experimental group and 25 are controlled group. Plyometric exercises such as hopping, bounding,depth jumps, tuck jumps etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for eight weeks. Pre Test and Post Test were conducted by giving the six trials of Long Jump and 30 Meters Run to the experimental group and controlled group .
Results:This study shows that due to the plyometric exercises there is a improvement of experimental group in the performance ability and speed and controlled group is decreased in performance ability and speed due to the general training.
Discussion: Long jumping is all about explosive power. Explosive power is a combination of speed, muscular endurance and muscular strength, all of which can be developed through plyometric exercises. It is concluded that due to plyometric exercises there will be improvement in performance and speed among long jumpers.
Key Words:plyometric exercises,maximal strength, speed, explosive power etc.

Introduction:

Plyometrics were developed by Soviet Bloc Scientists.A Plyometric exercise consists of three phases. The first is a rapid muscle lengthening movement called the eccentric phase, second comes a short resting period called the amortization phase. Finally, the athlete engages in an explosive muscle shortening movement called the concentric phase. The athlete repeats this three part cycle as quickly as he can. The goal of Plyometric exercises is to decrease the amount of time in-between the eccentric and concentric movements. Plyometrics are any exercise where the muscle is contracted eccentrically, then immediately, concentrically. All this means is that muscle is stretched [loaded] before it is contracted.Plyometrics have to be used wisely with a basic-understanding of the bio-mechanical and physiological concepts that govern training. Coaches need to know these basic principles which govern the development of the type of strength that jumpers require.Plyometric training develops that explosive, elastic and reactive strength that All jumpers need to 'leave the ground'.The word Plyometric is derived from the Greek word 'pleythein' meaning to increase or from the greek roots 'plio and metric' meaning 'more and measure'.Plyometrics is an advanced training technique aimed at linking strength with speed of movement to Produce Power. By stretching a muscle and quickly contracting it enables a muscle to reach maximum strength in as short a time as possible. With plyometric training, we seek to train the body's fast-twitch fibre, so that they can load [stretch] more quickly, and in turn unload more quickly to produce more power.In terms of basic muscular physiology, a pre-stretched, or loaded muscle is capable of generating more force than an un-stretched one. Plyometric exercises 'educate' muscles to respond quickly and powerfully.Plyometrics is one of the best ways, if not the best to improve Power Output. Power is similar to strength, except you are 'adding' the time factor. Therefore, power is the relation of strength and speed which is what the jumper is looking for. Consider that a long jumper at take-off has his take-off foot in contact with the board for approximately 0.12 to 0.15 of a second then reactive speed is a pre-requisite. Specific plyometric training allows the jumper to approach at high speeds and still be able to produce an effective jump.

The **long jump** (formerly commonly called the "broad jump") is a track and field event in which athletes combine speed, strength, and agility in an attempt to leap as far as possible from a take off point. This event has been an Olympic medal event since the first modern Olympics in 1896 (a medal event for women since 1948) and has a history in the Ancient Olympic Games.There are five main components of the long jump: the approach run, takeoff, action in the air and landing. Speed in the run-up, or approach, and a high leap off the board are the fundamentals of success. Because speed is such an important factor of the approach, it is not surprising that many long jumpers also compete successfully in sprints. A classic example of this long jump / sprint doubling are performances by Carl Lewis.

The approach

The objective of the approach is to gradually accelerate to a maximum controlled speed at takeoff. The most important factor for the distance traveled by an object is its velocity at takeoff - both the speed and angle. Elite jumpers usually leave the ground at an angle of twenty degrees or less; therefore, it is more beneficial for a jumper to focus on the speed component of the jump. The greater the speed at takeoff, the longer the trajectory of the center of mass will be. The importance of a takeoff speed is a factor in the success of sprinters in this event. The length of the approach is usually consistent distance for an athlete. Approaches can vary between 12 and 19 strides on the novice and intermediate levels, while at the elite level they are closer to between 20 and 22 stride.

Takeoff

The objective of the takeoff is to create a vertical impulse through the athlete's center of gravity while maintaining balance and control.This phase is one of the most technical parts of the long jump. Jumpers must be conscious to place the foot flat on the ground, because jumping off either the heels or the toes negatively affects the jump. Taking off from the board heel-first has a braking effect, which decreases velocity and strains the joints. Jumping off the toes decreases stability, putting the leg at risk of buckling or collapsing from underneath the jumper. While concentrating on foot placement, the athlete must also work to maintain proper body position, keeping the torso upright and moving the hips forward and up to achieve the maximum distance from board contact to foot release.There are four main styles of takeoff: the kick style, double-arm style, sprint takeoff, and the power sprint or bounding takeoff.

Action in the air and landing

There are three major flight techniques for the long jump: the hang, the sail, and the hitch-kick. Each technique is to combat the forward rotation experienced from take-off but is basically down to preference from the athlete. It is important to note that once the body is airborne, there is nothing that the athlete can do to change the direction they are travelling and consequently where they are going to land in the pit. However, it can be argued that certain techniques influence an athlete's landing, which can have an impact on distance measured. For example, if an athlete lands feet first but falls back because they are not correctly balanced, a lower distance will be measured.

There are three different styles used for the flight part of a long jump. They are the: sail, hang and hitch kick. The best thing to do is start with a simple technique and progress as you gain more experience.

The Sail: This is the most basic technique; when performed, it looks like you are reaching out and touching your toes.

After the takeoff, drive your free leg out and hold it in front of your body as long as possible.

The takeoff leg will move into the same position once you are in the air.

Bring your arms forward towards your toes, which keeps you from falling back at the landing.

The Hang:This style is a little more stable, and helps bring the feet up higher above the ground.

After takeoff, drive your free leg forward and up then drop it underneath your hips.

The takeoff leg will then come up to meet the free leg.

The knees should be bent at a 90-degree angle and will look like a backwards ‘L.’

Extend your arms and reach up over your head. At the peak of the jump, rotate your arms forward. This should also cause your legs to extend forward.

The Hitch-Kick: The most advanced long jump technique, it looks like a running motion in the air.

At the take off, drive the free leg up to make 90-degree angle.

The opposite arm of your free leg will pump upwards. You will then bring your free leg back to make a circular motion but your body should be moving up and forward. The opposite arm will also make a circling motion back as well.

As the free leg is cycling, bring the takeoff leg to a 90-degree angle and start to extend it outwards. The arm opposite of the takeoff leg should also start coming forward and extend it out as well.
As your free leg finishes making a cycle, move it forward to take join the take off leg for landing. Bring around the second arm so both are extended outwards. You will then push you arms back but keep your body forward and bring your chin towards your knee

Speed is very important when you jump. To gain the speed you have to run up on your toes and use your arms. Explosive Power and speed is an essential attribute for any potential long jumper. The approach speed is very much important in long jump.
Purpose of the study: The purpose of the present study to find out the effect of plyometric exercises for the development of performance ability and speed in Long Jump.

Methodology: The sample for the present study consists of 50 Male Long Jumpers of Osmania University out of which 25 are experimental group and 25 are controlled group. Plyometric exercises such as hopping, bounding,depth jumps, tuck jumps etc were given to experimental group on alternate days i.e. three sessions per week and controlled group were given the general training for eight weeks. Pre Test and Post Test were conducted by giving the six trials of Long Jump and 30 Meters Run to the experimental group and controlled group .
30 Meters Run:
Sprint or speed tests can be performed over varying distances, depending on the factors being tested and the relevance to the sport.
purpose: The aim of this test is to determine acceleration and speed.
equipment required: measuring tape or marked track, stopwatch or timing gates, cone markers, flat and clear surface of at least 50 meters.
procedure**:** The test involves running a single maximum sprint over 30 meters, with the time recorded. A thorough warm up should be given, including some practice starts and accelerations. Start from a stationary position, with one foot in front of the other. The front foot must be on or behind the starting line. This starting position should be held for 2 seconds prior to starting, and no rocking movements are allowed. The tester should provide hints for maximizing speed (such as keeping low, driving hard with the arms and legs) and encouraged to continue running hard through the finish line.
results: Two trials are allowed, and the best time is recorded to the nearest 2 decimal places. The timing starts from the first movement (if using a stopwatch) or when the timing system is triggered, and finishes when the chest crosses the finish line and/or the finishing timing gate is triggered.
The both groups were conducted long jump performance with six trials in pre test and post test also to assess the performance.

Results:

This study shows that due to the plyometric exercises there is a improvement of experimental group in the performance ability and speed and controlled group is decreased in performance ability and speed due to the general training. The plyometric exercises are beneficial to the Long Jumpers for improvement of performance.

Discussion:

Long jumping is all about explosive power. Explosive power is a combination of speed, muscular endurance and muscular strength, all of which can be developed through plyometric exercises. It is concluded that due to plyometric exercises there will be improvement in performance and speed among long jumpers.

Table 1: Showing the Mean values and Independent Samples Test of Long Jump between experimental and control groups

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
Long Jump	Experimental	5.72±0.222	6.02±0.198	6.72	0.000
	Control	5.67±0.215	5.63±0.211		

*Significant at 0.05 level

The Long Jumper experimental group mean in long jump performance is 5.72 in Pre Test and Standard Deviation is 0.222 and Post Test is 6.02 and standard deviation is 0.198. There is a improvement of from 5.72 to 6.02 between the Pre Test and Post Test by experimental group due to the plyometric training. The Long Jumper control group mean in long jump performance is 5.67 in Pre Test and Standard Deviation is 0.215 and Post Test is 5.63 and standard deviation is 0.211. There is a decrease from 5.67 to 5.63 between the Pre Test and Post Test by control group due to the general training. The t values is 6.72 and p-value is 0.000.

Table 2 :showing the Mean values and Independent Samples Test of 30 M run test for speed between experimental and control groups

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
30 M Run Test	Experimental	3.48 ± 0.115	3.26 ± 0.154	10.62	0.000
	Control	3.57 ± 0.102	3.64 ± 0.090		

*Significant at 0.05 level

The Long Jumper experimental group mean in 30 M run for speed is 3.48 in Pre Test and Standard Deviation is 0.115 and Post Test is 3.26 and standard deviation is 0.154. There is a improvement of from 3.48 to 3.26 in timing between the Pre Test and Post Test by experimental group due to the plyometric training. The Long Jumper control group mean in 30 M run for speed is 3.57 in Pre Test and Standard Deviation is 0.102 and Post Test is 3.64 and standard deviation is 0.090. There is a increase from 3.57 to 3.64 in the timings between the Pre Test and Post Test by control group due to the general training. The t values is 10.62 and p-value is 0.000.

Conclusion:

It is concluded that due to the plyometric exercises there is a improvement of speed among long jumpers. It is also concluded that due to the plyometric exercises there is a improvement in the performance of long jumpers. Hence it is recommended that the plyometric exercises training must be given to the long jumpers to improve their performance. Similar studies can be conducted on others events in athletics.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp104-107

Role of Sports Psychologist for Team Performance in Sports

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Abstract:
The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. This has led coaches to take an increasing interest in the field of sport psychology and in particular in the area of competitive anxiety. The importance of a sports psychologist as an integral member of the coaching and health care teams is widely recognized. Sports psychologists can teach skills to help athletes enhance their learning process and motor skills, cope with competitive pressures.

Methods:
The purpose of the study to find out the role of sports psychologist in team performance.For the present study 100 players were selected from Dr Babasaheb Ambedkar University, Aurangabad. The effective sample consisted of 100 players (Kabaddi, Basketball, Badminton and cricket players), 50 players given the sports counseling and 50 players not given the sports counseling age range 18-25 years. Singh personal stress source inventory and sinha comprehensive anxiety test were used for the study.

Results:
The results related to the hypothesis have been recorded. The Players not given the Sports Counseling players have significantly high stress than the given the sports counseling. The Players who have not given the Sports Counseling players have significantly high anxiety than the given the sports counseling.

Discussion: It is an essentially need of sports psychologist in team sports performance Personality profiling, Assessing strengths and weaknesses. Now a days all the teams are using the services of sports psychologist to enhance the performance.

Key words: stress, anxiety, sports counselling etc.

Introduction:
The increased stress of competitions can cause athletes to react both physically and mentally in a manner that can negatively affect their performance abilities. They may become tense, their heart rates race, they break into a cold sweat, they worry about the outcome of the competition, they find it hard to concentrate on the task in hand. This has led coaches to take an increasing interest in the field of sport psychology and in particular in the area of competitive anxiety. That interest has focused on techniques that athletes can use in the competitive situation to maintain control and optimize their performance. Once learned, these techniques allow the athlete to relax and to focus his/her attention in a positive manner on the task of preparing for and participating in competition. Psychology is another weapon in the athlete's armory in gaining the winning edge.The specialized field of sports psychology has developed rapidly in recent years. The importance of a sports psychologist as an integral member of the coaching and health care teams is widely recognized. Sports psychologists can teach skills to help athletes enhance their learning process and motor skills, cope with competitive pressures, fine-tune the levelof awareness needed for optimal performance, and stay focused amid the many distractions of team travel and in the competitive environment. Psychological training should be an integral part of an athlete's holistic training process, carried out in conjunction with other training elements. This is best accomplished by a collaborative effort among the coach, the sport psychologist, and the athlete; however, a knowledgeable and interested coach can learn *basic* psychological skills and impart them to the athlete, especially during actual practice.

Preparing for Competition

Simple psychological skills to help the athlete manage the competitive performance environment include: 1) learning relaxation skills (e.g. progressive relaxation; slow, controlled, deep abdominal breathing; or autogenic training; 2) mastering all of the attention styles (types of concentration); 3) imagery (both visualization and kinesthetic); 4) appropriate self-talk; and 5) developing a pre-competition mental routine to be employed immediately prior to competition on game day (these routines are short [1–2 minutes] and use all of the mental skills just presented).

Psychology Skills Training

Psychology skills training for the athlete should aim to improve their mental skills, such as self-confidence, motivation, the ability to relax under great pressure, and the ability to concentrate and usually has three phases:

Education phase, during which athletes learn about the importance of psychological skills and how they affect performance09/01/13 - new ad format for Lisa Brown - gif image with new linkAcquisition phase, during which athletes learn about the strategies and techniques to improve the specific psychological skills that they require.Practice phase, during which athletes develop their psychological skills through repeated practice, simulations, and actual competition.While sport psychologists primarily work with athletes and focus their research on improving athletic performance, coaches are another population where intervention can take place. Researchers in this area focus on the kinds of things coaches can say or do to improve the performance in sports. Motivational climate refers to the situational and environmental factors that influence individuals' goals. The two major types of motivational climates coaches can create are task-oriented and ego-oriented. While winning is the overall goal of sports competitions regardless of the motivational climate, a task-orientation emphasizes building skill, improvement, giving complete effort, and mastering the task at hand (i.e., self-referenced goals), while an ego-orientation emphasizes demonstrating superior ability, competition, and does not promote effort or individual improvement (i.e., other-referenced goals). Effective coaching practices explore the best ways coaches can lead and teach their athletes. For examples, researchers may study the most effective methods for giving feedback, rewarding and reinforcing behavior, communicating, and avoiding self-fulfilling prophecies in their athletes.

Purpose of the study:

The purpose of the study to find out the role of sports psychologist in team performance. This study will be significant regarding the role of sports psychologist in the improvement of performance in sports

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

Methodology:

For the present study 100 players were selected from Dr Babasaheb Ambedkar University, Aurangabad. The effective sample consisted of 100 players (Kabaddi, Basketball, Badminton and cricket players), 50 players given the sports counselling and 50 players not given the sports counseling age range 18-25 years. Singh personal stress source inventory and sinha comprehensive anxiety test were used for the study.

Sample: For the present study 100 players were selected from Dr Babasaheb Ambedkar University, Aurangabad. The effective sample consisted of 100 players (Kabaddi, Basketball, Badminton and cricket players), 50 players given the sports counseling and 50 players not given the sports counseling age range 18-25 year.

Tools: Singh Personal Stress Source Inventory (SPSSI): This test is developed and standardized by Arun Kumar Singh. The test consisted of 35 Items. The subjects were required to respond to each item in terms of 'Seldom', sometimes, and fluently. Internal Consistency Reliability by odd – even method was found to be .784 which was highly significant.Sinha's Comprehensive Anxiety Test (SCAT–SS):This scale was constructed and standardized by A. K. P. Sinha and L. N. K. Sinha. It consists of 90 sentences and each item provides two alternatives. The inventory can be scored accurately by hand and no scoring key or stencil is provided so far. For any response indicated as 'YES' the testee should be awarded the score of one, and zero for 'NO'. The sum of the entire positive or yes responses would be the total anxiety score of the individual. The coefficient of reliability was determinate by using the two methods. First the test-retest method (N=100) was employed to determine the temporal stability of the test. The product moment correlation between the test and retest scores was 0.85. Second method is the internal consistency reliability was ascertained by adopting odd-even procedure (N=100). Using the spearman brown formula, the reliability coefficient of the test was found to be 0.92.

Procedures of data collection

Two instruments could be administered individuals as well as a small group. While collecting the data for the study the later approaches was adopted. The subjects were called in a small group of 20 to 25 subjects and there seating arrangements was made in a classroom. Prior to administration of test, through informal talk appropriate rapport form. Following the instructions and procedure suggested by the author of the test. The test was administered and a field copy of test was collected. Following the same procedure, the whole data were collected.

Variable:

Independent variable:

Players a) Given Sports Counseling b) Not Given Sports Counseling

Dependent Variable: 1) Stress 2) Anxiety

Results:

The results related to the hypothesis have been recorded. The Players not given the Sports Counseling players have significantly high stress than the given the sports counselling. The Players who have not given the Sports Counseling players have significantly high anxiety than the given the sports counselling.

Discussion:

It is an essentially need of sports psychologist in team sports performance Personality profiling, Assessing strengths and weaknesses. Now a days all the teams are using the services of sports psychologist to enhance the performance.

Statistical analysis and discussion

't' showing the significance of difference between played four matches with counseling and playedfour matches without counseling respect to Stress and Anxiety. (Four matched aggregate mean taken)

Dimension	Group	Mean	SD	S.E	N	df	't'
Stress	Four matches Played with Sports Counseling	22.69	7.18	1.01	50	98	6.89**
	Four matches Played without Sports Counseling	34.12	9.27	1.31	50		
Anxiety	Four matches Played with Sports Counseling	38.45	6.53	0.92	50	98	6.42**
	Four matches Played without Sports Counseling	47.80	7.97	1.13	50		

The results related to the hypothesis have been recorded. Mean of stress score of the Four matches Played with Sports Counseling Mean is 22.69 and that of the Four matches Played without Sports Counseling Mean is 34.12 The difference between the two mean is highly significant ('t'= 6.89, df =98, P < 0.01) It is clear that Four matches Played with Sports Counseling and Four matches Played without Sports Counseling Differ Significantly From each other from the mean scores and graph it was found that the Four matches Played without Sports Counseling have Significantly high stress than the Four matches Played with Sports Counseling.

Second Mean of anxiety score of the Four matches Played with Sports Counseling Mean is 47.80 and that of the Four matches Played without Sports Counseling Mean is 38.45 The difference between the two mean is highly significant ('t'= 6.42, df =98, P < 0.01) It is clear that Four matches Played with Sports Counseling and Four matches Played without Sports Counseling Differ Significantly From each other from the mean scores and graph it was found that the Four matches Played without Sports Counseling have Significantly high anxiety than the Four matches Played with Sports Counseling.

It is an essentially need of sports psychologist in team sports performance Personality profiling, Assessing strengths and weaknesses in current mental approaches of individuals in the goal of refinement for optimal performance, Helping key stakeholders such as managers and coaches promote an optimal environment for maximum team enjoyment, Stress management, Weight and health management, Assisting with life management strategies, Teaching mental skills such as imagery and competition planning, Offering individual consultations, as well as facilitating interactive workshops,andGeneralcounseling.

Sports Psychology is about improving your attitude and mental game skills to help you perform your best by identifying limiting beliefs and embracing a healthier philosophy about your sport. The aim of

sports psychologis helps overcome any pressure that the athlete may have from coach,parent and themselves. Teaching Strategies,Techniques to improve the sports performance. At times of poor emotional well being, not feeling well the psychologist will help to increase your state of well being to give the best results in the sports competition.

Sports Pyschologist guiding the Team member

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

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp108-110

A Comparative Study of Emotional Intelligence among Chess Players and Carroms Players of Hyderabad District in India

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Introduction: There is a growing interest in emotional intelligence in sport. Recent research found emotional intelligence related to emotions experienced before successful and unsuccessful performance. It was found that emotions correlating with successful performance vigor, happiness, and calmness, whereas emotions associating with poor performance include confusion, depression and fatigue. Emotional intelligence correlated positively with pleasant emotions and negatively with unpleasant emotions.Chess is a two-player board game played on chess board a square-checkered board with 64 squares arranged in an eight-by-eight grid. It is one of the world's most popular games, played by millions of people worldwide at home, in clubs, schools, colleges, universities etc. Carrom is known by many names around the world, including carrum, couronne, carum, karam, karom, karum, fatta and finger billiards.
Methods: The present study was undertaken to investigate differences between emotional intelligence among Chess Players and Carrom Players. The Sample for the study are 100 Chess and 100 Carrom players of Hyderabad District in India. The purpose of the study was to examine the emotional intelligence among Chess Players and Carrom Players. Pedhe and Hyde's emotional intelligence test was used the study.
Results: The results of this study is Chess Players are have significantly high emotional intelligence than the Carrom Players.
Discussion: Emotional intelligence might also help explain why some people appear to initiate strategies to reduce the discrepancy between current emotions and ideal emotions.. In sport psychology, the notion that emotions provide feedback and those individuals learn to associate certain emotions with success .In Chess and Carroms the emotional intelligence plays a vital role for achieving the performance.
Key Words:emotional intelligence,carrom,chess etc.

Introduction:

There is a growing interest in emotional intelligence in sport (Meyer and Zizzi, 2007). Recent research found emotional intelligence related to emotions experienced before successful and unsuccessful performance (Lane et al., 2009b). Lane et al. (2009b) found that emotions correlating with successful performance vigor, happiness, and calmness, whereas emotions associating with poor performance include confusion, depression and fatigue. Emotional intelligence correlated positively with pleasant emotions and negatively with unpleasant emotions. Further, Lane et al. (2009c) found emotional intelligence scores correlated with frequent use of psychological skills. Athletes reporting frequent use of psychological skills (Thomas et al., 1999) also appear to report high scores on the self-report emotional intelligence scale (Schutte et al., 1998).According to theoretical proposals by Salovey and Mayer (1990), emotional intelligence could explain the process through which people recognize which emotions appear to help performance and which emotions might hamper performance. Furthermore, emotional intelligence might also help explain why some people appear to initiate strategies to reduce the discrepancy between current emotions and ideal emotions. Recent research has argued that people learn from their emotional experiences (Baumeister et al., 2007). Baumeister et al. propose previous emotional outcomes and current emotional states contribute people selecting actions according to anticipated emotions. For example, an athlete who failed to achieve his/her competitive goals is likely to feel unhappy and angry after competition. These feelings prompt the athlete to consider how she/he could improve performance to avoid similar outcomes in the future. At the next competition, should the athlete experience mild anger and unhappiness, even anticipatory in nature, then he or she will initiate thoughts or behaviors to regulate these emotions, possibly by using psychological skills. In sport psychology, the notion that emotions provide feedback and those individuals learn to associate certain emotions with successis consistent with suggestions made by

Hanin (2003). Hanin argued that individuals develop meta-emotional beliefs regarding which emotions associate with optimal performance and emotions associate with dysfunctional performance.

Chess is a two-player strategy board game played on a chessboard, a checkered gameboard with 64 squares arranged in an eight-by-eight grid. It is one of the world's most popular games, played by millions of people worldwide at home, in clubs, online, by correspondence, and in tournaments.
Each player begins the game with 16 pieces: one king, one queen, two rooks, two knights, two bishops, and eight pawns. Each of the six piece types moves differently. Pieces are used to attack and capture the opponent's pieces, with the objective to 'checkmate' the opponent's king by placing it under an inescapable threat of capture. In addition to checkmate, the game can be won by the voluntary resignation of the opponent, which typically occurs when too much material is lost, or if checkmate appears unavoidable. A game may also result in a draw in several ways, where neither player wins. The course of the game is divided into three phases: opening, middlegame, and endgame.
The first official World Chess Champion, Wilhelm Steinitz, claimed his title in 1886; the current World Champion is Indian chess GrandmasterViswanathan Anand. In addition to the World Championship, there are the Women's World Championship, the Junior World Championship, theWorld Senior Championship, the Correspondence Chess World Championship, the World Computer Chess Championship, and Blitz and Rapid World Championships. The Chess Olympiad is a popular competition among teams from different nations. Online chess has opened amateur and professional competition to a wide and varied group of players. Chess is a recognized sport of the International Olympic Committee and international chess competition is sanctioned by the World Chess Federation (FIDE), which adopted the now-standard Staunton chess set in 1924 for use in all official games. There are also many chess variants, with different rules, different pieces, and different boards.
Since the second half of the 20th century, computers have been programmed to play chess with increasing success, to the point where home computers can play chess at a very high level. In the past two decades computer analysis has contributed significantly to chess theory, particularly in the endgame. The computer Deep Blue was the first machine to overcome a reigning World Chess Champion in a match, when it defeated Garry Kasparov in 1997.

Carrom (also known as Karrom) is a "strike and pocket" table game of Eastern origin similar to billiards and table shuffleboard. It is found throughout the East under different names though most non-eastern people know it by the East Asian name of Carroms (or Karrom). It is very popular in India, Pakistan, Bangladesh, Sri Lanka and surrounding areas. In the Indian sub-continent, many clubs and cafes have regular tournaments. Carrom is very commonly played within families and other functions.
The International Carrom Federation (ICF) was formed in the year 1988 in the city of Chennai, India. The formal rules for the Indian version of the game were published in 1988. In the same year the ICF officially codified the rules. The game is very popular throughout South Asia mainly India, Pakistan, Bangladesh, Sri Lanka etc. and has gained some popularity in Europe and the United States where it has been introduced by the Indian diaspora. The board and pieces can be bought in Europe or the USA and are usually imported from India. The most expensive boards are made to a high standard with high quality wood and decorations though cheaper boards are available.

Chess Board

Carrom Board

Objective of the Study:
To find out the emotional intelligence among chess players and carrom players

Aim of the Study:
To Examine out the emotional intelligence among chess players and carrom players
Hypothesis:
Chess players have significantly high emotional intelligence than the carrom players.
Methodology:
Sample:
For the present study 200 Sample were selected from Hyderabad District in India. The effective sample consisted of 200 subjects, 100 subjects were chess playes and 100 subjects were carom players.
Tools
Emotional Intelligence test:
Pedhe and Hyde was used for measuring Emotional intelligence. This test is developed and standardized by Pedhe and Hyde the 34 items are rated on a five point scale. The subjects were required to respond to each item in terms of "Strongly disagree" , "Disagree", "Neutral", "Agree", "strongly agree". This is well known test having high reliability and validity coefficients.
Procedures of data collection
One test could be administered individuals as well as a small group. While collecting the data for the study the later approaches was adopted. The subjects were called in a small group of 20 to 25 subjects and there seating arrangements was made in a classroom. Prior to administration of test, through informal talk appropriate rapport form. Following the instructions and procedure suggested by the author of the test. The test was administered and a field copy of test was collected. Following the same procedure, the whole data were collected.
Variable
Independent variable- Players a) Carrom players b) chess players

Dependent Variable 1. Emotional Intelligence

Results: The results of this study is Chess Players are have significantly high emotional intelligence than the Carrom Players.
Discussion: Emotional intelligence might also help explain why some people appear to initiate strategies to reduce the discrepancy between current emotions and ideal emotions.. In sport psychology, the notion that emotions provide feedback and those individuals learn to associate certain emotions with success .In Chess and Carroms the emotional intelligence plays a vital role for achieving the performance.
Statistical analysis and discussion

Emotional Intelligence among chess players and carom players Mean S.D. and "t" Value.

Group	Mean	S.D	N	df	't'
Chess players	83.23	11.29	100	198	7.65**
Carrom players	71.44	10.48	100		

The results related to the hypothesis have been recorded. Mean of Emotional Intelligence score of the chess players is 83.23 and that of the carrom players is 71.44. The difference between the two mean is highly significant ('t'= 7.65, df =198) It is clear that chess players and carrom players Differ Significantly From each other from the mean scores and graph it was found that the chess players have Significantly high Emotional Intelligence than the carrom players. This Result Support the Hypothesis.
Conclusion:
It is concluded that Chess players have significantly high emotional intelligence than the carrom players. .In Chess and Carroms the emotional intelligence plays a vital role for achieving the performance.
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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp111-113

A Comparative Study on Strength and Agility among Wrestlers and Judokas of Maharashtra in India

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Abstract:
The are two styles of wrestling at the modern Olympics - freestyle and Greco-Roman. While the rules are almost identical, Greco-Roman wrestlers must not use the legs to trip or lift an opponent or attack an opponents legs. Wrestling greatly emphasises strength and agility. 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.

Methods:
The purpose of the study to find out the strength and agility among Wrestlers and Judokas of Maharashtra in India. The Sample for the study is 30 Male Wrestlers and 30 Male Judokas are taken for the study. The Age Groups for the study is from 18 Years to 22 Years. Pull Ups and Shuttle Run are the test Items of AAPHER Youth fitness test are taken for the study. This Tests are conducted on both the groups.

Results: The results of the study has shows that Wrestlers are having good Strength and agility compare to the Judokas.

Discussion:
Wrestling is a demanding sport that requires large amounts of physical and mental toughness for success. Wrestlers spend hours a day training in the gym and on the mat for matches that only last a total of six minutes or less. strength and conditioning are essential for competitive judo athletes. Hence both Wrestlers and Judokas are required strength and agility to excel.

Key words: strength, agility, wrestling, Judo etc.

Introduction:

Wrestling is a form of combat sport involving grappling type techniques such as clinch fighting, throws and takedowns, joint locks, pins and other grappling holds. A wrestling bout is a physical competition, between two (occasionally more) competitors or sparring partners, who attempt to gain and maintain a superior position. There are a wide range of styles with varying rules with both traditional historic and modern styles. Wrestling techniques have been incorporated into other martial arts as well as military hand-to-hand combat systems.

Wrestling is one of the oldest forms of combat with references to it as early as the Iliad, in which Homer recounts the Trojan War in the 13th or 12th century BC. The origins of wrestling can be traced back 15,000 years through cave drawings in France. Babylonian and Egyptian relief's show wrestlers using most of the holds known to the present-day sport. In ancient Greece, wrestling occupied a prominent place in legend and literature; wrestling competition, brutal in many aspects, was the number one sport of the Olympic Games. The ancient Romans borrowed heavily from Greek wrestling, but eliminated much of its brutality.

During the Middle Ages (fifth century to fifteenth century) wrestling remained popular and enjoyed the patronage of many royal families, including those of France, Japan and England.

Early Americans brought a strong wrestling tradition with them when they came from England. The settlers also found wrestling to be popular among Native Americans. Amateur wrestling flourished throughout the early years of the country and served as a popular activity at country fairs, holiday celebrations, and in military exercises. The 1st organized national wrestling tournament was held in New York City in 1888, while the 1st wrestling competition in the modern Olympic Games was held in 1904 in Saint Louis, Missouri. FILA was founded in 1912, in Antwerp, Belgium. The 1st NCAA Wrestling Championships were also held in 1912, in Ames, Iowa. USA Wrestling, located in Colorado Springs, Colorado, became the national governing body of amateur wrestling in 1983. It conducts competitions for all age levels.

Greco-Roman is an international discipline and an Olympic sport. In Greco-Roman style, it is forbidden to hold the opponent below the belt, to make trips, and to actively use the legs in the

execution of any action. Recent rule changes in Greco-Roman increase opportunities for and place greater emphasis on explosive, 'high amplitude' throws. Pinning one's opponent to the mat is one way of winning. One of the most well known Greco-Roman wrestlers is Alexander Karelin from Russia.
Freestyle wrestling is an international discipline and an Olympic sport, for both men and women. This style allows the use of the wrestler's or his opponent's legs in offense and defense. Freestyle wrestling has its origins in catch-as-catch-can wrestling and the prime victory condition in this style involves the wrestler winning by throwing and pinning his opponent on the mat. American high school and college wrestling is conducted under different rules and is termed scholastic and collegiate wrestling. Outside the U.S., one can find professional wrestlers who compete by the rules of freestyle wrestling.
Judo (meaning "gentle way") 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 (kata) and are not allowed in judo competition or free practice (randori).
The philosophy and subsequent pedagogy developed for judo became the model for other modern Japanese martial arts that developed from *koryū* (traditional schools). The worldwide spread of judo has led to the development of a number of offshoots such as Sambo and Brazilian Jiu-Jitsu. Judo practitioners are called judoka.

Purpose of the study: The purpose of the study to find out the strength and agility among Wrestlers and Judokas of Maharashtra in India.

Methodology: The Sample for the study is 30 Male Wrestlers and 30 Male Judokas are taken for the study. The Age Groups for the study is from 18 Years to 22 Years. Pull Ups and Shuttle Run are the test Items of AAPHER Youth fitness test are taken for the study. This Tests are conducted on both the groups.

Pull Ups:
Purpose :To measure arm and shoulder strength.
Facilities and Equipment:A metal or wooden bar approximately $1^{1}/2$ inch in diameter is place at a convenient height. However, for the lower age levels a close way gym bar was used. At times improvised modalities such as a basketball goal support or a ladder was utilized.
Procedure:The bar is adjusted to such a height that the student can hang free of the floor. The student should grasp the bar with his palm facing away from his body (over hand grasp). The student should then raise his body until his arms are fully extended.
Instructions :The students were instructed not to lift the knees or assist by pull up or kicking. The subject must return to the hang position with the arms fully straight. Swinging or snapping are not permitted.
Scoring:One point is scored each time, the student completed a pull up. Part scores do not count, and only one trial is permitted unless it is obvious the student did not have a fair chance on his first trail.
Testing personnel:One trained tester was assigned to administer this item, whose duty was to count the score.
Purpose: To measure speed and agility.

Shuttle Run:
Facilities and Equipment : Two lines parallel to each other are marked on the floor thirty feet apart. Since the student must over run both of these lines, it is necessary to have several feet more of floor space at either end. A block of wood 2 by 2 by 4 inches and a stopwatch are needed.
Procedure: The subject stands at one of the lines with the 2 blocks at the other lines. On the signal to start, the student runs to the blocks, takes one and returns to the starting line, and places the block behind that line. He then returns to the second block, which is carried across the starting line on the way back. Two students can run at the same time if 2 timer are available, or if 1 test administrator has a split second timer, and of course, if there are 2 sets of blocks. Two trials are permitted
Instructions: On the signal “Go” run as fast as you can to the next line and pick up a block. You should return the block over the second line where you place it on the floor. Do not throw it. Return for the second block, and this time you may run across the starting line as fast as you can without placing the blocks on the floor.

Scoring : The score is the elapsed time recorded in seconds and tenth of seconds for the better of 2 trials.

Testing Personnel : One trained tester can administer this test and record the score and time. If he has a split-second timer, he may have two students running at the same time. If two regular stop watches are available. Two timers can be used.

Wrestlers in action Judokas in action

Results:

The results of the study has shows that Wrestlers are having good Strength and agility compare to the Judokas.

Wrestling requires good strength and agility compare to Judo.

Discussion: Wrestling is a demanding sport that requires large amounts of physical and mental toughness for success. Wrestlers spend hours a day training in the gym and on the mat for matches that only last a total of six minutes or less. strength and conditioning are essential for competitive judo athletes. Hence both Wrestlers and Judokas are required strength and agility to excel.

Table No.1 showing the pull ups strength of Judokas and Wrestlers.

Results of Pull Ups Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Judokas	30	11.00	0.94	0.30			
Wrestlers	30	14.20	1.14	0.36	-4.71	58.00	0.00

The Judokas mean performance in pull ups is 11.00 and Standard Deviation is 0.94 and Wrestlers mean performance is 14.20 and standard deviation is 1.14. The Wrestlers mean performance is 14.20 and judokas mean performance is 11.00 and there is a better performance of 3.20 of Wrestlers in pull-ups compare to judokas. Hence wrestlers are having good strength compare to judokas.

Table No.2 showing the agility strength of Judokas and Wrestlers.

Results of shuttle run	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Judokas	30	15.38	0.56	0.17			
Wrestlers	30	14.10	1.20	0.37	2.53	58.00	0.02

The Judokas mean performance in shuttle run is 15.38 and Standard Deviation is 0.56 and Wrestlers mean performance in shuttle run is 14.10 and standard deviation is 1.20. The Wrestlers mean performance is 14.10 and judokas mean performance is 15.38 and there is a better performance of 1.28 of Wrestlers in shuttle run compare to judokas. Hence wrestlers are having good agility compare to judokas.

Conclusion:

1.It is concluded that Wrestlers are having good strength compare to Judokas.

2. It is also concluded that Wrestlers are having good agility compare to Judokas.

3. Similar studies can be conducted on other sports and games.

References:

Wikipaedia, Wrestling

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp114-116

A Comparative study of Aerobic endurance among Kabaddi and Kho Players of Maharashtra

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Abstract;
Endurance is the ability of an organism to exert itself and remain active for a long period of time, as well as its ability to resist, withstand, recover from, and have immunity to trauma, wounds, or fatigue. In humans, it is usually used in aerobic or anaerobic exercise. The definition of 'long' varies according to the type of exertion – minutes for high intensity anaerobic exercise, hours or days for low intensity aerobic exercise. Kabaddi is a South Asian team sport. The name is derived from the Tamil word (hand), "pidi" (catch), which is translated into "Holding Hands". Kho Kho is an Indian and Pakistani sport played by teams of twelve players who try to avoid being touched by members of the opposing team, only 9 players of the team enter the field. It is one of the two most popular traditional tag games of South Asia, the other being kabaddi.
Methods:
The purpose of the study to find out Aerobic Endurance among Kabaddi and Kho Kho Players of Maharashtra.For the present study 60 Sample were selected from Nanded in Maharashtra State out of which 30 Male Kabaddi Players and 30 Male Kho Kho Players. The cooper test 12 Min Run were conducted for both the players.
Results:
The results of the study has shown that Kho Kho Players are having good Aerobic Endurance then Kabaddi Players.
Discussion:
It was found that Kho Kho Players are involve in more running that Kabaddi Players. Hence it may be concluded that Kho Kho Players are having good Aerobic Endurance compare to Kabaddi Players.
Key words: aerobic endurance, Kabaddi, Kho Kho etc.

Introduction: Endurance is the ability of an organism to exert itself and remain active for a long period of time, as well as its ability to resist, withstand, recover from, and have immunity to trauma, wounds, or fatigue. In humans, it is usually used in aerobic or anaerobic exercise. The definition of 'long' varies according to the type of exertion – minutes for high intensity anaerobic exercise, hours or days for low intensity aerobic exercise.Aerobic endurance is the amount of oxygen intake during exercise.Aerobic endurance is the time which you can exercise, without producing lactic acid (and it building up) in your muscles. In other words stamina, the amount of time you can maintain an aerobic use of energy (oxygen)

Kabaddi is a team sport which originated in Asia and is played around the globe today. It is fondly known as ‘Game of the masses’ because of the excitement and thrill it provides to the spectators which immerse themselves into the game and give Kabaddi players the encouragement they need.

Kabbadi derived from two words Kai means hand pidi means catch.Kabbadi is a South Asian team sport. In Two teams occupy opposite halves of a field and take turns sending a "raider" into the other half, in order to win points by tackling members of the opposing team; the raider then tries to return to his own half, holding his breath and chanting "kabaddi, kabaddi, kabaddi" during the whole raid.Raider must not cross the lobby unless he touches any of his uponent.If he does so then he will be declared as out.In the international team version of kabaddi, two teams of seven members each occupy opposite halves of a field of 10 m × 13 m in case of men and 8 m × 12 m in case of women.Each has three supplementary players held in reserve. The game is played with 20-minute halves and a five-minute halftime break during which the teams exchange sides.Teams take turns sending a "raider" to the opposite team's half, where the goal is to tag or wrestle ("confine") members of the opposite team before returning to the home half. Tagged members are "out" and temporarily sent off the field.Meanwhile, defenders must form a chain, for example, by linking hands; if the chain is broken, a member of the defending team is sent off. The goal of the defenders is to stop the raider from

returning to the home side before taking a breath.If any of the seven players cross the lobby without touching the raider he will be declared as out.

The raider is sent off the field if:
the raider takes a breath before returning or the raider crosses boundary line or
A part of the raider's body touches the ground outside the boundary (except during a struggle with an opposing team member). Each time when a player is out, the opposing team earns a point. A team scores a bonus of two points, called a *loan*, if the entire opposing team is declared out. At the end of the game, the team with the most points wins.
Kho Kho is an Indian and Pakistani sport played by teams of twelve players who try to avoid being touched by members of the opposing team, only 9 players of the team enter the field. Kho Kho and Kabaddi, in spite of popular misconception, are not the same. Each team consists of 12 Players but only 9 Players take the field.
Kho kho playground is rectangular. It is 29 meters in length and 16 meters in width. There are two rectangles at the end. One side of the rectangle is 16 meter and the other side is 2.75 meters. In the middle of these two rectangles, there shall be two wooden poles. The central lane is 907.50 cm long and 30 cm X 30 cm on the lane. There are eight cross lanes which lie across the small squares and each of it is 500 cm in length and 70 cm in breadth, at right angles to the central lane and divided equally into two parts of 7.30 cm each by central lane. At the end of central lane, two posts shall be fixed. They shall be 120 cm above the ground and their circumference shall be not less than 30 cm and not more than 40 cm. The post shall be made of wooden poles which are smooth all over. The posts shall be fixed firmly in the free zone tangent to the post-line at a height between 120 to 125 cm.

Kabaddi Players in action

Kho Kho Players in action

Methodology:

The purpose of the study to find out Aerobic Endurance among Kabaddi and Kho Kho Players of Maharashtra.For the present study 60 Sample were selected from Nanded in Maharashtra State out of which 30 Male Kabaddi Players and 30 Male Kho Kho Players. The cooper test 12 Min Run were conducted for both the players.

The 12 Minute Cooper Test is used for collection of Data.

The Cooper test is a test of Aerobic Endurance.It was designed by Kenneth H. Cooper in 1968 for US military used in the original form; the point of the test is to run as far as possible within 12 minutes. To undertake this test you will require:

400 meter track ,Stop Watch ,Whistle and Technical Official

This test requires the Kabbadi and Kho Kho players to run as far as possible in 12 minutes.

The subjects given 10 minutes for warm up.

The assistant gives the command "GO", starts the stopwatch and athlete commences the test

The Technical Official keeps the athlete informed of the remaining time at the end of each lap

The Technical Official blows the whistle when the 12 minutes has elapsed and records the distance the athlete covered to the nearest 10 meters

Results:

The results of the study has shown that Kho Kho Players are having good Aerobic Endurance compare to the Kabaddi Players.

Discussion:

It was found that Kho Kho Players are involve in more running that Kabaddi Players. Hence it may be concluded that Kho Kho Players are having good Aerobic Endurance compare to Kabaddi Players.

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Kabaddi Players and Kho Kho Players in Cooper Test.

Results of 12 min Run Cooper Test(Mtrs)	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Kho Kho Players	30	3141.75	219.71	49.13	1.69453	58.00	0.10
Kabaddi Players	30	3043.50	137.71	30.79			

The mean performance of Kho Kho Players in 12 Min Run Cooper Test is 3141.75 compare to Kabaddi Players mean performance in 12 Min Run Cooper Test is 3043.50, there is a difference of 98.75 between Kabaddi Players and Kho Players in mean performance. Kho Kho Players are having good aerobic endurance because running is more involved in Kho Kho than kabbadi.

Conclusions:

1.It is concluded that Kho Kho Players are having good aerobic endurance compare to Kabaddi Players.

2. This type of study is useful to the coaches and physical educators to enhance the motor qualities among kho kho and kabbadi players.

3. Similar studies can be conducted on other sports and games to know their motor qualities and skills to analyse their performance in sports and games.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp117-120

A Comparative study of Explosive Power and agility among Sepak Takraw and Foot Ball Players of Hyderabad District in India

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Abstract
"Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, therefore sepak takraw quite literally means to kick ball. The choosing of this name for the sport was essentially a compromise between Malaysia and Thailand, the two powerhouse countries of the sport. Strength and agility is important for football players and sepak takraw players. The basic elements of speed, mobility and strength are all functions of explosive power and agility.
Methods:
The purpose of the present study to find out the effect of difference of explosive power and agility among sepak takraw and foot ball players of Hyderabad District in India.The sample for the present study consists of 20 Male sepaktakraw and 20 Male foot ball players . The Standing Broad Jump for explosive power and shuttle run for agility has conducted for the both groups .
Results:
This study shows that sepak takraw players are having good explosive power and agility compare to foot ball players.
Discussion:.
Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton.Absolute or maximal strength in and of itself is not enough though - not if football players want to reach their full potential. To gain the greatest advantage, gains in maximal strength should be converted into explosive power. Power is a combination of strength and speed. And in football, with all other factors equal, the player with the greater power will come out on top.
Key Words:explosive power, agility etc.

Introduction:
"Sepak" is the Malay word for kick and "takraw" is the Thai word for a woven ball, therefore sepak takraw quite literally means to kick ball. The choosing of this name for the sport was essentially a compromise between Malaysia and Thailand, the two powerhouse countries of the sport. Strength and agility is important for football players and sepak takraw players. The basic elements of speed, mobility and strength are all functions of explosive power and agility. Sepak Takraw is Playing Volleyball with the Feet.
Sepak takraw is a skill ball game originated from Asia. It combines the teamwork of volleyball, the dexterity of soccer and the finesse of badminton. In Thailand it is called takraw, but the official name of this internationally recognized game is sepak takraw. Without a doubt it is one of the world's most exciting sports, both to play and to watch, yet it is relatively unknown outside of Southeast Asia. Playing the sport requires little in the way of equipment or preparation but it does require quick reflexes, coordination, agility and, above all, technique. Thick skin is also helpful; a skilfully kicked takrawballcantravelatspeedsofover60mph!
The game is played by two opposing Regus, a team of three players each, on a court separated by a net similar to badminton. It begins with the service, executed by a ball toss from one player to the Server. Then, the players try to beat their opponents using their legs and head, except their hands, inside three kicks. The highlight is the "spike" (see right picture above). This is the most dramatic and explosive move in the game for spectators to watch as players go mid-air, twisting and turning to power the ball down into the opponent's court. To play takraw, players can use either a net, a hoop, or simply stand around in a circle formation. Whatever the style, the object is to kick the ball to another player without the ball touching the ground. Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton players .

This sport seems to have its origins in ancient Thailand and was invented about 500 years ago. There is a strong martial arts tradition in Thailand with Muay Thai Boxing originating from and still being widely practiced there today. Because of this strong tradition of martial arts which relies on powerful kicks, the sport may have come about as a side project of a few Muay Thai boxers. The kicking aspect of Muay Thai and the kicking aspect of Sepak Takraw are fairly similar and agility and dexterity in kicking very high objects and flexibility all play a part in both sports.

The spectacle of the sport is what makes it so entertaining to watch, the players doing crazy stunts with their feet very high off the ground. Now the sport of volleyball is difficult to play and anyone who has ever played it before will confirm that fact. It takes years of practice to master the techniques and get everything right. Football is also a difficult game to master and it is so hard to become great at it that footballers are paid hefty sums of money. Now imagine combing these two very difficult sports into one crazy sport and what you get is Sepak Takraw. The players have to be very physically fit and limber to be able to do the high flying moves that they do in order to score points and win matches. There must be some martial arts training required when a person is learning to play the game. The high kicks and acrobatic moves are heavily borrowed from kick boxing and are probably incorporated into the training regimes of the players.

Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. The most popular of these sports worldwide is association football, more commonly known as just "football" or "soccer". Unqualified, the word *football* applies to whichever form of football is the most popular in the regional context in which the word appears, including association football, as well as American football, Australian rules football, Canadian football, Gaelic football, rugby league, rugby union and other related games. These variations of football are known as football codes.
Training explosively involves performing the eccentric (lowering) portion of a lift at normal speed while the concentric (lifting) portion is performed as rapidly and forcefully as possible. Explosive training is designed to increase muscular power which is defined as the rate of performing work. In addition, the explosive performance of an exercise appears to increase both the rate of force development and the rate of velocity development or an individual's ability to produce force and velocity in a very short time period. Explosive training generally results in very high power outputs, which is why they have a large effect on performance in activities and sports requiring high speed movements.

Agility or *nimbleness* is the ability to change the body's position efficiently, and requires the integration of isolated movement skills using a combination of balance, coordination, speed, reflexes, strength and endurance. Agility is the ability to change the direction of the body in an efficient and effective manner and to achieve this you require a combination of: balance - the ability to maintain equilibrium when stationary or moving (i.e. not to fall over) through the coordinated actions of our sensory functions (eyes, ears and the proprioceptive organs in our joints); static balance - the ability to retain the centre of mass above the base of support in a stationary position; dynamic balance - the ability to maintain balance with body movement; speed - the ability to move all or part of the body quickly; strength - the ability of a muscle or muscle group to overcome a resistance; and lastly, co-ordination - the ability to control the movement of the body in co-operation with the body's sensory functions (e.g. catching a ball [ball, hand and eye co-ordination]). In sports, agility is often defined in terms of an individual sport, due to it being an integration of many components each used differently (specific to all of sorts of different sports). Sheppard and Young (2006) defined agility as "a rapid whole body movement with change of velocity or direction in response to a stimulus."
Explosive exercise is often used by elite athletes to improve their ability to generate power and strength. This is essential in sports that require fast burst of maximal effort, such as sprinting and jumping. The types of exercises used to build this power are movements that are require a maximum or near maximum power output from the athlete in a short amount of time.Explosive exercise training routines are one way to increase power output. The goal of explosive exercise training is to ultimately move heavy weights very quickly. But to get to that point safely, without risking injury, it's important to start with light weights and slow controlled movements. Over a matter of training session (several weeks), but the weight lifted and speed at which it's lifted will be increased.Explosive power exercises should be taught and supervised by fitness professionals to reduce the risk of injury. They should also be done in conjunction with a regular workout program to ensure that the athlete is balanced in all exercise areas.

Purpose of the study:
The purpose of the present study to find out the effect of difference of explosive power and agility among sepak takraw and foot ball players of Hyderabad District in India. This study will bring the true facts of Physical variable abilities among Sepak Takraw and foot Ball players. The study is limited to 20 Male Sepak Takraw Player and 20 Male Foot Ball Players of Hyderabad District in India.

Methodology:
The sample for the present study consists of 20 Male sepaktakraw and 20 Male foot ball players . The Standing Broad Jump for explosive power and shuttle run for agility has conducted for the both groups
Standing Broad Jump:
The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power
purpose: to measure the explosive power of the legs
equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The take off line should be clearly marked.
procedure: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed
scoring**:** The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts.

Shuttle run:
This test measures agility and speed while running between two lines 10m apart.
purpose: this is a test of speed, body control and the ability to change direction (agility).
equipment required: two wooden blocks for each runner (each block should measure 10 x 5 x 5 cm), marker cones or marking tape, measurement tape, stopwatch, flat non-slip surface, with two lines 10 meters apart.
procedure: Mark two lines 10 meters apart using marking tape or cones. The two blocks are placed on the line opposite the line they are going to start at. On the signal "ready", the participant places their front foot behind the starting line. On the signal, "go!" the participant sprints to the opposite line, picks up a block of wood, runs back and places it on or beyond the starting line. Then turning without a rest, they run back to retrieve the second block and carry it back across the finish line. Two trials are performed.
scoring: Record the time to complete the test in seconds to the nearest one decimal place. The score is the better of the two times recorded. A trial is void if a block is dropped or thrown.
The above two tests conducted at Lal Bahadur Stadium, Hyderabad separately for both groups with the help of qualified Technical Official in Athletics.

Results:
This study shows that sepak takraw players are having good explosive power and agility compare to foot ball players.

Table – I

Test	GROUP	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Shuttle Run	Sepak Takraw	20	14.30	0.57	0.18	2.54	38.00	0.02
Shuttle Run	Foot Ball Players	20	15.58	1.21	0.38			

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

Table – II

Test	GROUP	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Standing Broad Jump	Sepak Takraw	20	2.24	0.11	0.04	3.68	38.00	0.00
Standing Broad Jump	Foot Ball Players	20	2.15	0.05	0.02			

The Table II is showing the Sepak Takraw players are having the good explosive power compare to Foot Ball Players. The mean of sepak takraw players in Standing Broad Jump is 2.24 compare to foot ball players is 2.15. It is due to good explosive strength a sepak takraw player is having to jump and hit with the legs like volley ball in the court.

Discussion:

Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton. Absolute or maximal strength in and of itself is not enough though - not if football players want to reach their full potential. To gain the greatest advantage, gains in maximal strength should be converted into explosive power. Power is a combination of strength and speed. And in football, with all other factors equal, the player with the greater power will come out on top. Sepak takraw is played between two teams of three players, the left inside,right inside and back. The important skills in sepak takraw is Inside kick, Out side kick and Roll spike. Foot Ball is one of the most popular sports in the world. Soccer Performance which depends on the technical skills and physical fitness of the players. Agility,explosive strength and acceleration are regarded as critical technical skills and the main components of the foot ball.

Conclusion:

It is concluded that Sepak Takraw players are having more agility and explosive strength than foot ball players.

Sepak Takraw players require quick reflexes, coordination, agility and technique to perform well. Foot Ball is a game of position play each position is distinct and each position player has responsibilities designed to contribute to overall team success. Sepak Takraw and foot ball players requires agility and explosive strength to excel in their performance. Hence the physical conditioning training must be given to sepaktakraw and foot ball players to improve the motor qualities such as speed, agility, explosive strength, endurance etc.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp121-123

A Comparatve Study Of Achievement Motivation Among Athletes And Cricketers of Aurangabad in India

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Abstract:
Achievement Motivation defined as the need to perform well or the striving the success as the need to perform well or the striving for success and evidenced by persistence and effort to achieve high performance in sports. Motivation is based on your emotions and achievement related goals.Achievement Motivation is the desire to excel at task. Athletics is an exclusive collection of sporting events that involve competitive running, jumping, throwing, and walking. Cricket is a bat-and-ball game played between two teams of 11 players on a field, at the centre of which is a rectangular 22-yard long pitch. One team bats, trying to score as many runs as possible while the other team bowls and fields, trying to dismiss the batsmen and thus limit the runs scored by the batting team.

Methods:
The purpose of the study is to find out the level of achievement motivation among Athletes and Cricketers .The sample for the study consists of 100 Athletes and 100 Cricketers those who have participated in the Inter College Tournaments of Dr.Baba Saheb Ambedker Marathwada University.Aurangabad.The Standardized Dr.B.N.Mukharji Achievement Motivation scale were used for the study.

Results:
It was found the Athletes are having more Achievement Motivation than Cricketers because the Athletes required compulsory Motivation to achieve excel in sports then the Cricketers whose is a group effort.

Discussion:
The decision must be made by Athletes is final for his performance. Whereas in cricketers there will be group effort among all players and their achievement motivation differs from each sports persons to sports persons.

Key words: Achievement motivation, excel, cricket, athletes etc.

Introduction:

Sport Psychology is the scientific study of people and their behaviors in sport. The role of a sport psychologist is to recognize how participation in sport exercise and physical activity enhances a persons development. Beginning, in the 1970, Sport psychology became a part of the curriculum on university campuses. Today, sport and exercise psychologists have begun to research and provide information in the ways that psychological well being and vigorous physical activity are related. Modern day sports are very demanding . It requires for the sportsmen and athletes a like to perform to the very best of their abilities and beyond. Individual sport activities such as wrestling and gymnastics, have shown to elicit higher anxiety levels than competitive team sport activities such as soft ball and basket ball.

Achievement Motivation defined as the need to perform well or the striving for success and evidenced by persistence and effort in the face of difficulties. Achievement Motivation is regarded as central human motivation.Achievement Motivation form to be the basic for good life. People who are oriented towards achievement in general, enjoy life and feel in control, being motivated keeps people dynamic and gives them self respect. They set moderally difficult but easily achievable targets, which help them, achieve their objectives. They do not set up extremely difficult or extreme easy targets by motivated people prefer to work on a problem rather than leaving the outcome to chance. It is also seen that achievement motivated sports persons seem to be more concerned with their personal achievement rather the rewards of success.

A person who is involved in Athletics (sport), which involves track and field events, long distance, cross-country and road running, and race walking. **Athletics** is one of the World's most commonly participated sports because of its variety and diversity. Individual's can be talented in one aspect of the sport (whether this be running, jumping, throwing, or walking), specifying to be athletes within their

discipline; or all-round athletes can develop skill in many aspects of athletics, allowing them to compete in Decathlons (10 athletic events) or Heptathlons (7 athletic events) - which challenge the entire body. The simplicity of the competitions, and the lack of a need for expensive equipment, makes athletics one of the most commonly competed sports in the world. Athletics is mostly an individual sport, with the exception ofrelay races and competitions which combine athletes' performances for a team score, such as cross country.
Organized athletics are traced back to the Ancient Olympic Games from 776 BC, and most modern events are conducted by the member clubs of the International Association of Athletics Federations. The athletics meeting forms the backbone of the modern Summer Olympics, and other leading international meetings include the IAAF World Championships and World Indoor Championships, and athletes with a physical disability compete at the Summer Paralympics and the IPC Athletics World Championships.

Cricket is a bat-and-ball game played between two teams of 11 players on a field, at the centre of which is a rectangular 22-yard long pitch. Each team takes it in turn to bat, in which they attempt to accumulate as many runs as possible, while the other team fields, attempting to prevent the batting team scoring runs. Teams may bat once or twice each depending upon the format of the game. Each turn is known as an innings. The game progresses as one member of the fielding team known as the bowler delivers the ball to the batsman down the length of the pitch. The batsman then attempts to strike the ball with his bat in order so that the ball either reaches the boundary or enables him to run to the other end of the pitch and thus accumulate runs. The batsman may continue batting until he is dismissed. Once ten batsmen from the batting side have been dismissed, the team is said to be *all out* and the two teams change roles.
In professional cricket the length of a game ranges from 20 overs of six bowling deliveries per side to Test cricket played over five days. The Laws of Cricket are maintained by the International Cricket Council (ICC) and the Marylebone Cricket Club (MCC) with additional Standard Playing Conditions for Test matches and One Day Internationals. Cricket was first played in southern England in the 16th century. By the end of the 18th century, it had developed into the national sport of England. The expansion of the British Empire led to cricket being played overseas and by the mid-19th century the first international matches were being held. The ICC, the game's governing body, has 10 full members. The game is most popular in Australasia, England, the Indian subcontinent, the West Indies and Southern Africa.

Athletes in action in Athletics


Cricketers in action

Purpose of the study: The purpose of the study is to find out the level of achievement motivation among Athletes and Cricketers.

Methodology: The sample for the study consists of 100 Athletes and 100 Cricketers those who have participated in the Inter College Tournaments of Dr.Baba Saheb Ambedker Marathwada University,Aurangabad. The Standardized Dr.B.N.Mukharji Achievement Motivation scale were used for the study. The Questionnaire were administered in small groups both cricketers and athletes.

Results:

It was found the Athletes are having more Achievement Motivation than Cricketers because the Athletes required compulsory Motivation to achieve excel in sports then the Cricketers whose is a group effort.

Discussion:

The decision must be made by Athletes is final for his performance. Whereas in cricketers there will be group effort among all players and their achievement motivation differs from each sports persons to sports persons.

Table No.1 :Table No.1 showing the achievement motivation among Cricketers and athletes.

Sports Persons	Mean	S.D.	N	DF	't'
Cricketers	32.13	5.92	100	198	8.14**
Athletes	39.27	7.90	100		

The results in Table No.1 Shows that athletes are having more Achievement motivation than cricketers . The Cricketers mean is 32.13 and athletes mean is 39.27. The mean difference between athletes and cricketers is 7.14.
Individual Performance sports like Athletics, Badminton,boxing, Judo, Weight Lifting etc must have more achievement motivation to excel in sports. The Decision must be made by Individual sports persons is final for his performance. Whereas in Team Game there will be group effort among all players and their achievement motivation differs from each sports persons to sports persons.

Conclusion:
It is concluded that athletes are having more Achievement Motivation than cricketers because they set goals and aims to give level best performance to win the Competition, where as the cricketers depend upon their group to give the high level of performance.It is recommended that achievement motivation is compulsory for all sports persons to achieve high excellence in sports.The Coaches must prepare all the sports persons with high level of motivation to excel in sports and games.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp124-127

A Study on the effect of Weight Training exercises on physical fitness ability of the Shotput Throwers of Hyderabad District in India

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Abstract:
Physical fitness is not only one of the most important keys for a healthy body, but it is also the basis for dynamic and creative activity. Healthful living implies freedom from disease, enough strength, endurance, skill, agility, capacity to meet the daily demands and sufficient reserves to meet extra ordinary stresses without undue fatigue, besides mental development and emotional balance according to the maturity level of the individual.
Methods: The purpose of the present study to find out the effect of weight training exercises for the development of physical fitness ability among shot put throwers. The sample for the present study consists of 40 Male shot put throwers out of which 20 are experimental group and 20 are controlled group. Weight training exercises are given four times a week for six weeks for experimental group and controlled group were given general training of shot put. To assess the Physical fitness Pre Test and Post Test were conducted on Shotput back throw, 50 Meters run and standing Broad Jump to assess the physical fitness for both the groups.
Results: This study shows that due to the weight training exercises there is a rapid improvement of experimental group in the physical fitness ability and controlled group has less improvement in physical fitness due to the general training.
Discussion: Physical fitness is one of the most important things in life and one of the most valuable assets one can ever have Most shot putters are relatively strong and sturdily built. Their workouts include various weighttraining exercises to develop the Physical fitness.
Key Words:physical fitness, weight training exercises etc

Introduction:

Physical fitness comprises two related concepts: general fitness (a state of health and well-being), and specific fitness (a task-oriented definition based on the ability to perform specific aspects of sports or occupations). Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. Physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypo kinetic diseases, and to meet emergency situations.
The main benefits of Physical Fitness are -
1. Condition of heart and lungs by increasing the oxygen available to the body therefore enabling the heart to use oxygen more efficiently.
2. Development of physical fitness components such as strength, endurance , agility, flexibility etc and improvement of muscle tone.
3. Fosters correct posture, figure, body image, and physical appearance.
4. Quick recovery after injury, illness and decrease the risk of cardio-vascular disease.
5. Reduces and controls body fat, exercise combined with a proper diet will reduce body fat and also fulfil proper nutritional requirement
6. Increase energy level of a person and helps to maintain ideal body weight.
7. Through Participation in physical fitness program, leisure (free) time is properly utilized.
8. Improve mood and reduce depression and anxiety.
9. Postpones fatigue and reduces recovery time after vigorous activity.
10. Helps people to meet challenges of life, make them self confident and postpones ageing process.

Weight training is a common type of strength training for developing the strength and size of skeletal muscles. It uses the weight force of gravity(in the form of weighted bars, dumbbells or weight stacks) to oppose the force generated by muscle through concentric or eccentric contraction. Weight training uses a variety of specialized equipment to target specific muscle groups and types of movement.

Sports where strength training is central are bodybuilding, weightlifting, power lifting, and strongman, Highland games, shot put, discus throw, and javelin throw. Many other sports use strength training as part of their training regimen, notably football, wrestling, rugby, track and field, rowing, lacrosse, basketball, hockey. Popularity of strength training for other sports and physical activities is becoming increasingly popular.

Shot-put is a sport in which upper body strength is a critical factor. However, it is not the only factor that determines your success, and an ideal workout program will reflect that. In addition to working the muscles of your arm and shoulders, you should incorporate lower body exercises and drills to promote balance in your shot put training. Be sure to exercise with supervision to reduce the risk of injuries. Though upper body strength is not the only component of shot put success, it should not be ignored, either. Building shoulder, chest and arm strength is crucial, so exercises such as the shoulder press and clean and press can help develop the muscles used in shot put. Triceps dips, shoulder shrugs, bent-over rows, and the chest press can also help strengthen your arms, chest and shoulders. Performing squats and dead lifts, which train many different leg muscles at the same time, will be beneficial for shot put workouts. Additionally, single-leg exercises such as lunges will help develop the balance necessary for shot put. Proper footwork is also important for shot put success, and Lasorsa recommends performing footwork drills that improve agility and mimic the motion of moving across, and rotating within, the circle. Sprinting drills can also encourage leg power. General training drills can help improve general strength and conditioning, but specificity in training is important as well. Throwing drills such as medicine ball shot-puts, stationary standing shot-puts and kneeling throws, along with practicing proper form, will help ensure that your strength translates into throwing success Plyometrics is a type of training that is particularly relevant to shot put and other track and field activities because the training focuses on explosive movements.

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. Shot put competitions have been held at the modern Summer Olympic Games since their inception in 1896, and it is also included as an event in theWorld Athletics Championships.Each competition has a set number of rounds of throws. Typically there are three preliminary rounds to determine qualification for the final, and then three more rounds in the final. Each competitor is credited with their longest throw, regardless of whether it was achieved in the preliminary or final rounds. The competitor with the longest legal put is declared the winner. Two putting styles are in current general use by shot put competitors: the glide and the spin. With all putting styles, the goal is to release the shot with maximum forward velocity at an angle of approximately forty degrees.Shot put and discus are track and field events at the middle school, high school, collegiate, professional and Olympic levels. Most shot putters and discus throwers are relatively strong and sturdily built. Their workouts include various weightlifting exercises as well as specific drills that help enhancetheirskills.Although throwing the shot seems uncomplicated, the sport requires a highly developed technique and immense fitness.

Purpose of the study: The purpose of the present study to find out the effect of weight training exercises for the development of physical fitness ability among shot put thrower. This study will bring the true facts of weight training exercises and their impact to improve the Physical fitness ability among shot put throwers. This study also helps the physical educators and coaches to improve their training regime to excel in shotput.

Methodology: The sample for the present study consists of 40 Male shot put throwers out of which 20 are experimental group and 20 are controlled group. Weight training exercises are given four times a week for six weeks for experimental group and controlled group were given general training of shot put.

Weight Training Exercises used for training to experimental group.
1.Snatch and Snatch Pull
2.Push Press
3.Back Squat
4.Bench Press
5. Clean Jerk
6. Clean Pull
7. Incline Bench Press
8.Front Squat
9.Jump Squat
10. Power Clean
11. Sit ups
12. Back Raises

To assess the Physical fitness Pre Test and Post Test were conducted on Shot-put back throw, 50 Meters run and standing Broad Jump to assess the physical fitness for both the groups.

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.

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.

50 M Run:

Sprint or speed tests can be performed over varying distances, depending on the factors being tested and the relevance to the sport.

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

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

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

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

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

purpose: to measure the explosive power of the legs

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

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

Scoring:The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts. attempts are allowed.

Results:

This study shows that due to the weight training exercises there is a rapid improvement of experimental group in the physical fitness ability and controlled group has less improvement in physical fitness due to the general training. This study shows there is a effect of Weight Training Exercises for improvement of Physical fitness ability among the shotput throwers.

Discussion:

Physical fitness is one of the most important things in life and one of the most valuable assets one can ever have Most shot putters are relatively strong and sturdily built. Their workouts include various weight training exercises to develop the Physical fitness.

Table-I

Mean values and **Independent Samples Test of shot put back throw between experimental and control groups**

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
Shot Put Back Throw	Experimental	13.14±1.26	13.42±1.23	1.22	0.231
	Control	13.06±1.22	12.95±1.20		

*Significant at 0.05 level

In Table –I the Mean Values of Pre Test of Experimental Group in Shotput Back Throw is 13.14 and control group is 13.06 and in the Post Test the Mean values of Experimental Group has improved from 13.14 to 13.42 and control group has decreased from 13.06 to 12.95. The Standard Deviation on Experimental Group is 1.26 in Pre Test and 1.23 in Post Test and control group is 1.22 in Pre Test and 1.20 in Post Test and t is 1.22 and P-Value is 0.231.

Table-II

Mean values and **Independent Samples Test of 50 M run test between experimental and control groups**

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
50 M Run Test	Experimental	7.51 ± 0.294	7.23 ± 0.262	4.58	0.000
	Control	7.64 ± 0.376	7.73 ± 0.408		

*Significant at 0.05 level

In Table –II the Mean Values of Pre Test Experimental Group in 50 M Run is 7.51 and control group is 7.64 and in the Post Test the Mean values of Experimental Group has decreased the mean timing from 7.51 to 7.23 and control group has increased from 7.64 to 7.73. The Standard Deviation on Experimental Group is 0.294 in Pre Test and 0.262 in Post Test and control group is 0.376 in Pre Test and 0.408 in Post Test and t is 4.58 and P-Value is 0.000

Table-III

Mean values and **Independent Samples Test of Standing Broad Jump between experimental and control groups**

Variables	Group	Pre Test Mean ± SD	Post Test Mean ± SD	t	P - Value
Standing Broad Jump	Experimental	2.30 ± 0.157	2.42 ± 0.185	3.55	0.001
	Control	2.26 ± 0.159	2.22 ± 0.161		

*Significant at 0.05 level

In Table –III the Mean Values of Pre Test Experimental Group in Standing Broad Jump is 2.30 and control group is 2.26 and in the Post Test the Mean values of Experimental Group has increased from 2.30 to 2.42 and control group has decreased from 2.26 to 2.22. The Standard Deviation on Experimental Group is 0.157 in Pre Test and 0.185 in Post Test and control group is 0.159 in Pre Test and 0.161 in Post Test and t is 3.55 and P-Value is 0.001

Conclusion:

1.It is concluded that there will be improvement in the fitness ability of the shot put throwers due to the weight training.

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

3. Similar studies can be conducted on other throwing events in Athletics.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp128-130

A Comparative study of Speed and Endurance among Net Ball and Korf Ball Players of Osmania University in India

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Abstract:
Speed and Endurance are very important physical ability for performance in Net Ball and Korf Ball. Netball is very similar to basketball, except you do not dribble the ball and you can only take one step once you've received it. Korfball is a mixed gender team sport, with similarities to netball and basketball. A team consists of eight players; four femaleand four male. Net Ball and Korf Ball requires speed and endurance for performance.

Methods:
The purpose of the present study to compare the speed and endurance among Net ball and Korf Ball Players. The sample for the present study consists of 40 Male Net Ball and Korf Ball Players of Osmania University out of which 20 are Net ball players and 20 are Korf Ball players. The 30 Meters Run for Speed and 12 Minute Run Cooper Test for endurance is used to assess the results.

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

Discussion:
Net Ball is heavily intermittent meaning its involves physical events expressing maximal exertion short distance, speed, agility, explosive power and endurance. Korf Ball requires high speed, super agility and enormous endurance. Hence Net ball and Korf ball requires speed and endurance to perform well.

Key Words: Net Ball, Korf ball, intermittent, speed,endurance etc.

Introduction:
Aerobic Endurance is the amount of oxygen intake during exercise. Aerobic Endurance is the time which you can exercise, without producing lactic acid in your muscles. During aerobic (with oxygen) work, the body is working at a level that the demands for oxygen and fuel can be meet by the body's intake. The only waste products formed are carbon-dioxide and water which are removed by sweating and breathing. Aerobic exercise is physical exercise of relatively low intensity and long duration, which depends primarily on the aerobic energy system. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy – generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time. Aerobic exercise comprises innumerable forms. In general, it is performed at a moderate level of intensity over a relatively long period of time. For example, running a long distance at a moderate pace is an aerobic exercise, but sprinting is not. Playing singles tennis, with near continuous motion, is generally considered aerobic activity, while golf or two person team tennis, with brief bursts of activity punctuated by more frequent breaks, may not be predominantly aerobic. Some sports are thus inherently "aerobic", while other aerobic exercises, such as fartlek training or aerobic dance classes, are designed specifically to improve aerobic capacity and fitness.

Korfball (Dutch *Korfbal*) is a mixed gender team sport, with similarities to netball and basketball. A team consists of eight players; four female and four male. A team also includes a coach. It was founded in the Netherlands in 1902 by Nico Broekhuysen. In the Netherlands there are around 580 clubs, and over 100,000 people playing korfball. The sport is also very popular in Belgium and Taiwan and is played in 54 other countries.The game consists of Two Half of 30 minutes each, with an interval of 5 minutes between the first and second half. After every two Goals the team has to change the courts.

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

Korf Ball

Net Ball

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

Methodology:
To find out the Aerobic Endurance and Speed between Male Net Ball and Male Korf Ball Players. The sample for present study consists of 20 Male Net Ball Players and 20 Male Korf Ball Players of Osmania University who has taken part in the O.U. Inter College sports and games during the year 2012-13.
The 12 Minute Cooper Test is used for collection of Data.
The Cooper test is a test of Aerobic Endurance.It was designed by Kenneth H. Cooper in 1968 for US military used in the original form; the point of the test is to run as far as possible within 12 minutes. To undertake this test you will require:
400 meter track ,Stop Watch ,Whistle and Technical Official
This test requires the Net Ball and Korf Ball player to run as far as possible in 12 minutes.
The subjects given 10 minutes for warm up.
The assistant gives the command “GO”, starts the stopwatch and athlete commences the test
The Technical Official keeps the athlete informed of the remaining time at the end of each lap
The Technical Official blows the whistle when the 12 minutes has elapsed and records the distance the athlete covered to the nearest 10 meters
30 M Run:
The objective of this test is to monitor the development of the athlete's ability to effectively and efficiently build upacceleration, from a standing start or from starting blocks, to maximum speed.
To undertake this test you will require:
Flat non-slip surface, Stopwatch,An assistant
This test requires the athlete to sprint as fast as possible over 30 metres.The athlete warms up for 10 **minutes.**
The assistant marks out a 30 metre straight section with conesThe athlete starts in their own time and sprints as fast as possible over the 30 metresThe assistant starts the stopwatch on the athlete's 1st foot strike after starting and stopping the stopwatch as the athlete’s torso crosses the finishing lineThe test is conducted 3 timesThe assistant uses the fastest recorded time to assess the athlete’s **performance**
The Net ball Players and Korf Ball Players are make to run separately in 12 Min cooper test and 30 M run. The Tests were conducted at Osmania University Grounds by the qualified Technical Officials.

Results:

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

Discussion:

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

Table No.1

Results of 30 M Run Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Net Ball Players	20	4.87	0.48	0.12	2.25	38.00	0.03
Korf Ball Players	20	4.55	0.23	0.06			

The Net ball Players mean performance in 30 M Run is 4.87 and Standard Deviation is 4.87 and Korf ball Players mean performance in 30 M Run is 4.55 and Standard Deviation is 0.23. The Korfball players are having the better speed i.e. 4.55 compare the net ball players is 4.87 there is a difference 0.32. The t-value is 2.25.

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

Table No.2

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

The Net ball Players mean performance in 12 Min cooper test is 3050.00 and Standard Deviation is 219.71 and Korf ball Players mean performance in 12 Min cooper test is 2950.00 and Standard Deviation is 137.71.The netball players are having the better endurance i.e.3050.00 than korfball players is 2950.00 there is a difference of 0.100 between them.

Conclusion:

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

Reference:

Brianmac Sports Coach

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp131-134

To Study The Physical Disability In Mental Retaradation

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Introduction

In the early years, children may have some difficulties in learning to move skilfully. This is not unusual. However, for some children, the muscles and nerves that control body movements may not be properly formed or may become damaged causing a physical disability. There are organisations and services that can help you and your child if your child has a physical disability. For resouces in South Australia go to Physical disability - Resources.

For children with a disability and their families life can be quite different to other families.

- Children with a disability
- Disability - brothers and sisters
- Living with a disability (Teen topic)

What is a physical disability?

A physical disability is any condition that permanently prevents normal body movement and/or control. There are many different types of physical disabilities. Some of the main ones include:

Muscular dystrophies

When a child has muscular dystrophy, this means that the muscle fibres in the body gradually weaken over time. Children can have different types of muscular dystrophy. The most common type is Duchenne Muscular Dystrophy which occurs only in boys. All types of muscular dystrophy are genetic even though other family members may not have the condition.

Acquired brain and spinal injuries

Physical disabilities may result from permanent injuries to the brain, spinal cord or limbs that prevent proper movement in parts of the body.

Spina bifida

Sometimes, a baby's spinal cord (the nerves that run down the spine) do not develop normally during pregnancy. When this happens, the child can have a physical disability called spina bifida. The type and amount of disability caused by spina bifida will depend upon the level of the abnormality of the spinal cord. Children with spina bifida may have:

- partial or full paralysis of the legs
- difficulties with bowel and bladder control.

They may also have:

- hydrocephalus (high pressure on the brain because of fluid not being drained away as normal)
- bone and joint deformities (they may not grow normally)
- curvature (bending) of the spine.

Cerebral palsy

Cerebral palsy is caused by damage to the parts of the brain which control movement during the early stages of development. In most cases, this damage occurs during pregnancy. However, damage can sometimes occur during birth and from brain injuries in early infancy (such as lack of oxygen from near drowning, meningitis, head injury or being shaken).

Children with cerebral palsy may have difficulties with:

- posture (the ability to put the body in a chosen position and keep it there)
- movement of body parts or the whole body
- muscle weakness or tightness
- involuntary muscle movements (spasms)
- balance and coordination
- talking and eating.

Children can have different types of cerebral palsy:

- hemiplegia (involves muscle movements and weakness on one side of the body)
- diplegia (involves muscle movements and weakness in the lower part of the body)
- quadriplegia (involves muscle movements and weakness in both arms and both legs)
- ataxia (involves problems with balance and coordination).

There is much more about Cerebral Palsy in the booklet 'Cerebral Palsy - an information guide for parents' written for the Royal Children's Hospital (Victoria)

Multiple disabilities
Some children with physical disabilities will have other disabilities, such as intellectual, visual or hearing impairments. They may also have communication difficulties or other medical conditions such as epilepsy or asthma. When a child has several different types of disability, professionals talk about multiple disabilities rather than listing separate conditions.

Causes of physical disabilities

There are many different causes for physical disabilities. These include:

- inherited or genetic disorders, such as muscular dystrophy
- conditions present at birth (congenital), such as spina bifida
- serious illness affecting the brain, nerves or muscles, such as meningitis
- spinal cord injury
- brain injury.

Role of a physiotherapist

Physiotherapists can help children with disabilities and their families by:

- assisting the child to learn how to use parts of the body and develop physical skills
- helping a child to become mobile (either independently or by using equipment)
- helping parents to become skilful in assisting their child including lifting, positioning and physical care
- working with staff from the child's preschool or school.

Role of an occupational therapist

Occupational therapists are often called OTs. The role of an OT is to help a child become fully involved in all aspects of life - at home, at preschool or school and within the general community.

OTs work with each child in different ways depending upon the child's disability, interests and skills. For example, an OT may give advice on any physical changes needed in the home or the child's preschool or school. This advice can include information on the type of stairs, handrail or ramp that

will be best for the child. An OT may suggest changes to toys, equipment or furniture and can also advise on ways to improve writing and other hand skills.

Role of a speech pathologist

Children with a physical disability may need help with talking. Some will learn to use alternative methods of communication such as:

- communication boards or charts
- electronic devices
- sign language.

A speech pathologist will assess a child's ability to understand and express thoughts, feelings and ideas, and help to improve communication skills using speech or alternatives to speech. A speech pathologist can also help with eating and drinking problems.

Other important professionals

A number of other health professionals may be involved in helping your child. These include the:

- *orthopaedic surgeon* who examines a child's muscles and/or bone structure and provides surgery to manage problems related to these
- *ophthalmologist* who is a specialist eye and vision doctor
- *paediatric rehabilitation specialist* who assesses and manages the physical condition of children and young people with chronic (ever-present) disabilities
- *orthotist* who provides corrective equipment such as splints
- *psychologist* who assesses cognitive (thinking) skills and helps to manage emotional and behavioural problems
- *audiologist* who assesses hearing.

Special equipment

Many different professionals and agencies can provide advice about equipment for children with physical disabilities. Which will be the best source of information depends upon the needs of your child and your family.

Depending upon your problems, you may need to speak with a physiotherapist, speech pathologist or an occupational therapist. Each of these therapists knows enough about the work of the others to be able to advise you about who could be most useful.

At different times, your child may require equipment to help with:

- walking/mobility
- talking/communication
- eating
- toileting
- showering/bathing.

Some equipment for children with physical disabilities can include computer and electronic technology, especially for assistance with communication.

What you can do

- In some families, physical disabilities can be inherited. If your child has an inherited condition such as muscular dystrophy, you may wish to speak to a genetic counsellor. A genetic counsellor will study your family history and explain the risks of any inherited condition being

passed to other children. This counsellor would also be able to provide information to you when you are planning to have children if someone in your family has had an inherited disability. Speak to your family doctor or contact your local hospital for further information.

- A healthy diet before and during pregnancy can help to prevent some physical disabilities. In particular, extra folate before and around the time of becoming pregnant help to prevent spina bifida.
- Immunisation against serious childhood illness will help to prevent some physical disabilities.
- Prevent serious injury to the child's brain or spine through, for example, car and home safety.

If your child has a physical disability:

- Where possible, enrol at child care, preschool or school well before your child is due to attend so that necessary changes to stairs, toilets or classrooms can be completed.
- Help teachers by giving them up-to-date information about your child's medical and physical needs. This will assist teachers in choosing the best teaching methods for your child.

Preschool and school

At preschool or school, teachers will discuss physical changes, special equipment and support needs for your child. Sometimes, teachers may be able to get extra help in the classroom or advice from visiting specialist teachers.

Preschools and schools may need to apply for grants to make changes to classrooms and buildings, such as installing wheelchair access ramps or special toilets. Expensive or complex changes to the site may take some time to complete.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp135-137

Methods Of Sports Training And Conditioning Of Circuit Training Programme

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INTRODUCTION

Sport training is a subject of great importance in physical Education. It has developed to a high level in the western countries. Sports have become an important social and cultural activity of the modern world which is being given the rightful place it deserves by the nations and societies of the world. The contribution of sports towards the overall welfare of the human society. TRAINNING means process of preparation for some task. This process invariably extends to a of days, months or sometimes longer duration .METHOD means manner of doing something in a Systematic i.e. organization of produce. Training is an education process .It a aims at improving the sports performance as well as education of the sports man. High sports performance though training can be achieved by a scientific use of training means .Training means are various physical exercise and other object, methods and procedures which are used for the improvement, maintenance and recovery of capacity and performance readiness. Each training method has its own specific on the performance capacity. The effect may be director indirect. Physical exercises have a direct on performance capacity. In training methods the basic of classification of physical exercise is the comparison of load caused by the exercise with the actual load during the competition for this comparison two parameters are used i.e. load structure of exercise and performance structure of exercise .In training the sportsmen to improve the optimum level of performance the following methods are used..

DEFINITION:"Sports Training is the basic form of preparation of sportsmen"-According to Matovejea."Sports Training is a pedagogical (Teacher plan) process, based on scientific principles, aiming at preparing sportsmen for

AIMS OF SPORTS TRAINING: Physical fitness and conditioning :Components, conditioning.Technical skill: Techniques.Tactical efficencycy-Knowledge about game, teaching system ect.Education: Beliefs, values, motives, interest cognitive abilities(perception , thinking, memory), Emotional abilities, personality traits (Regular, sincerity, punctuality) Habits(eating, rest, hygiene, spend of leisure time)etc.

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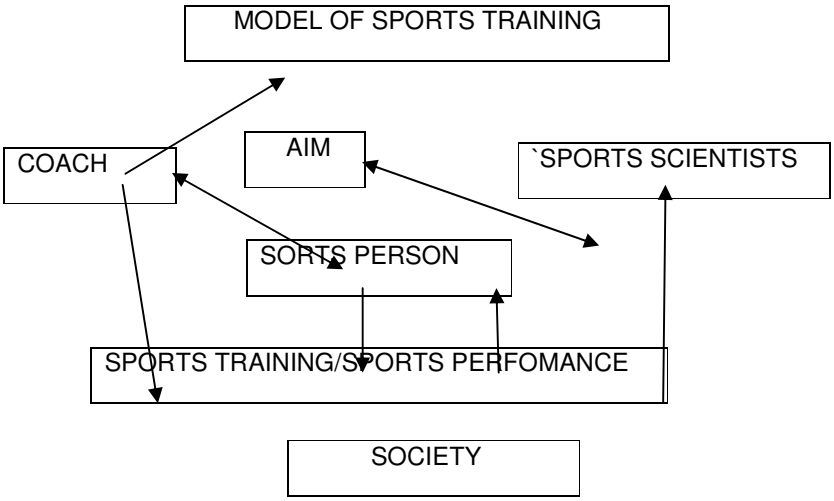

CIRCUIT TRAINING:

Circuit Training develops All-round strength and endurance capacity. It is a form of performing various exercises in a group continuously in a series of sets, with prescribed interval between sets. The variables here are the number of different exercises in a circuit, the number of repetition in each set. An additional refinement is placing a time limit on a given number of repetitions and an overall time for a full circuit.Circuit training is best done in Gymnasium or in sports hall where you can move easily from one exercise to another, each already set up in its own area .In this general and specific training programme can frame to improve technical and tactical efficiency of the individual.

PROGRAMMEE:

- Arrange mostly in a circle.
- Place stations for exercise.
- Usually with 8 to 15 exercises in a circle.
- Popular form of doing exercises.
- Organize in such manner that different muscle groups exercised in rotation.
- It develops strength endurance and endurance capacity.
- Place at which the exercises are arranged are called as stations .
- They are arranged in a circle

ORGANIZATION: Facilities available i.e. hurdles, weight, medicine balls, jumping exercise, own body weight exercise, partner exercise etc.Place to perform more than one individual in each station, it develops competitive spirit.Try to move next station in a minimum possible time.Proper supervision by the expert.Exercise and program should be planned carefully and preferably continue for several days i.e.2-3 months.Performance chart of each individual are to be maintained.Trainee should aware of the exercise and model of circuit.Load must be increased in time to time.Time should be fixed at each station following by rest after the circuit.

METHOD:
Exercises are more than normal.No recovery till one round is completed.3 to 5 minutes rest after completion of the set(Round).Intensity below 60% of the maximum.Repetition 50 to 60 percent of the maximum.It develops strength endurance
.
CIRCUIT TRAINING-INTERVAL METHOD: Number of exercise are less comparatively with continuous method.Intensity 60 to 90% of the maximum. Repetition more than medium.Rest 30 to 45 sec. in each station followed by some duration of exercise.It can be adapt according to intensity or extensive interval method.It develops speed endurance with combination of strength and endurance.

CIRCUITTRAINING-REPETITIONMETHOD:
Less number of exercise comparatively with continuous and interval methods.ntensity above 90 percent of the maximum.Repetition less than 6.Rest 3 to 5 minutes after a set is completed.It develops maximum strength plus explosive strength.

GENERAL EXERCISES: 1. Sit ups 2. Shoulder press3. Leg Curl 4. Bench press5. Half squat
6. Dips 7. Leg pres 8. Hip flexion9. Rowing. 10. Good morning
FOOT BALL: Push pass,Chest trip,Instep kick,Heading,Goal keeping,Dribbling,Throw-in,Diving,Ball Juggling,Half volley

INTERVAL TRAINING
The principle of interval training is that of speed work. A workload is applied, generally from 30 to 40 seconds, which speed up the heart, this is followed by a recovery period. The subsequent intervals of work and recovery periods are adjusted in duration and number to suit the athlete and the level of training reached. Interval training naturally involves alternating periods of work with periods of recovery. The advantage of interval training is that more work can be done with less fatigue than in continuous training. The original form of interval running as conceived by the German pairs of coach Gerschler and physiologist Rein dell was to repeat a set distance in a set time with a fixed recovery jog between. A typical session could be 8X200 meters in 28 seconds with a 100 meters recovery jog in 45 seconds between each fast run. As the athlete improved he could increase the number of fast runs, and/or increase the speed of the runs, and/or reduce the time spent in recovery.

PROCEDURE: Based on principles, activity done with done with pauses (Intervals) of incomplete recovery.Training is a system of repeated effort, in which a specific activity or skill of a game is carried out, for a specific period of time, alternately with measured recovery period.Widely used to improve speed endurance and speed in movement execution.Heart does not surpass 180 beats per minute i.e. representing a limit.Before activity starts bring heart rate 120 to 130 beats per minute, and same to be maintainedBefore start of the next repetition.Recovery does not exceed 60 to 90 seconds.Dr. Gerchler and Rein dell insist very much upon the following theory i.e. the recovery effort, which strengthens the heart.

TYPES:

1) Scholish classified the interval training according to the intensity (Load).

A) Intensive interval method: In this method the intensity is 80 to 90 percent of the maximum.

B) Extensive interval method: In this method the intensity is 60 to 80 percent of the maximum.

2) Harre classified interval method according to the duration of the each repetition.

A) Short time interval method: Approximately 15 sec. to 2 minutes.

B) Middle time interval method: Approximately 2 to 8 minutes.

C) Long time interval method: Approximately 8 to 15 minutes.

- Short time interval method is more suitable for the development of an anaerobic capacity.
- Middle time interval method is suitable for the development of speed endurance capacity.
- Long time interval method is suitable for the development of endurance and aerobic capacity.

EXAMPLE:
HARRE METHOD:(Duration)

- Athlete runs 200 meters in 24 seconds.
- For training 20% more time i.e. 29 seconds.
- Sets 8 to 10.
- Rest- 60-90 seconds in each set.

METHOD(Load) 200 meters 24 seconds

INTENSIVE METHOD (80-90)	EXTENSIVE METHOD (60-80) 1)
80% OF MAXIMUM – 28 Seconds 90% of maximum – 26 seconds	60% of maximum 30 seconds 70% of maximum 30 seconds

INTENSIVE INTERVAL METHOD

Intensity 75 meters (Maximum capacity 9 seconds)
Duration 11 Seconds (80%) – 9+1.8 seconds.
Recovery 30-60 seconds.
Repetitions (sets) - 8 to 10
Nature of recovery - Slow Jogging, Breathing exercises Relaxing exercises etc.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp138-140

Preparing the child is as important as choosing the right sport

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INTRODUCTION

It's that time of the year when young parents are brainstorming to find just the right sport for their little geniuses. Identifying the right learning environment could be taxing on a parent; we need to ensure that our child is respected and is kept happy and wanting to go back to learning environment each passing day. Let us explore the various possibilities by which this can be achieved. At this juncture physical independence is extremely essential so that he does not suddenly feel left alone to take care of his needs. The right intellectual preparation is indispensable for sport preparedness. Give your child the right words to express his needs.

Participating in sports and physical activity programs can contribute positively toward developing:

• Physical fitness and a healthy lifestyle

• Self-confidence and self-esteem

• Motor skills

• Social skills

• Sportsmanship and ethics

• Fun and enjoyment of physical activity

Sports can do more for your child than just increase their physical fitness. They're also great for building teamwork, confidence and improving body image. Finding the right sport for your child can be challenging, and often you'll need to stop and start a few along the way.

The Big Deal About Sports

Many other non sport activities can provide exercise and keep you active:

- playing at a playground
- raking leaves
- jumping rope
- dancing around your bedroom
- walking your dog
- working in the garden
- washing the car
- making a snowman

How to choose a sport

Look to your child's interests,
Is she extremely active and loves running around?
Does she enjoy watching her sisters play ?
Has she expressed an interest in a certain sport ?
so spend some time on-line researching what's available in your area.

Discussion: The problem is we don't know where to start. With countless fitness activities out there, we are having a hard time choosing the right sport. While the following advice is geared toward parents who are trying to help their children find the sport that is right for them, the advice could be applied to an aspiring athlete of any age.

1. The best sport for a child is one that the child finds fun and interesting.... Allow your child the freedom to try different sports. If your child is interested in a particular sport, check out the programs available at school, through your city's parks and recreation association, religious organizations or civic clubs."

According to physical conditioning expert EJ Abido, one of the keys in choosing the "right sport" is your preference. He said preference alone can help you keep going with the sport or workout you've chosen because you like what you're into.

2. The another way of choosing your workout is by knowing your physical limits. He said one must be aware of his thresholds, which can be conveniently determined by undergoing a medical checkup.

3. The good way to choose your sport or workout is through your needs also.

"For some people, choosing which sports to pursue throughout high school is hard because they have never really played an organized sport before and aren't sure what they'll most enjoy. For others it's a tough decision because their friends don't like to play the same sports. No matter what your sports dilemma is, you have to make the decision that is best for you.... Many people are attracted to the competition and popularity that can come with team sports. Others love the unity that is present in a team atmosphere. But for some people, teams are just frustrating and another form of cliques."

Finding the right sport can be a challenge, but it is certainly worth the effort. It's even better if the sport is one you enjoy enough to stick with for the long term.

- What is my child interested in? Does she want to stick with one sport, or participate in several seasonal ones?
- What can I afford in time, money, and commitment?
- What is the coach's philosophy? Do we share the same values and beliefs about sports? Does this coach enjoy working with athletes at my child's level?
- Do all the kids in the program appear to be having fun? Are they all involved?
- Am I comfortable with the parents of the children who participate?
- Is the equipment and location safe? What procedures are followed if my child is injured?

Player Pointers

Some things for players to keep in mind:

- Enjoy the game!
- Respect teammates, as well as opponents, whether they are winning or losing.
- Remember that the outcome is never as important as the lasting impression of warmth, understanding and pure enjoyment of playing.
- Remember that scoring is most thrilling when it rewards a true achievement.
- Recognize that playing to win is an essential component of competition, but seeking victory at any cost defeats the true meaning of competition.
- Show respect for the referees, umpires and judges at all times, and accept their decisions in a dignified manner.
- Lose gracefully, as well as win gracefully.
- Try your best.

Parent Pointers
Some things for parents to keep in mind:

- Provide transportation to and from all practices and games or meets, and ensure your player is prompt in arriving and in departing.
- Attend practices and games or meets if your schedule allows. Lend the players your support in a positive manner. Emphasize their accomplishments and efforts.
- Make sure your child never talks with, or leaves with, strangers.
- Have your child bring the required equipment to and from all games and practices.
- Practice with your child.
- Avoid material rewards. Stress the joy of the sport.
- Listen. Make your child feel important and encourage contribution to a team effort.
- Understand that your child will make mistakes.
- Be positive and do not criticize. If your child is not performing correctly or improving, suggest an alternate technique with the coach's guidance, such as, "That's pretty good, now how about trying it this way?"
- Be graceful-and not boastful-when your child's team wins.
- Be positive and provide encouragement when your child's team loses or your child fails to place.
- Make fun and technique-development top priorities when practicing.
- Support your child's coach and, before being asked, offer to help in any way possible.
- Do not disagree with the coach or referees on the field or in front of your child. Questions, input and positive suggestions should be discussed privately and calmly.
- Enjoy the excitement of the sport and the opportunity to be with your child.

The health and fitness benefits of physical activity will be experienced whether an individual or team sport is chosen.

Benefits of team sports
Ideally children should try some form of team sport at some stage of their childhood. Playing a team sport builds resilience and teaches many skills that are invaluable throughout life - such as working as part of a team. But you can think outside the square, team sports don't necessarily mean only football or netball. Rowing, Gymnastics, Dance and Swimming all have team aspects and provide all the benefits. You just need to find the sport that suits your child.

Benefits of solo sports
A solo sport can teach persistence, dedication and build a child's self-esteem. Even though a sport may be played on their own, there are normally still a lot of opportunities for socialization and competing with others so the benefits of team sport also apply.

Four types of exercise
According to the US National Institute on Aging, there are four types of physical activity they consider most important. Knowing them might help you choose what's best for you.

Endurance. These exercises enhance heart rate and breathing and are therefore good for the heart, lungs and circulation. They also help prevent or delay stress-related diseases. Examples of endurance exercises are: walking, running, biking, swimming and dancing.

Strength training. Examples of this type of exercises are: weight training or body weight exercises such as push-ups or pull-ups. Lifting weights make people, especially the older adults, strong enough to do what they need to do and like to do.

Balance. These exercises help prevent falls, a major cause of disability among the elderly. Try practicing balancing on one foot and increasing the length of time one is able to do it. Try adding some movement of the eyes or hands to make it more challenging.

Stretching. Yoga and other exercises that make you try to increase the range of motion of a joint. These exercises help you to become flexible.

If you're after improved endurance, you might want to try endurance sports or exercises. If you want enhanced strength, then strength training is for you. Balance exercises are great for improving balance and stretching will help you get limber.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp141-144

Wellness through Physical Activities and Sports

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Introduction: Man is a basic unit of society. In society he has to live and cooperate with others. A physically fit member of society, instead of being a burden on it, will be able to contribute his might in the achievement of its goals and objectives. A physically fit individual can prove a better worker, technician, doctor, engineer or a parent and can contribute towards the betterment of self, family or the institution where he works.Physical wellness or well being is an ideal concept of physical fitness and includes both external as well as internal components of a person's fitness. The external factor of fitness may be misleading because a person may not be as fit as one appears to be outwardly. In some cases, persons having some mental problems appear to be very healthy. Similarly, the achievement of a particular task may not reveal the real status of his health. Therefore, the internal component of well being i.e., physical, mental and social well being is very important in wellness. Such factors are the foundations of health. Therefore, proper health is an essential factor of wellness. Proper physical fitness also includes the health factor and is therefore something more than mere fitness for a particular task. Proper physical fitness or a state of well being can only help a person in leading a better quality life. Physical fitness is one aspect of wellness. Wellness is not only physical fitness but mental fitness. Social fitness and emotional fitness are also its essential aspects. In fact, wellness is the capability of an individual by which he leads a well balanced life.

Concept of Wellness

Wellness is a recent concept denoting the integration of all parts of health and fitness/physical, mental, intellectual, emotional and social) that expands one's potential to live and work effectively and to make significant contribution to society.

Components of Wellness

Wellness depends upon many factors but the most significant components of wellness are : -

- Balance diet
- Positive attitude and stable mind
- Proper Relaxation
- Regular Exercise

Balance Diet
Many of us don't know what balance diet is? We even don't have time to take diet at proper time due to academic/professional load. Those who think of taking balance diet don't get it because of reduced nutritious values of the food stuff. Nutritious values getting reduced due to the use of chemicals, fertilizers, pesticides, due to use of colours for the beautification of fruits and vegetables, also due to application of harmful tactics for ripening the immatured fruits and vegetables.
On the other hand many of use are having poor eating habits i.e. taking chowmin, powbhagi, noodles, burger, bakery, items etc., and all these if eaten for a longer time do affect the health.
Therefore, taking balance diet seems to be just impossible and of course "It's Not in Our Control" to a great extent.

Positive Attitude and Stable Mind
In the present life style it is very difficult to achieve positive attitude and stable mind. Students face this problem due to excess academic load and parental levelexpectation. It's very difficult to find a person without tension, worries, depression, frustration and many such emotional instabilities.
Again this component also "Not Seems to be in our Control."

Proper Relaxation
Medical Science says that proper rest to the body is essential need. At least 5-8 hours of absolute rest is advised by the Doctor's and Scientists but due to the aforesaid reasons the mind and the body don't get enough rest for relaxation.

Regular Exercise
This is one amongst the essential requirement of wellness but physical exercise tends to decline significantly with age. On the basis of research it has been concluded that:-

- Hardly 40% persons of the total population are conscious about the exercise.
- Almost 1/3rd of the total population are aware of the significance of the exercises.
- Females are least interested in doing exercises.
- Most of the Non-Communicable Diseases like obesity, diabetes, high blood pressure, stroke, depression, heart diseases, respiratory problems may be caused due to inactive life pattern.
- Doctors and scientists advise to under go physical exercises regularly for maintaining health body and healthy mind.

Factors Affecting Physical Fitness and Wellness

Amount of Training –
The amount of training also effects the physical ffitness. If the amount of training is not up to desirable level, it will be incapable for improving his physical fitness.
Scientific Way of Training –
If the way of training is not scientific, the physical fitness may decrease.
Regular Exercise
Regular exercise is the most import factor which effect the physical fitness of any individual.
Rest and Relaxation
If proper rest and relaxation are done, there will be positive effect on the physical fitness of an individual but if he does not have proper rest and relaxation, his level of physical fitness may decline.
Proper Conditioning
Conditioning has a direct relationship with physical fitness.
Good Posture
Everyone appreciates the good posture of an individual.
It is also the symbol of wellness. The person, who does not have good posture, tends to have lower level of physical fitness.
Heredity
Heredity also plays a vital role in affecting the physical fitness. In fact, heredity decides the structure of a person.
Environment
The environment, which includes, climate, temperature, attitude, social and cultural factors, affects the physical fitness of person.
Standard of Living
Standing of living plays an indirect role in influencing the physical fitness.
The people, who have low standard of living, are likely to have less physical fitness.
Balanced Diet
Balanced diet is not only helpful in maintaining the physical fitness but it also improves the level of physical fitness.
Stress and Tension
Stress and tension decrease the psychological power of an individual, which in turn, reduces the level of physical fitness and wellness.
Drugs:Drugs have a specific influence on physical fitness of a person. But later on, these drugs have a negative effect on the physical fitness of sports persons.

Problems in Women due to Inactive Life
Evidence says that women of present life pattern faces lot of physiological and psychological problems due to in active life: Some of the problems faced by them are:

- Backache
- Disturbed menstruation cycle.

- Difficult to conceive
- Frequent miscarriage.
- Pre-matured birth of a child
- Anaemic
- Depression etc

Benefits of Regular Exercises
We have already come to know so far that except this component of wellness all other components are almost not in our control. But this component is definitely in our control. Moreover, for regular exercise we don't need to spend money; this is 100% free of cost. Only interest is to be generated within the self. It is neither expensive nor it requires much space.

Benefits of exercises can be classified into the following:

A. Physical Benefits

- Regular and continuity of exercises for a longer duration gives better posture and balance.
- Better appearance and smart look
- Sourced personality

B. Physiological Benefits

- Efficient functioning of all the systems of the body.
- Proper growth and development
- Improves sexual abilities

C. Physiological Benefits

- Proper awareness
- Sound mind
- Increases intellectual ability
- Better self esteem
- Relief from negative emotions like stress, frustrations etc.
- Feeling of wellbeing
- Self confidence etc.

D. Health Related Benefits

- Control weight hence prevents besity
- Strong muscles, ligaments, bones etc. hence prevents from injuries
- Increases appetite and better digestion of the food
- Maintains blood pressure and cholesterol level
- Increases the body immunity power
- Freshness and energetic feelings
- Sound sleep mental measures
- Acts as preventive measures against various non communicable diseases etc

Methods for improving wellness *Sports and Games* –

- Contribute to wellness by developing the various physical fitness components such as strength speed, endurance, flexibility and coordinative abilities
- These components reduce lower back pain, risk of various diseases such as diabetes and heart problems.
- Researches in this field indicate that sports and games enhance the growth and development of mind.

Good Nutrition

- A health and nutritious diet helps to maintain an ideal body weight for sports and improves performance.
- Obesity comes due to over eating and by not doing physical exercises
- It reduces the working efficiency of an individual and finally wellness of a person can be improved

No to Alcohol and Drugs

- Always say 'no' to alcohol and drugs if you want to improve wellness style of life.

No to Smoking

- Smoking is harmful to the lungs and leads to heart diseases and efficiency in any type of work. It may cause mouth, larynx, throat and easophagus cancer.
- Nicotine in cigarette causes blood vessels to narrow and further inhibits blood flow. Therefore muscles cannot get sufficient oxygen for sustained and vigorous activity.

To have fun and Frolic

- To lead a life with fun and frolic enhances wellness. Sports and games are meant to be fun, frolic, and break from the routine of life. It helps to reduce stress and tension.

Benefits of physical activities

- Everyone wants to maintain one's physical fitness because owing to physical fitness, one can perform the routine work easily. That's why it is said that physical fitness adds years to one's life.
- Fitness and wellness are necessary for a common man too.
- Physical fitness is important in the daily activities of walking, running, lifting and carrying.
- Improves posture and personal appearance.
- Changes our lifestyle or way of life.
- Medical doctors indicate that physical fitness maintains muscular tissue, decreases the risk of injury and reduces lower back-pain.
- Research studies in the field of physical fitness indicate that the children, who establish physical fitness in early life are likely to remain active in future.

Conclusion

On the basis of aforesaid study it has been concluded that many factors are responsible for the wellness, but the most significant factors are proper diet, positive attitude, proper rest of the body and regular exercise. Except the last component of the wellness all other components are very difficult to be made available or achieved as because they are not is our control. But the last component i.e. doing exercise regularly is in our control and is available free of cost one must understood the benefits of regular exercises and give forty minutes of 24 hours to keep oneself healthy for long life and efficient work ability.

ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp145-149

Effect of Area of Residence and Gender on Aggression among Sportsmen and Non-Sportsmen

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Abstract:
Aggression and the Individual Individuals who participate in sports seem to exhibit higher levels of aggression than those who do not. However, this may be because sports attract people who are naturally more aggressive than non-athletes. Some sports are more likely to be associated with violence and inappropriate aggression. When provoked, for example, participants in contact sports reveal much higher levels of aggression than those in noncontact sports. Research also shows that aggression may give players an edge when used early in a contest, or they may show aggression if they fail in the sport. Other factors also influence aggression during sports events.
Methods:
The purpose of the study to find out the Effect of area of residence and gender on Aggression among Sportsmen and Non-Sportsmen .For the present study 200 Sample were selected from Aurangabad, Maharashtra State. The effective sample consisted of 200 subjects, out of whom 100 subjects were Urban and 100 subjects were Rural. The age range of subjects were 18 to 25 years. Aggression Scale (A scale) test is developed and standardized by Km Roma Pal and Mrs. Tasneem Naqvi were used for the study.
Results: The results of the study has shown that Sportsmen have significantly high Aggression than the Urban Non-Sportsmen..Rural Sportsmen have significantly high Aggression than the Urban Sportsmen.Male Sportsmen have significantly high Aggression than the Female Sportsmen.
Discussion:
The Aggression was influenced by types of area of residence, Gender and Sportsmen and Non-Sportsmen were examined in the study. Aggression differs from rural or urban, male or female , sportsmen and non-sportsmen.
Key words: Aggression, gender, area of residence etc.

Introduction:
The relationship between sport and aggression has been studied extensively for decades, yet investigators still have only an incomplete understanding of the link between the two. That there is a link seems certain, and researchers in various disciplines continue trying to refine their understanding of it in ways that will illuminate both sport and society. In the first half of the 20th century, many psychologists assumed that participation in sports might allow individuals to vent their aggressive tendencies. Generally, these assumptions arose from the view that aggression is an internal drive based on frustration and/or instinct. However, more recent research shows the opposite-participation in sports is likely to increase an individual's aggression. Sport psychologists distinguish between hostile and instrumental aggression. The primary purpose of hostile aggression is to inflict physical or psychological injury on another; the main aim of instrumental aggression is to attain an approved goal, such as winning a game. These two forms of aggression can be distinguished clearly in most sport situations, although not necessarily in extreme contact sports such as boxing and ice hockey. Recent research suggests that instrumental aggression in sport may spill over into hostile aggression outside of sport, for example, male athletes involved in sexual assault against women.Display of machismo, playing with pain, or intentionally injuring an opponent may be "grounded in athletes' uncritical acceptance of and commitment to what they have been told by important people in their lives ever since they began participating in competitive programs. Where winning is valued above all else, athletes may use aggression to show their total commitment to sport or to winning in sport.Aggression and the Individual Individuals who participate in sports seem to exhibit higher levels of aggression than those who do not. However, this may be because sports attract people who are naturally more aggressive than non-athletes. Some sports are more likely to be associated with violence and inappropriate aggression. When provoked, for example, participants in contact sports reveal much higher levels of aggression than those in noncontact sports.

Research also shows that aggression may give players an edge when used early in a contest, or they may show aggression if they fail in the sport. Other factors also influence aggression during sports events. For example, the presence of officials in organized sports increases the number of fouls since the athletes assume it is the referees' job to control inappropriate aggression.
Monroe M. Lefkowitz, Leopold O. Walder, Leonard D. Eron, L. Rowell Huesmann (*November 1973)* Preference for televised contact sports as related to sex differences in aggression. Investigated the relationship between viewing televised contact sports (hockey, football, boxing, and wrestling) and the manifestation of aggressive behavior, as part of a larger longitudinal study of the development of aggression. Data were gathered from an entire 3rd-grade population of 875 children. 10 yrs later data were collected from a subsample of 211 males and 216 females who could be located. At both times aggression was measured by a peer nomination technique. In the 2nd study, various self-ratings of aggression were also obtained in conjunction with information pertaining to the amount of contact sports watched. Peer nominations and self-ratings of aggression were related significantly to amount of viewed televised contact sports, but only for females. This finding as well as the absence of such a relationship for males was attributed to differences in child-rearing and socialization practices applied to males and females.
Eric G. Donahue, Blanka Rip, Robert J. Vallerand (*September 2009)* When winning is everything: On passion, identity, and aggression in sport. Objectives To examine the interplay between harmonious and obsessive passion and aggressive behavior in sports. It was hypothesized that players who are obsessively-passionate about basketball should report higher levels of aggressive behaviors than harmoniously-passionate players in general, and especially under self threat. Methods Using the Dualistic Model of Passion (Vallerand et al. (2003), *Journal of Personality and Social Psychology*, 85, 756–767) as a guiding framework, basketball players indicated their level of passion and aggression during typical basketball situations using a self-reported questionnaire. Results In Study 1, results demonstrated that athletes with a predominant obsessive passion for basketball reported higher levels of aggression on an aggression scale than athletes with a harmonious passion. In Study 2, harmoniously-passionate and obsessively-passionate athletes were randomly assigned to one of two conditions: self-threat and self-affirmation. We predicted that under self-threat, obsessively-passionate players should report higher levels of aggressive behavior than harmoniously-passionate players. However, no differences were expected between obsessively and harmoniously-passionate players in the self-affirmation condition. These hypotheses were supported. Conclusions The present findings reveal that having an obsessive passion is associated with aggressive behavior, especially under identity threat. Thus, the love for one's sport may lead to some maladaptive interpersonal behavior, especially if such love is rooted in a sense of identity that is contingent on doing well in that sport.

Objective of the Study:
To find out the Effect of area of residence and gender on Aggression among Sportsmen and Non-Sportsmen.
Aim of the Study:
To Examine the Effect of area of residence and gender on Aggression among Sportsmen and Non-Sportsmen.

Hypothesis:
Sportsmen will be significantly high Aggression than the Urban Non-Sportsmen.
Rural Sportsmen will be significantly high Aggression than the Urban Sportsmen.
Male Sportsmen will be significantly high Aggression than the Female Sportsmen.
Purpose of the study:
The purpose of the study to find out the Effect of area of residence and gender on Aggression among Sportsmen and Non-Sportsmen

Methodology:
Sample:
For the present study 200 Sample were selected from Aurangabad, Maharashtra State. The effective sample consisted of 200 subjects, out of whom 100 subjects were Urban and 100 subjects were Rural. The age range of subjects were 18 to 25 years.
Tools
Aggression Scale (A scale):
This test is developed and standardized by Km Roma Pal and Mrs. Tasneem Naqvi. The test consisted of 30 Items and Five Alternatives. The reliability coefficient of the test was found 0.82.

Procedures of data collection

For data collection first permission has been taken from respective sources than the randomized Respondant has been selected for data collection. Personal data sheet (PDS) has been given to the subjects then standardized test administeron the subjects.

Before that rapport was established with subjects. And they have been told that their responses were kept confidential and the information is used for research purpose on

Complete summary of three ways ANOVA for Decisiveness

Source of variation	Ss	df	Mss	F	P
A : Players	266.8	1	266.8	143.44	P < 0.1
B : Residence	3880.8	1	3880.8	2086.45	P < 0.1
C : Gender	1245.01	1	1245.01	669.36	P < 0.1
A x B	39.6	1	39.6	21.29	P < 0.1
A x C	25.2	1	25.2	13.55	P < 0.5
B x C	68.45	1	68.45	36.8	P < 0.1
A x B x C	12.01	1	12.01	6.46	P < 0.1
Within : error	358.01	192	1.86		
Total	5895.88	199			

Top Sports persons of India

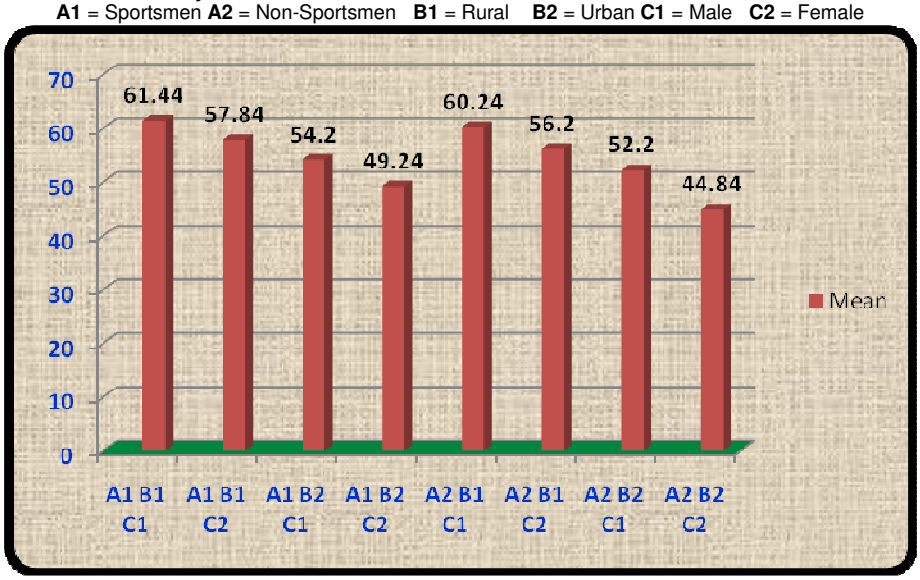
Abhinav Bindra, Gold Medalists in Olympics in Rifle shooting and Saina Nehwal, Bronze medalists in Shuttle Badminton in Olympics.

Variable
Independent variable-
Players a) Sportsmen b) Non-Sportsmen
Residence a) Ruralb) urban
Sex a) Male b) Female
Dependent Variable
1. Aggression
2.Dominance

Results:
The results of the study has shown that Sportsmen have significantly high Aggression than the Urban Non-Sportsmen..Rural Sportsmen have significantly high Aggression than the Urban Sportsmen.Male Sportsmen have significantly high Aggression than the Female Sportsmen.

Discussion
Statistical Treatment:
The Aggression was influenced by types of area of residence, Gender and Sportsmen and Non-Sportsmen were examined in the study. Means and standard deviations obtained by the eight classified groups on the measure of Aggression.. The eight classified groups were the same, which were classified on the basis of three independent variables namely by Players, area of residence

Graph-1
A = Players **B = Residence** **C =Gender**
A1 = Sportsmen **A2** = Non-Sportsmen **B1** = Rural **B2** = Urban **C1** = Male **C2** = Female



Means and standard deviation obtain by the eight classified groups are given in the graph 1. Careful examination of the standard deviation associated with the means reveals that in all the eight classified groups the distribution of Aggression score is normal. Mean value shows that group A1B1C1 had the highest Aggression among the eight groups, while group A2B2C2 had the poorest Aggression. The subjects in the group A1B1C1 Sportsmen, having Rural and coming form Male. Other groups A2B2C2 include Non-Sportsmen with Urban coming from Female. The other values are between these two groups differences in the largest and the smallest means is large, but whether the difference is significantly large or not could not be decided only on the basis of mean and standard deviation whether the results supported the hypothesis or not was found out only after treating the data by three wayanalysisofvariances.

From the summary and graph no. 1., it is seen that main effect A is highly significant main effect A refers to the factor Players. It was varied at two levels i.e. Sportsmen and Non-Sportsmen it was assumed Sportsmen and Non-Sportsmen differ significantly with regards to Aggression. Since the main effect A is highly significant ($F = 143.44$, $df = 1$ and 192, $P < 0.01$) It is clear that Sportsmen and Non-Sportsmen subjects differ significantly from each other from the mean scores and graph No. 1 it was found that the Sportsmen had significantly higher Aggression than the Non-Sportsmen this results support the hypothesis.

The second independent variable the factor of area of Residence it was also varied at two levels. The effective sample was divided in to two groups, Rural and Urban. Main effect B represents the factor of area of Residence. Main effect B has yielded highly significantly result and F value of 2086.45 for 1 and 192 df is significant beyond 0.01 level. It indicates that the subjects the Rural and the subjects of area of Residence differ from each other significantly. If the means and graphs no. 1 are consider then it is seen that the mean scores Male subjects is larger than the Urban subjects. It was found to Rural Sportsmen had significantly high Aggression than the Rural Sportsmen. This result supports the hypothesis.

Factor of Gender was regarded as an important factor in the development of Aggression. It was assumed that subjects having Male developed significantly higher Aggression than the subjects having Female. To what extent the hypothesis was supported by the results was examine from the summary of ANOVA. Main effect C represent the factor of Gender, it was also varied at two level from the summary it is seen that main effect c is associated with a high F value. It's seen that in development of Aggression the role of Gender of most significant. An F value of 669.36, which is much larger than what is needed to be significant at 0.01 level when df are 1 and 192, If the means and the graph no. 1 is consider then it is seen that the mean score of Male is larger than that of the Female subjects this results also support the hypothesis.

Though all the three main effect were highly significant result showed that, in the development of Aggression, this factor were not functioning independently. This could be seen from the interaction effects. Interaction A x B has brought out and F value of 21.29 which is much larger than what is needed to be significant at 0.01 level when the df are 1 and 192 in other words main effect A and main effect B are interdependent on each other.

Interaction A x C is also significant ($F = 13.55$, df = 1 & 192, $P < 0.01$) it means main effect A and C are dependent on each other. Interaction B x C has brought out and f value of 36.8, which is much larger than what is needed to which significant at 0.01 level when the df are 1 and 192 in other works main effect B & main effect C are interdependent. Interaction A x B x C is significant ($F = 6.46$, df = 1 & 192, $P < 0.01$), which suggest that all the three independent variables namely types of Players, area of residence and gender are interdependent on each other.

Conclusion:

It is concluded thatSportsmen have significantly high Aggression than the Urban Non-Sportsmen.
It is concluded that Rural Sportsmen have significantly high Aggression than the Urban Sportsmen.
It is concluded that Male Sportsmen have significantly high Aggression than the Female Sportsmen.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp150-152

"A Comparative Study of Mental Health among Athlete and Non-Athlete"

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ABSTRACT
Background: Mental health is a term used to describe either a level of cognitive or emotional well-being or an absence of a mental disorder. From perspectives of the discipline of positive psychology or holism mental health may include an individual's ability to enjoy life and procure a balance between life activities and efforts to achieve psychological resilience. The World Health Organization defines mental health as "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community". Objective and Aim of Study: To find out the mental health among athlete and non-athlete. Hypothesis: There will be significant difference between Athlete and non-athlete with respect to mental health.
Materials & Methodology: For the present study 200 Sample were selected from Mumbai City. The effective sample consisted of 200 subjects, out of whom 100 Athlete (Short distance runners, throwers: Short put, Javelin, Javelin thrower, and Discuss throwers) and 100 non-Athlete (Football players, Cricket players, and Volleyball Players). The age range of players is 18-25 years. C.G. Deshpande Mental Health Test was used for measuring Mental Health. All the 50 items of the scale are presented in simple and brisk style. Each item has two answer (multiple Choice) 'YES' and 'NO' This is well known test having high reliability and validity coefficients.
Conclusions &Results: Athlete has significantly good mental health than the non-athlete. (Athlete: M = 45.26, SD = 6.28 and Non Athlete: M = 37.59, SD = 4.18).
Key words: Sports and Exercise Psychology

Introduction:

Mental health refers to the overall well-being of an individual. It is about the balance of the social, physical, spiritual and emotional aspects of life. Our Mental Health is characterized by our personal growth, sense of purpose, self-acceptance, and positive relationship with other people. It is also highly affected by environmental factors like our family life, social life, and our life at work. Our general well-being is decreased by any negative experiences in any of these areas. Among the most common Mental Illnesses or Mental Disorders are Anxiety and Depression.Mental Health is a concept that refers to the psychological and emotional well-being of a person. Being mentally healthy generally means that you are able to use your emotional capabilities to function well in society and go through everyday life with little or no difficulty. Some factors that can affect your mental health are your family life, social life, and life at work. Having negative experiences in any of the said areas can deteriorate the condition of your mental health. Healthy human development is a necessary foundation for all development progress. Without healthy populations, the achievement of development objectives will be out of reach. Good health is fundamental to the ability of individuals to realize their full human potential. It is also a crucially important economic asset. Low levels of health impede people's ability to work and earn a living for themselves and their families. When someone becomes ill, an entire family can become trapped in a downward spiral of lost income and high health-care costs. On a national scale, poor population health diminishes productivity and impedes economic growth, while investment in better health outcomes is generally seen as an investment in economic growth. Increasing physical activity levels because physical inactivity is a primary risk factor driving the global increase in chronic disease, sport can play a critical role in slowing the spread of chronic diseases, reducing their social and economic burden, and saving lives. While physical activity includes a broader range of activities than sport alone (people can be physically active at work or engaged in domestic tasks at home), direct participation in sport is one of the most enjoyable, and therefore powerful, means of motivating and mobilizing people to become physically active. In addition to enhancing overall physical fitness, regular physical activity, active play and sports can have a positive impact on other major health risk factors, such as high blood pressure, high cholesterol, obesity, tobacco use and stress.

Marian S.Harris, Lovie J. Jackson, Kirk O'Brien, Peter Pecora (February 2010) Ethnic group comparisons in mental health outcomes of adult alumni of foster care. Racial similarities and differences in mental health outcomes of African American and White adults placed in foster care as children were examined. Existing general population studies present mixed findings as to whether racial differences in mental health exist, therefore, the current study sought to test the null hypothesis of no racial group differences in this sample of young adult alumni of foster care who were all placed as children with a private foster care agency. Specifically, logistic regression analyses were used to compare mental health outcomes among African American and White alumni. Race/ethnicity was significant only for the diagnosis of 12-month Modified Social Phobia. When controlling for demographic background, risk factors, and foster care experiences, race/ethnicity ceased to be a significant factor.Parivash Nourbakhsh (2004), a comparison between athlete and non-athlete students stressors and their relationships with their mental health. Introduction University students are the transitional stage from adolescence to adulthood. During this period, university issues and psychological problems among students appear to have been overlooked to a large extent. The purpose of this study was to compare the athlete and non - athlete students' stressors and their relationships with their mental health. Methods 273 male and female athletes and 147 male and female non - athletes by staged random sampling were selected as samples of this study. Two scales, the student's stressors questionnaire (SSQ) and symptom checklist - 25(SCL-25) were used to test the proposed hypothesis. The reliability and validity of these two instruments are reported to be significant in various studies. Results Testing the proposed hypothesis at the P<.05 showed the following results: No significant difference was reported between female and male athlete and non-athlete students in their responses to the stressors. Significant differences were reported between athletes and non-athletes in their responses to dormitory stressors. The comparison between male athlete and non-athletes stressors and their mental health did not show a significant difference at P<.05. There was a positive and significant relationship between female and male athlete stressors with their mental healtht. This relationship was also significant for male non-athletes, but was not significant for female non-athlete. A multi-comparison between stressors and mental health showed that two factors (academic setting and living in dormitory) were considered to be better predictors of men athletes' mental health. But factors like graduation and living in dormitory were better predictors of women athletes' mental health. Discussion/ Conclusions Based on the results of this study it is therefore recommended that higher education institutions prepare suitable conditions in which students can advance their knowledge and understanding and be able to live in such dormitories where they are able to reduce their mental stressors and increase their mental health.

Objective and Aim of Study: To find out the mental health among athlete and non-athlete.
Hypothesis: There will be significant difference between Athlete and non-athlete with respect to mental health.

Methodology : Sample: For the present study 200 Sample were selected from Mumbai city. The effective sample consisted of 200 subjects, out of whom 100 Athlete (Short distance runners, throwers Short put, Javelin, Javelin thrower, and Disk throwers) and 100 Non-Athlete (Football players, Cricket players, and Volleyball Players). The age range of subjects where 18-25 years (M = 22.09, SD = 3.13).
Tools: Dr. C.G. Deshpande Mental Health Test: Dr. C.G. Deshpande Mental Health test was used for measuring Mental Health. All the 50 items of the scale are presented in simple and brisk style. Each of the 40 item has two answer (multiple Choice) 'YES' and 'NO' This is well known test having high reliability and validity coefficients.

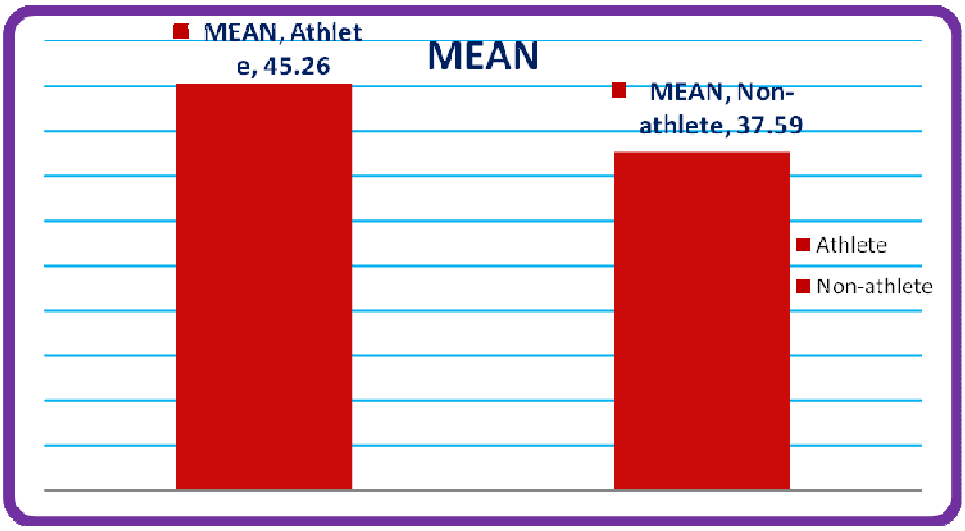
Procedures of data collection: Mental health test administered individuals as well as a small group. While collecting the data for the study the later approaches was adopted. The subjects were called in a small group of 18 to 25 subjects and there seating arrangements was made in a classroom. Prior to administration of test or scale, through informal talk appropriate rapport form. Following the instructions and procedure suggested by the author for the scale and tests. The test was administered and field copies of each test were collected. Following the same procedure, the whole data were collected.

Variables of the study:
A. Independent Variable: 1) Group a) Athlete b) Non-athlete
B. Dependent Variable: 1) Mental Health
Statistical Analysis:

Table No.01
Athlete and Non-athlete Shows the mean S.D, and 't' value of factors 'Mental Health'

Group	MEAN	SD	SE	N	DF	't'
Athlete	45.26	6.28	0.63	100	198	10.17**
Non-athlete	37.59	4.18	0.42	100		

Significant at 0.01 Level**



The results related to the hypothesis have been recorded. Mean of mental health score of the athlete is 45.26 and that of the non-athlete is 37.59 the difference between the two mean is highly significant't' = 10.17, df = 198. Thus the hypothesis is confirmed athlete have significantly high mental health than non-athlete.

Results:
Athlete has significantly high Mental Health than the Non-athlete.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp153-156

To study the psychological effect in Neurolaw

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Neurolaw is an emerging field of interdisciplinary study that explores the effects of discoveries in neuroscience on legal rules and standards. Drawing from neuroscience, philosophy, social psychology, cognitive neuroscience, and criminology, neurolaw practitioners seek to address not only the descriptive and predictive issues of how neuroscience is and will be used in the legal system, but also the normative issues of how neuroscience should and should not be used. The most prominent questions that have emerged from this exploration are as follows: To what extent can a tumor or brain injury alleviate criminal punishment? Can sentencing or rehabilitation regulations be influenced by neuroscience? Who is permitted access to images of a person's brain? Neuroscience is beginning to address these questions in its effort to understand human behavior, and will potentially shape future aspects of legal processes.

New insights into the psychology and cognition of the brain have been made available by functional magnetic resonance imaging (fMRI). These new technologies were a break from the conventional and primitive views of the brain that have been prevalent in the legal system for centuries. Brain imaging has provided a much deeper insight into thought processes, and will have an effect on the law because it contests customary beliefs about mental development. Because the science is still developing and because there is substantial opportunity for misuse, the legal realm recognizes the need to proceed cautiously. Neurolaw enthusiasts are quick to find means to apply neuroscience in a variety of different contexts. For example, intellectual property could be better evaluated through neuroscience. Major areas of current research include applications in the courtroom, how neuroscience can and should be used legally, and how the law is created and applied.

Neuroscience and the law have interacted over a long history, but interest spiked in the late 1990s. After the term neurolaw was first coined by Sherrod J. Taylor in 1991,scholars from both fields began to network through presentations and dialogs. This led to an increasing pull to publish books, articles, and other literature. The Gruter Institute for Law and Behavioral Research and the Dana Foundation were the first groups to provide funding for the new interdisciplinary field. Parallel to the expansion of neurolaw, an emergence of ethics specifically regarding neuroscience was developing as well. The intersection of neurolaw and ethics was able to be better scrutinized by the initiation of the Law and Neuroscience Project in 2007.The MacArthur Foundation launched Phase I of its project through a $10 million grant in hope of integrating the two fields. The initiative sustained forty projects addressing a multitude of issues, including experimental and theoretical data that will provide further evidence as to how neuroscience may eventually shape the law.This new field of study has also piqued the interests of several universities. Baylor College of Medicine's Initiative on Neuroscience and the Law's research seeks to research, educate, and make policy change.The University of Pennsylvania's Center for Neuroscience and Society began in July 2009, and is working towards confronting the social, legal, and ethical inferences of neuroscience.

Neurocriminology

The term neurolaw was first used in practice by the neuroscientist and attorney J. Sherrod Taylor in 1991.Taylor's book, *Neurolaw: Brain and Spinal Cord Injury* (1997), was used as a resource for attorneys to properly introduce medical jargon into the courtroom and to further develop the implications of neuroscience on litigation. In addition, Taylor explained the consequences of *Daubert v. Merrell Dow Pharmaceuticals*.This United States Supreme Court case resulted in what is now known as Daubert Standard, which sets rules regarding the use of scientific evidence in the courtroom.

Crime prediction
Behavioral testing and neuroimaging evidence offer a potentially accurate method of predicting human behavior. This advancement would be beneficial particularly for determining guilty criminal sentences or discerning which criminals deserve to be released on parole or detained in jail due to the possibility of future offenses. Not only could it aid in the process of recidivism, it could also show an indication of the need for personal rehabilitation. In light of this information and its potential applications, the legal system seeks to create a balance between just punishment and penalties based on the ability to predict additional criminal activity.

Insanity defense
The tendency of the United States criminal justice system has been to limit the degree to which one can claim innocence based on mental illness. During the middle of the 20th century, many courts through the Durham Rules and the American Law Institute Model Penal Code, among others, had regarded impaired volition as legitimate grounds for the insanity defense. However, when John Hinckley was acquitted due to insanity, a reversal of opinion occurred, which then spurred a narrowing definition of mental illness. Decisions became increasingly based on the M'Naghten Rules, which asserted that unless one was able to prove that a mental illness kept him or her from knowing that the act was wrong, or knowing the disposition of the criminal act, one would not be able to be tried as mentally handicapped. Contemporary research conducted on the prefrontal cortex has criticized this standpoint because it considers impaired volition as a factor. Many courts are now considering "irresistible impulse" as legitimate grounds for mental illness.One of the factors neuroscience has added to the insanity defense is the claim that the brain "made someone do it." In these cases, the argument is based on an understanding that decisions are made before the person is able to consciously realize what is happening. More research on control and inhibition mechanisms will allow further modifications to the insanity defense.Impaired functioning of the PFC is evidence proving that a prime factor in mental illness is an issue of volition. Many experiments using MRI show that one of the functions of the PFC is to bias a person towards taking the more difficult action. This action is representative of a long-term reward, and it is competing with an action that will lead to immediate satisfaction. It is responsible for moral reasoning, including regret. Individual variations that impair the PFC are extremely detrimental to the decision-making process, and give an individual a greater likelihood in a committing a crime he or she would have otherwise not committed.

Brain death
Injuries or illnesses that lead to a persistent vegetative state have come to the forefront of many ethical, legal, and scientific issues regarding brain death. t is a difficult subject to know when someone is beyond hope for recovery, as well as to decide who has the right to make the decision of when death is most appropriate. Research to determine a person's cognitive state has helped develop an understanding of the vegetative state. While a person can be awake and conscious, he or she may not show any signs of awareness or recognition to external stimulation. In 2005, research was conducted on a 23-year-old female who suffered severe head trauma due to an automobile accident. The woman was diagnosed to be in a vegetative state; after five months she continued to be unresponsive, but did show normal sleep and wake cycles. Using fMRI technology, researchers concluded that she was able to understand external stimuli, showing a response via activity in specific regions of the brain. For example, there was increased activity in the middle and superior temporal gyri similar to activity exhibited by control subjects. This positive response reveals potential for medical imaging to be used to understand the implications of brain death, and to help answer legal, scientific, and ethical questions pertaining to brain death.

Nootropics
In addition to questions involving how neuroscience should influence criminal and civil law, neurolaw also encompasses ethical questions regarding nootropics, more commonly known as mind-enhancing drugs. A plethora of drugs are already known to cause a variety of effects on the brain, for example, the stimulatory action of caffeine. Similarly, current research suggests that the future may hold even more powerful medications that can specifically target and alter brain function.he potential to significantly improve one's concentration, memory, or cognition has raised numerous questions on the legality of these substances, and their appropriateness for various uses, such as studying for an exam. Analogous to the controversy over the use of anabolic steroids in professional sports, many high schools and universities are wary of students eventually using nootropics to artificially boost academic performance.

Some of the questions raised regarding the use of nootropics include:

- How will these enhancers affect performance gaps between family income classes?
- Will it become necessary to use an enhancing drug simply to remain competitive in society?
- How does society distinguish between what is an acceptable substance (e.g. caffeine) and an unacceptable substance to alter one's mind?
- Do people have the right to experiment with substances to modify their own cognition?

Scientists and ethicists have attempted to answer these questions while analyzing the overall effect on society. It is largely accepted that mind-enhancing drugs are acceptable for use with patients facing cognitive disorders, as in a case of prescribing Adderall to children and adults with ADHD. In contrast, Adderall and Ritalin have become popular black-market drugs, most notably on college campuses. Students often use them to maintain focus when struggling to complete large amounts of schoolwork.

Technology

Much of neurolaw depends on state-of-the-art medical technology that has been adapted to a new role in the legal system. Among the most prominent technologies and disciplines are functional magnetic resonance imaging (fMRI), positron emission tomography (PET scan), magnetic resonance imaging (MRI), and epigenetics. MRI and fMRI are particularly important because they allow detailed mapping of the human brain, potentially allowing technicians to visualize another person's thoughts. FMRI, a derivative of MRI, allows for oxygen-specific mapping to view the most active areas of a brain at a specific moment. Combined with the knowledge of how the brain works in different situations (lying, remembering, etc.), there is the potential to use functional neuroimaging evidence as a modern form of lie detection. Similarly, PET scans use a radioactive tracer injected into the body to analyze brain tissue.

Lie detection

In regard to neuroscience as a form of lie-detection, specific regions of the brain have been analyzed in order to uncover patterns of truth telling, deception, and false memory. Notably, an important obstacle to any form of lie detection is when subjects inadvertently recall false memories.This is induced experimentally by presenting subjects a list of semantically related words. While they believe their responses to be true, their recollections are in fact false. For instance, reading a long list of words including "moon," "sun," and "Mars," may cause a subject to incorrectly believe the word "Earth" to have been listed, even if it was not. This is a normal psychological occurrence, but presents numerous problems to jury attempting to sort out the facts of a case. Indeed, researchers have attempted to distinguish genuine truths from "false truths." Subjects are subsequently quizzed on the word list while specific regions of the brain are analyzed for activity. For instance, the dorsolateral prefrontal cortex has been shown to activate when subjects are pretending to know information which they do not know, in contrast to truth telling and false recognition. Alternatively, the right anterior hippocampus activates when a subject presents false recognition in contrast to lying or accurately telling a truth. However, there remain limitations to how much brain imaging can distinguish between the many forms of truths and deceptions. For instance, future research hopes to uncover patterns that differentiate whether someone has genuinely forgotten an experience in contrast to the active choice to withhold information.

Criticism

The use of neuroimaging in the legal system creates a very divided critical audience; many argue for its potential, while others argue it will not accurately replace human investigations to verify criminal decision making processes. Neuroimaging is inadequately understood; the multiple variables it displays, including medication, nutrition, and hormones create an image that is very complex and often impossible to interpret accurately. Other critics highlight that the image derived from the technology does not display the brain’s intentionality during the illegal act. Functional neuroimaging was not intended to calculate volition, and while it may offer insight into the processes that cause behavior, it is debated whether or not the images can objectively narrow in on human reason.There are also many worries about privacy as well.

Application in practice
Neurolaw has already been applied to various situations throughout the United States and other countries. Two companies, No Lie MRI and Cephos Corp, both offer lie-detection services using fMRI. Advertising to lawyers, prosecutors, and other firms, they attempt to provide a twenty-first century version of the traditional polygraph.Because of variations among individuals' responses however, the technology is not fool proof and many are skeptical of its uses. Nevertheless, It is often considered to be a more advanced technique than the polygraph test. The United States rarely allows evidence to be accepted in the court of law; and in response to worries of its scientific validity, judges have so far veered away from allowing Cephos and No Lie MRI tests into the courtroom.

Criminal law
In Mumbai, India, the legal system has taken a more rapid approach to using neuroscience, and has already incorporated it into criminal convictions. In 2008, an Indian woman was convicted of murder based on strong circumstantial evidence, including a brain scan that suggested her guilt. This conviction was sharply criticized by Hank Greely, a professor of law at Stanford University. Greely contested the scan based on evidence produced by a brain electrical oscillations signature profiling test (BEOS). No scientific peer-review studies had ever been published demonstrating the efficacy of BEOS, raising questions about its reliability in such an important decision.
In the United States, convicts have used introduced brain scan results during the sentencing phase of trials. Because the court system allows nearly any mitigating evidence during sentencing, brain scans have not faced as many hurdles for this application. In two instances occurring in California and New York, defendants were able to reduce their sentence of first-degree murder to manslaughter. Each presented brain scans suggesting hindered neurological function hoping to mitigate their responsibility in the crime.Brain images were also used in the case of Harrington v. State of Iowa in 2003 as evidence for the defense.

Government and military
The United States Military has become increasingly interested in the possibilities made available by neuroscience. In an effort to combat terrorism, officials hope to use modern technologies for a variety of purposes. Brain imaging may help to distinguish between enemy combatants from those who pose no risk. Similarly, officials can help determine the mental stability of their own soldiers. Nootropic drugs could also be used to enhance the focus and memories of soldiers, allowing for better recognition of dangers and improved performance. However, this has led to questions regarding the personal privacy of soldiers and detainees. While the general population generally has the right to refuse medication, soldiers may eventually face compulsory medication to benefit the overall mission.Additionally, questions regarding the accuracy of brain imaging arise when testing detainees for concealed information. Although the civilian court system is reluctant to use unproven technologies, the military's reliance on them may generate controversy over the possibility innocence or guilt of enemy combatants.
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Caveats
Neuroscience is a complex field and one not well understood by the general public. Although experts recognize the possibilities and drawbacks of brain imaging relatively well, others may be either too confident in or completely reject the field. Judges must decide on the validity of various neurological evidence so it can enter the courtroom, and juries must not be too willing to place all faith in neuroscience.Due to glorified depictions of forensics labs on popular television shows, brain imaging has faced criticism for having a "CSI effect". Society may soon develop a false sense of what is possible with contemporary technologies, and may not understand the value of evidence being presented.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp157-159

To Study The Mental Disability Dissociative Amnesia Among Childrens

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Dissociative disorders are conditions that involve disruptions or breakdowns of memory, awareness, identity or perception. People with dissociative disorders use dissociation, a defense mechanism, pathologically and involuntarily. Dissociative disorders are thought to primarily be caused by psychological trauma.

The five dissociative disorders listed in the American Psychiatric Association's DSM IV are as follows:

- Depersonalization disorder: periods of detachment from self or surrounding which may be experienced as "unreal" (lacking in control of or "outside of" self) while retaining awareness that this is only a feeling and not a reality.
- Dissociative amnesia: (formerly Psychogenic Amnesia): the temporary loss of recall memory, specifically episodic memory, due to a traumatic or stressful event such as; war and other disasters. It is considered the most common dissociative disorder amongst those documented. This disorder can occur abruptly or gradually and may last minutes to years depending on the severity of the trauma and the patient.
- Dissociative fugue: (formerly Psychogenic Fugue): physical desertion of familiar surroundings and experience of impaired recall of the past. This may lead to confusion about actual identity and the assumption of a new identity. This state is typically associated with stressful life circumstances and can be short or lengthy.

Both dissociative amnesia and dissociative fugue usually emerge in adulthood and rarely occur after the age of 50.

- Dissociative identity disorder: (formerly Multiple Personality Disorder): the alternation of two or more distinct personality states with impaired recall among personality states. In extreme cases, the host personality is unaware of the other, alternating personalities; however, the alternate personalities are aware of all the existing personalities.
- Dissociative disorder not otherwise specified: used for forms of pathological dissociation that do not fully meet the criteria of the other specified dissociative disorders.

The ICD-10 classifies conversion disorder as a dissociative disorderwhile the DSM-IV classifies it as a somatoform disorder.

Diagnosis and prevalence

According to a 2002 meta-analysis by Ross et al.,the lifetime prevalence of dissociative disorders varies from 10% in the general population to 46% in psychiatric inpatients, based on testing using the Dissociative Disorders Interview Schedule and the Structured Clinical Interview for DSM-IV Dissociative Disorders. Some diagnostic tests have also been adapted and/or developed for use with children and adolescents such as the Children's Version of the Response Evaluation Measure (REM-Y-71), Child Interview for Subjective Dissociative Experiences, Child Dissociative Checklist (CDC), Child Behavior Checklist (CBCL) Dissociation Subscale, and the Trauma Symptom Checklist for Children Dissociation Subscale.

There are problems with classification, diagnosis and therapeutic strategies of dissociative and conversion disorders which can be understood by the historic context of hysteria. Even current

systems used to diagnose DD such as the DSM-IV and ICD-10 differ in the way the classification is determined.

Children and adolescents

Dissociative disorders (DD) are widely believed to have roots in traumatic childhood experience (abuse or loss), but symptomology often goes unrecognized or is misdiagnosed in children and adolescents. Researchers cite several reasons why recognizing symptoms of dissociation in children is challenging: it may be difficult for children to describe their internal experiences;caregivers may miss signals or attempt to conceal their own abusive or neglectful behaviors;[11] symptoms can be subtle or fleeting;disturbances of memory, mood, or concentration associated with dissociation may be misinterpreted as symptoms of other disorders.In addition to developing diagnostic tests for children and adolescents (see above), researchers post a number of approaches to improve recognition and understanding of dissociation in children. Recent research has focused on clarifying the neurological basis of symptoms associated with dissociation by studying neurochemical, functional and structural brain abnormalities that can result from childhood trauma.Others in the field have argued that recognizing disorganized attachment (DA) in children can help alert clinicians to the possibility of dissociative disorders.Clinicians and researchers also stress the importance of using a developmental model to understand both symptoms and the future course of DD's.In other words, symptoms of dissociation may manifest differently at different stages of child and adolescent development and individuals may be more or less susceptible to developing dissociative symptoms at different ages. Further research into the manifestation of dissociative symptoms and vulnerability throughout development is needed. Related to this developmental approach, more research is required to establish whether a young patient's recovery will remain stable over time.

Current debates and the DSM-5

A number of controversies surround DD in adults as well as children. First, there is ongoing debate surrounding the etiology of dissociative identity disorder (DID). The crux of this debate is if DID is the result of childhood trauma and disorganized attachment.A second area of controversy surrounds the question of whether or not dissociation as a defense versus pathological dissociation are qualitatively or quantitatively different. Experiences and symptoms of dissociation can range from the more mundane to those associated with posttraumatic stress disorder (PTSD) or acute stress disorder (ASD) to dissociative disorders.Mirroring this complexity, it is still being decided whether the DSM-5 will group dissociative disorders with other trauma/stress disorders.A 2012 review article supports the hypothesis that current or recent trauma may affect an individual's assessment of the more distant past, changing the experience of the past and resulting in dissociative states. However, experimental research in cognitive science continues to challenge claims concerning the validity of the dissociation construct, which is still based on Freudian notions of repression. Even the claimed etiological link between trauma/abuse and dissociation has been questioned. A recent summary of the critical evidence that proposed an alternative sociocognitive model was published in *Current Directions in Psychological Science*, an official publication of the American Psychological Society, in 2012.

Dissociation: Progress in the Dissociative Disorders

After the category of dissociative disorders was included in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) in 1980, specific diagnostic criteria of this set of mental disorders opened these conditions to empirical scientific research. Psychological, biological and neuroimaging studies used these criteria as a basis for subject selection. With the increased research and clinical interest in dissociative disorders a new peer-reviewed psychiatric journal was created, Disociation: Progress in the Dissociative Disorders which was published from its first issue in March 1988 to its final issue in December 1997. Richard P. Kluft, M.D., served as its first editor-in-chief and Bennett G. Braun, M.D., served as its associate editor. It served as the official journal of the International Society for the Study of Multiple Personality and Dissociation. In a response to the growing criticism concerning the validity of multiple personality disorder, and the involvement of prominent members of its editorial board in either the outright advocacy of the reality of claims of satanic ritual abuse or the reluctance to openly speak out against the moral panic, the organization changed its name to the International Society for the Study of Dissociation and then finally, in 1997, to the International Society for the Study of Trauma and Dissociation. In that same year Dissociation was discontinued and replaced by the Journal of Trauma and Dissociation.

Interestingly, the contents of *Dissociation* are not indexed in the PubMed database of the U.S. National Library of Medicine. However, most of the articles are available in pdf form in a database provided by the University of Oregon.

In a December 1989 editorial in *Dissociation*, editor-in-chief Richard P. Kluft suggested clinicians may not want to make the mistake of being "good Germans" by remaining silent about a potential "hidden holocaust" that satanitc ritual abuse claims might indicate. He cited with approval an earlier paper published by Hill and Goodwin in the journal that presented historical evidence of "pre-Inquisition" reports of ritual abuse as possible evidence of the veracity of the claims that satanic cults had existed throughout history.

The International Society for the Study of Multiple Personality and Dissociation held numerous annual conferences in the 1980s and 1990s. At the 7th International Conference of the ISSMP&D held in Chicago from 9-11 November 1990 an opening plenary session organized by Frank W. Putnam, M.D., then chief of the Dissociative Disorders Unit at the National Institute of Mental Health in Bethesda, MD, was the first public professional presentation of an alternative skeptical interpretation of the claims by thousands of patients and mental health professionals that there were organized, intergenerational satanic cults abusing children (and producing MPD) and engaging in ritual sacrifice.[19] In addition to Putnam, the other plenary panel members included psychiatrist George Ganaway, M.D., anthropologist Sherril Mulhern and psychologist Richard Noll. In the December 1989 issue of *Dissociation* Noll wrote that satanic ritual abuse claims were "a modern version of (a) paranoid mass delusion -- and one in which all too many clinicians and law enforcement officials also share." This opinion ws the first unambiguous skepticism of the MPD/satanism moral panic to be published in any medical or psychiatric journal.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp160-161

A Comparative Study of Achievement Motivation among Sprinters & Long distance runners of Hyderabad in India

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Introduction:

Sport Psychology is the scientific study of people and their behaviors in sport. The role of a sport psychologist is to recognize how participation in sport exercise and physical activity enhances a persons development. Beginning, in the 1970, Sport psychology became a part of the curriculum on university campuses. Today, sport and exercise psychologists have begun to research and provide information in the ways that psychological well being and vigorous physical activity are related. Modern day sports are very demanding . It requires for the sportsmen and athletes a like to perform to the very best of their abilities and beyond. Individual sport activities such as wrestling and gymnastics, have shown to elicit higher anxiety levels than competitive team sport activities such as soft ball and basket ball.

Achievement Motivation defined as the need to perform well or the striving for success and evidenced by persistence and effort in the face of difficulties. Achievement Motivation is regarded as central human motivation.Achievement Motivation form to be the basic for good life. People who are oriented towards achievement in general, enjoy life and feel in control, being motivated keeps people dynamic and gives them self respect. They set moderally difficult but easily achievable targets, which help them, achieve their objectives. They do not set up extremely difficult or extreme easy targets by motivated people prefer to work on a problem rather than leaving the outcome to chance. It is also seen that achievement motivated sports persons seem to be more concerned with their personal achievement rather than rewards of success.

Track and Field dominated the ancient Greek athletic festivals, and was also popular in Rome, but declined in the Middle Ages. In England track was revived sporadically between the 12th and 19th cent.; the first college meet occurred in 1864 between Oxford and Cambridge universities

The history of track and field event was started way back in 776 BC. The first foot race was held at the first Olympic festival in ancient Greece. The walking, running, and throwing things is a natural process in man from his birth. This process gave birth to track and field events. Many individuals started to compete with each other and the events became more popular as the days progressed. The events began to develop and many new track events were included in the process. Well, let us have a look at the history of track and field event.

Track and field athletics in the United States dates from the 1860s. The Intercollegiate Association of Amateur Athletes of America, the nation's first national athletic group, held the first collegiate races in 1873, and in 1888 the Amateur Athletic Union (which governed the sport for nearly a century) held its first championships. The Athletics Congress now regulates the sport in the United States; the International Amateur Athletics Federation (IAAF) sanctions international competition. Track and field has been the centerpiece of the summer Olympic games since their revival in 1896. International professional running, initiated in the 1970s, has had limited success.

Track events include the 100, 200, 400, 800, 1500, 5000 and 10000 meter runs.
The marathon, 42.196 Km.
The 100 (women), 110 (men) and 400 meter hurdles
The 400 and 1600 meter relays.
The 3,000 meter Steeple Chase (men).
The 20,000 and 50,000 meter (men) walks.
Athletic track events are divided into three groups. They are Sprints, Middle Distance and Long Distance Running.

Sprinters in action

Long distance runners in action

Purpose of the study: The purpose of the study is to find out the level of achievement motivation among Sprinters and Long distance runners.

Methodology:

The sample for the study consists of 100 Sprinters and 100 Long distance runners those who have participated in the Inter District Tournaments of Andhra Pradesh state. The Standardized Dr.B.N.Mukharji Achievement Motivation scale was used for the study. The Questionnaire were administered in small groups both Sprinters and Long distance runners.

Results:

It was found the Long distance runners are having more Achievement Motivation than Sprinters because the Long distance runners required compulsory Motivation to achieve excel in races than Sprinters where muscle power and technique is important to win races.

Discussion:

The decision must be made by Long distance runners is final for their performance. Whereas in sprints where muscle power and technique is needed. Achievement motivation differs from event and inividual.

Table No.1 :Table No.1 showing the achievement motivation among Cricketers and athletes.

Sports Persons	Mean	S.D.	N	DF	't'
Sprinters	32.13	5.92	100	198	8.14**
Long distance runners	39.27	7.90	100		

The results in Table No.1 Shows that Long distance runners are having more Achievement motivation than Sprinters . The sprinters mean is 32.13 and Long distance runners mean is 39.27. The mean difference between Long distance runners and sprinters is 7.14.

In distance races the athlete must be psychologically tough, must have more achievement motivation to excel in sports. Whereas in Sprints, muscle power and technique is needed and their achievement motivation differs from each event and each individual.

Conclusion:

It is concluded that Long distance runners are having more Achievement Motivation than Sprinter, because they set goals and aims to give level best performance to win the Competition, where as the Sprinters concentrate on technique at the start & finish and muscle power to give the high level of performance. It is recommended that achievement motivation is compulsory for all sports persons to achieve high excellence in sports. The Coaches must prepare all the sports persons with high level of motivation to excel in sports and games.

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ISSN 2231-3265
International Journal of Health, Physical Education and Computer Science in Sports
Volume No.9, No.1.pp162-165

Effect Of Specific Circuit Training Program On The Selected Physical Fitness Variables And Long Jump Performance Of Collegiate Women Athletes

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Abstract
The purpose of the study was to find out the effect of specific circuit training on the selected physical fitness variables and long-jump performance of collegiate women athletes. The study has been conducted on 90 Female Students studying in S.V.University College and Sri Padmavathi women degree college of Tirupati, are between 18-21 years. Students were devided in to three groups – Experimental group I (5 days per week), Experimental group-II (3 days per week) and control group consisting of 30 students each. The data was collected in the beginning and at the end of 12 weeks of training, in the selected physical fitness variables (Muscular endurance, Explosive power, Flexibility, Speed and agility) and in long jump performance. Analysis of covariance was applied for statistically analyze data and the hypothesis were tested for significance at 0.05 level. From the results it was found that the specific circuit training program is more effective in developing physical fitness and long jump performance of the collegiate women athletes.
Key words: Specific circuit training – Physical fitness – Long Jump performance.

Introduction :

"Mankind is the roof and crown of all creations. We can best fulfill the work which 'God' has assigned us, only if we have good Physical fitness".

Physical fitness means to share greater responsibility, without undue stress, fatigue and help in the quality of health and well being. Physical fitness gives health and the capacity to do everyday tasks, to engage in recreational pursuits and to meet emergencies when they arise. Regular participation in physical exercise and activities enhance the level of physical fitness. Physical fitness varies according to the nature of the work, the size and shape of the body, age and sex of the individuals. Training involves periodic assessment of the athlete's status and progress. Regular increase in the difficult task performance of training suggests some form of gradual increase in performance over an extended period of time. Training should result in level of personal fitness and be associated with good health.

Circuit Training

Circuit training is an everlasting and evolving training exercise program that was developed by R.E. Morgan and G.T. Anderson in 1953. Circuit Training is an excellent way to simultaneously improve mobility, strength and stamina. Circuit refers to a number of carefully selected exercises arranged consecutively and it comprised 9 to 12 stations in the circuit. Each exercise is performed for a specified number of repetitions or for a prescribed time period before moving on to the next exercise. The exercises within each circuit are separated by brief timed rest intervals, and each circuit is separated by a longer rest period. Depending on training level and training objectives number of circuits vary during a training session.

Long Jump

The long jump is a speed event that comprises of four phases

Approach run – Take-off – Flight through the air – Landing

To achieve maximum distance in the long jump the athlete will have to balance three components – technique, speed and strength.

Objectives of the Study

To find out the effect of Circuit Training on physical fitness variables and long jump performance of collegiate women athletes.

To find out the impact of selected exercise in circuit training will have better effect on physical fitness and long jump performance of collegiate women athletes.

Methodology

Ninety (90) women athletes of 18 to 21 years age group were randomly selected from S.V.University College, Tirupati and Sri Padmavathi Degree College for Women, Tirupati for the study. Necessary instructions were given to the subjects and were made familiarized with the tests of the study. Subjects were divided in 3 groups of 30 each. Out of these three two were experimental groups (Exp. I : Exp. II) the third one is controlled grou. Pre-test data and post-test data (after 12 weeks training) was collected for various physical fitness variables and in long-jump performance.

Circuit Training Program

S. No	Training Programme	Warm Up	Duration per each station	Interval Between sets	Sets per Day
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.	On the spot run with high knee action Trunk Bending Jump and toe touch Wall Dips Vertical Jumping Sit-ups Step-ups Squat thrust with both legs Opposite toe touching Jump Hang Back Stamping with take off leg Jumping Jacks	10 Minutes	60sec	2 Minutes	1 – 4 weeks 3 sets 5 – 8 weeks 4 sets 8 – 12 weeks 5Sets

Collection of data

S.No.	Variables	Tests	No. of Trails	Score-Units
I	PHYSICAL VARIABLES			
a.	Muscular Endurance	Sit – ups	Best of 3 trails	No. / Min.
b.	Explosive Power	Vertical Jump	Best of 3 trails	in Cms.,
c.	Flexibility	Sit and reach	Best of 3 trails	in Cms.,
d.	Speed	50 Mts. Dash	1 trial	in Sec.
e.	Agility	4 x 10 Mts., Shuttle run	1 trial	in Sec.
II	LONG JUMP PERFORMANCE	Long Jump	Best of 3 trails	in Mts.

The above table explained with the help of which test which variables data was collected.

Statistical Technique

The statistical techniques Analysis of covariance was (ANACOVA) used to find out the effect of circuit training programme on selected physical fitness components and long jump performance among college women.

Pretest and post-test data were collected on variables. (ANACOVA) analysis of covariance was used to find out the significant mean difference resulting from the circuit training.

All the hypotheses were tested for significance at 0.05 level.

Results and Discussion

TABLE – I

Computation of ANCOVA on Muscular Endurance of Experimental group I, Experimental group II and Control group

Test	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	8.67	8.80	8.87	Between sets	0.623	2	0.311	0.312
				With in sets	86.933	87	0.999	
Post-Test Mean	12.37	10.90	8.80	Between sets	192.82	2	96.411	* 48.634
				With in sets	172.47	87	1.982	

* Significant at 0.05 level

Table F value = 3.10

The above table clearly shows that there were significant difference of post-test of sit-ups of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

TABLE – II

Computation of ANCOVA on Speed of Experimental group I, Experimental group II and Control group

Test	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	8.96	8.95	8.94	Between sets	0.008	2	0.004	0.031
				With in sets	11.755	87	0.135	
Post-Test Mean	8.31	8.48	9.07	Between sets	9.609	2	4.804	* 47.568
				With in sets	8.787	87	0.101	

* Significant at 0.05 level

The above table clearly shows that there were significant difference of post-test of 50 Mts., Dash of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

TABLE – III

Computation of ANCOVA on Flexibility of Experimental group I, Experimental group II and Control group

	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	23.00	23.07	23.10	Between sets	0.156	2	0.078	0.021
				With in sets	322.566	87	3.708	
Post-Test Mean	26.53	25.73	23.90	Between sets	109.355	2	54.678	* 18.874
				With in sets	252.035	87	2.897	

* Significant at 0.05 level

The above table clearly shows that there were significant difference of post-test of sit and reach of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

TABLE – IV

Computation of ANCOVA on Agility of Experimental group I, Experimental group II and Control group

Test	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	11.82	11.85	11.86	Between sets	0.024	2	0.012	0.068
				With in sets	15.520	87	0.178	
Post-Test Mean	10.91	11.24	11.80	Between sets	12.314	2	6.157	* 35.929
				With in sets	14.909	87	0.171	

* Significant at 0.05 level

The above table clearly shows that there were significant difference of post-test of 4 x 10 yards shuttle run of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

TABLE – V

Computation of ANCOVA on Explosive Power of Experimental group I, Experimental group II and Control group

Test	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	17.87	17.89	17.87	Between sets	0.012	2	0.006	0.007
				With in sets	77.701	87	0.893	
Post-Test Mean	20.65	19.87	17.86	Between sets	123.723	2	61.861	* 71.325
				With in sets	75.457	87	0.867	

* Significant at 0.05 level

The above table clearly shows that there were significant difference of post-test of Vertical jump of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

TABLE – VI

Computation of ANCOVA on Long-jump performance of Experimental group I, Experimental group II and Control group

Test	Exp. Group – I	Exp. Group – II	Control Group	Sources of variance	SS	df	MS	'F' Ratio
Pre-Test Mean	2.83	2.83	2.83	Between sets	0.001	2	0.000	0.012
				With in sets	2.538	87	0.029	
Post-Test Mean	3.01	2.94	2.82	Between sets	0.530	2	0.265	* 9.292
				With in sets	2.481	87	0.029	

* Significant at 0.05 level

The above table clearly shows that there were significant difference of post-test of Long-jump of different groups, as the obtained 'F' value was significantly higher than the table value at 0.05 level of significance.

Conclusion

With the help of the interpretation of data, the following conclusions were drawn from the study.

There was significant difference between the (post-test of the) experimental groups I, II and control group in muscular strength and endurance, explosive power, speed, agility and long jump performance.

Experimental group I (with 5 days training in a week) was better than the experimental group II (with 3daystraining in a week) and control group in all physical fitness variables and in long jump performance.

Experimental group II is better than control group in all variables and in long jump performance.

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