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Email:rajesh2sports@yahoo.co.in

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Effect Of Two Different Fitness Programmes OnStrength Endurance And Resting Pulse Rate

Mr. Chandrasekar* and Dr. R. Gopinath **
*** Ph.D, Scholar Department of Physical Education, Vinayaka Missions University and ** Professor.**
Department of Physical Education, Annamalai University, Tamilnadu, India.

Abstract
The purpose of the present study was to find the effect of different fitness training programmes on strength endurance and resting pulse rate. For this purpose, thirty boys those who were studying in various schools and aged between 16 and 17 years from Andaman and Nicobar Islands, were selected. They were divided into three equal groups, each group consisted of ten subjects, in which group – I underwent interval training, group – II underwent circuit training and group – III acted as control group who did not participate in any special training. The training period for this study was three days in a week for twelve weeks. Prior to and after the training period the subjects were tested for strength endurance and resting pulse rate. The selected criterion variables were tested with sit-ups test and counting the pulse during the resting condition. The statistical tool applied for the present study was Analysis of Covariance (ANCOVA). Since, three groups were involved, the Scheffe *S* test was applied as post-hoc test. From the results of the study, it was concluded that both the training groups, i.e. interval training and circuit trainings, has improved the strength endurance and decrease the resting pulse rate.

Introduction

The word 'training' is used in it's broad sense and it's meaning varies with the field of application. In sports, the word training is generally understood to be a synonym of doing physical exercises. In it's narrow sense, training is doing synonyms of physical exercises for the improvement of performance.Sports training aims at achieving high performance in the future. Therefore the stinoture of prognostic sports performance should form the basis of formulation of training. All aims, objectives, means, methods and measures for different stages of training are to be derived from the performance capacity essential to achieve the prognostic sports performance. The performance structure in combination of other factors like motor development, age, training state, periodization etc., determines the training structure.Interval training is an excellent way to burn more calories, build endurance quickly and make workouts more interesting. Interval training involves alternating high intensity exercise with recovery periods and there are a variety of ways to set up interval workouts. One option is measured by periods of work followed by measured periods of rest. An example would be 1 minute of high intensity workout (such as a sprint), followed by 2 minutes of low intensity exercise (e.g., walking) and alternating it several times for 15-30 minutes.Circuit training was developed by R.E. Morgan and G.T. Anderson in 1957 at the University of Leeds in England. The term circuit refers to a number of carefully selected exercises arranged consecutively. In the original format, 9 to 12 stations comprised the circuit. This number may vary according to the design of the program. Each participant moves from one station to the next with little (15 to 30 seconds) or no rest, performing a 15 to 45 second work bout of 8 to 20 repetitions at each station (using a resistance of about 40% to 60% of one-repetition maximum). The program may be performed with exercise machines, hand-held weights, elastic resistance, calisthenics or any combination.

Methods

This study under investigation involved the experimentation of interval training and circuit training on strength endurance and resting pulse rate. For this purpose, thirty male students those who were studying in various schools, and aged between 16 and 17 years from Andaman and Nicobar Islands, were selected. The selected thirty subjects were randomly divided into three equal groups of ten each, out of which group - I (n = 10) underwent interval training, group - II (n = 10) underwent circuit training and group - III (n = 10) remained as control. The training programme was carried out for three days per week for twelve weeks. Strength endurance was measured by administering sit-ups test and resting pulse rate was assessed by counting the pulse at resting condition for one minute.

Analysis Of Data

The data collected prior to and after the experimental periods on strength endurance and resting pulse rate on interval training group, circuit training group and control group were analysed and presented in the following table -I.

Table – I

Analysis of Covariance and 'F' ratio for Strength Endurance and Resting Pulse Rate of Interval Training Group, Circuit Training Group and Control Group.

Variable Name	Group Name	Interval Training Group	Circuit Training Group	Control Group	'F' Ratio
Strength Endurance (Numbers /minute)	Pre-test Mean ± S.D	26.50 ± 1.269	25.50 ± 2.014	25.30± 1.252	1.714
	Post-test Mean ± S.D.	27.0 ± 1.054	28.70 ± 2.669	25.50 ± 0.972	8.379*
	Adj. Post-test Mean	26.335	28.942	25.923	23.73*
Resting pulse rate (Numbers /minute)	Pre-test Mean ± S.D	74.00 ± 1.247	73.10 ± 1.912	73.50 ± 0.972	0.991
	Post-test Mean ± S.D.	72.70 ± 2.058	70.50 ± 1.650	73.70 ± 1.059	9.953*
	Adj. Post-test Mean	72.287	70.883	73.729	17.70*

* Significant at .05 level of confidence.

(The table value required for significance at .05 level of confidence with df 2 and 27 and 2 and 26 were 3.35 and 3.37 respectively).

Further to determine which of the paired means has a significant improvement, Scheffĕ *S* test was applied as post-hoc test. The result of the follow-up test is presented in Table - II.

Table - II

Scheffĕ S Test for the Difference Between the Adjusted Post-Test Mean of Strength endurance and Resting pulse rate

Adjusted Post-test Mean of Strength endurance				
Interval Training Group	Circuit Training Group	Control Group	Mean Difference	Confidence interval at .05 level
26.335		25.923	0.412	1.23
26.335	28.942		2.607*	1.23
	28.942	25.923	3.019*	1.23
Adjusted Post-test Mean of Resting pulse rate				
72.287		73.729	1.442*	1.235
72.287	70.883		1.404*	1.235
	70.883	73.729	2.846*	1.235

* Significant at 0.05 level of confidence.

Results:

Before applying the experiment all the subjects of the interval training, circuit training and control groups attended the pre-test, which was conducted a day prior to the commencement of the training and the data were collected on strength endurance and resting pulse rate. After twelve weeks of training the post-test was conducted one day after the training period to find out the changes in the criterion variables, if any. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the experimental groups and control group on selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate. Since there was three groups were involved in this study, the Scheff *S* test was used as pos-hoc test and it is shown in Table - II.

After applying the analysis of covariance, the result of the study showed that there was a significant difference among interval training group, circuit training group and control group in strength endurance and resting pulse rate after twelve weeks of training. The criterion variables such as, strength endurance and resting pulse rate was improved for both the interval training group and circuit training group. Further, comparing the adjusted post-test means of all the criterion variables, such as, strength endurance and resting pulse rate both the training groups were significantly increased the performance after twelve weeks of training period, when compared with the control group. Moreover, the circuit training group has better improvement on both the criterion variables than the interval training group.

Conclusions:

It was concluded from the results of the study that there was a significant improvement in strength endurance and a significant decrease in resting pulse rate for both the experimental groups, such as interval training group and circuit training group, when compared with the control group. Since, the result of study has shown that there was no significant difference between the training groups on strength endurance, but not in the resting pulse rate.

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Effect Of Aerobic And Anaerobic Training On High Density Lipoproteins And Hemoglobin

Mr. G. Kolanji, Ph.D., Scholar ; Dr. R. L. Sudhan Paulraj, Associate Professor,
Department of Physical Education,
Annamalai University.

Abstract
The purpose of the study was to find out the effect of aerobic training and anaerobic training on high density lipoproteins and hemoglobin. To achieve this purpose, 30 male students studying in the Faculty of Agriculture, Annamalai University, studying in various classes was randomly selected as subjects. The age of the subjects ranged from 19 to 25 years. The subjects were divided into three equal groups of 10 subjects each in which group - I underwent aerobic training (continuous running), group – II underwent anaerobic training (interval running) and group - III acted as control that did not undergo any training programme. The training period for the study was three days (alternative days) per week for twelve weeks. The training was conducted only in the morning session between 6AM and 8 AM. The selected criterion variables, such as, high density lipoproteins and hemoglobin were assessed before and after the training period. To assess the high density lipoproteins, Boehringer Mannheim kit was used and to assess hemoglobin, Cyanmethemoglobin method was used. The collected data were statistically analysed by using Analysis of Covariance (ANCOVA). Since, there were three groups involved in the present study, Scheffé *S* test was used as post-hoc test, to find out which of the paired mean was significantly differ. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as appropriate. It was concluded from the results of the study, there was a significant increase in high density lipoproteins only for aerobic training group and not in anaerobic training group and a significant reduction in hemoglobin was found for both the training groups when compared with the control group.
Key Words: aerobic training, anaerobic training, high density lipoprotein, hemoglobin, ANCOVA, Scheffé S post-hoc test

Introduction

Training is a systematic process of repetitive progressive exercise of work involving, learning and acclimatization (***Arnheim and Klafs, 1963***). Training represents a long-term endeavor. Exercise efficiency is not developed overnight and a coach cannot create miracles by cutting corners through overlooking scientific and methodical theories (***Bompa, 1997***).

The basic training procedures will serve better when utilized with modifications suited to the individual. The best training programme is that which increase the desired quality at a higher rate without causing unwanted effects (***Boucher and Malina, 1993***). In sports the word “Training” is generally understood to be a synonym of doing physical exercises. In a narrow sense, training is doing physical exercises for the improvement of performance (***Hardayal Singh, 1993***).

Aerobic (or cardio respiratory) endurance is the ability of the body to supply oxygen and energy to the cells and remove waste products in order to sustain prolonged rhythmical exercise. The heart pumping oxygenated blood through the arteries to the cells accomplishes this. At the cellular level, the cells absorb oxygen and waste products are removed and carried away by the blood. An adequate supply of oxygen prevents the build up a lactic acid, which produces fatigue in the muscle, and also, follows for the production of adenosine triphosphate (ATP) – the basic energy source in the muscle. The heart then pumps this blood to the lungs to de-oxygenated and returned to the heart via the pulmonary veins to begin systemic circulation cycle once again (***www.wikipedia***).

Anaerobic exercise is high intensity muscular activity that lasts for a short period of time. Anaerobic means "without oxygen," so your body does not use oxygen to help produce energy when you exercise anaerobically like it does when you exercise aerobically (***www.functional-fitness-facts.com***).

METHODS

This study was involving the experimentation of aerobic training and anaerobic training on high density lipoproteins and hemoglobin. Only male students from the Faculty of Agriculture, Annamalai University studying in various classes and aged between 18 and 25 years were selected. The selected thirty subjects were randomly divided into three groups of ten each, out of which group - I (n = 10) underwent aerobic training, group - II (n = 10) underwent anaerobic training and group – III (n = 10) remained as control. The training programme was carried out three days (alternative days) per week during morning session only (6 am to 8 am) for twelve weeks. High density lipoprotein was assessed by using Boehringer Mannheim kit and hemoglobin was assessed by using Cyan Methemoglobin method.

ANALYSIS OF DATA

The data collected prior to and after the experimental periods on high density lipoproteins and hemoglobin on aerobic training group, anaerobic training group and control group were analysed and presented in the following table -I.

Table – I

Analysis of Covariance and 'F' ratio of High Density Lipoproteins and Hemoglobin on Aerobic Training Group Anaerobic Training Group and Control Groups

Variable Name	Group Name	Aerobic Training Group	Anaerobic training Group	Control Group	'F' Ratio
High density lipoproteins (in mg/dl)	**Pre-test Mean ± S.D**	51.80 ± 3.80	51.90 ± 2.89	50.80 ± 2.44	0.387
	Post-test Mean ± S.D.	53.50 ± 3.57	50.50 ± 2.953	50.30 ± 2.91	3.224
	Adj. Post-test Mean	53.206	50.108	50.986	31.686*
Hemoglobin (gm/dl)	**Pre-test Mean ± S.D**	13.60 ± 0.447	13.63 ± 0.49	13.38 ± 0.525	0.782
	Post-test Mean ± S.D.	13.32 ± 0.49	13.4 ± 0.498	13.45 ± 0.519	0.174
	Adj. Post-test Mean	13.256	13.316	13.607	22.151*

* Significant at .05 level of confidence. (The table value required for significance at .05 level of confidence with df 2 and 27 and 2 and 26 were 3.35 and 3.37 respectively).

Further to determine which of the paired means has a significant improvement, Scheffĕ S test was applied as post-hoc test. The result of the follow-up test is presented in Table - II.

Table - II

Scheffĕ S Test for the Difference between the Adjusted Post-Test Mean of High Density Lipoproteins and Hemoglobin

Adjusted Post-test Mean of High Density Lipoproteins				
Aerobic Training Group	**Anaerobic Training Group**	**Control Group**	**Mean Difference**	**Confidence interval at .05 level**
53.206		50.986	2.22*	1.176604
53.206	50.108		3.098*	1.176604
	50.108	50.986	0.878	1.176604
Adjusted Post-test Mean of Hemoglobin				
13.256		13.607	0.351*	0.1421997
13.256	13.316		0.06	0.1421997
	13.316	13.607	0.291*	0.1421997

* Significant at 0.05 level of confidence.

Results

Before applying the experiment all the subjects of the aerobic training, anaerobic training and control groups were attended the pre-test, which was conducted a day prior to the commencement of the training and the data were collected on high density lipoproteins and hemoglobin. After twelve weeks of training the post-test was conducted one day after the training period to find out any changes in the criterion variables. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the experimental groups and control group on selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as an appropriate. Since there were three groups were involved in this study, the Scheff *S* test was used as pos-hoc test and it is shown in Table - II.

After applying the analysis of covariance, the result of this study showed that there was a significant difference among aerobic training, anaerobic training and control groups on the changes in total cholesterol and hematocrit after twelve weeks of training. The criterion variables such as, total cholesterol and hematocrit were reduced after the training period. Further, comparing the adjusted post-test means to find out which of the group have significant increase in high density lipoproteins and hemoglobin, there was a significant difference was found between the training groups, in which, aerobic training group significantly increased when compared with the anaerobic training group and control group and there was no significant increase in high density lipoproteins after the anaerobic training. Indranil, Khanna and Dhara (2010) found that there was a significant increase in high density lipoproteins after the aerobic training. Kipreos, Tripolitsioti and Stergioulas (2010) also found that the male athletes of anaerobic activity also have reduced of high density lipoproteins.

In hemoglobin, both the training groups were significantly decreased after the training period, when compared with the control group. But, there was no significant variations was found between the training groups. Indranil, Khanna and Dhara (2010) found that there was a significant decrease in hemoglobin after aerobic training. Moosavizademonir (2011) also found that there was a significant reduction in hemoglobin after the eight weeks aerobic exercise. Wilkinson *et al* (2002) found that there was a significant reduction in hemoglobin after the high intensity interval training.

Overall findings shows that there was a significant reduction in high density lipoproteins in aerobic training and not in anaerobic training and in hemolgobin, it was found that there was a significant reduction after the aerobic training and anaerobic training.

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Alcohol & Drug Demand Reduction and Preventive Policies and Government of India's Approach

B.Venkanna
(Ph.D) Research Scholar,Department of Public Administration,Osmania University,Hyderabad-500007.

Introduction

India with a population of over 1 billion people, spread over an area of 3.28 million sq. kms. (3214 km. from North to South and 2933 km. from East to West), has about 3 million (about 0.3 per cent of total population) estimated victims of different kinds of drug usages, excluding alcohol dependents. Such population comes from diverse socio-economic, cultural, religious and linguistic backgrounds. The use of dependence-producing substances, in some form or the other, has been a universal phenomenon. In India also, the abuse of alcohol, opium and cannabis had not been entirely unknown. India is the biggest supplier of licit demand for opium required primarily for medicinal purposes. Besides this, India is located close to the major poppy growing areas of the world, with "Golden Crescent" on the Northwest and "Golden Triangle" on the North-East. These make India vulnerable to drug abuse particularly in poppy growing areas and along the transit/trafficking routes

The Scenario - Need for State Intervention

Over the years, drug addiction is becoming an area of concern as traditional moorings, effective social taboos, emphasis on self-restraint and pervasive control and discipline of the joint family and community are eroding. The processes of industrialization, urbanization and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life. The fast changing social milieu, among other factors, is mainly contributing to the proliferation of drug abuse, both of traditional and of new psychoactive substances. The introduction of synthetic drugs and intravenous drug use leading to HIV/AIDS has added a new dimension to the problem, especially in the Northeast states of the country.

Studies/Reports - Reported Trends in Drug Addiction

The rough estimation i.e. about 3 million population dependent on drugs (0.3% of the population), excluding those dependent on alcohol, has been the basis for various interventions. A long felt need to have an authentic profile of drug addicts and accurate data about the extent, pattern and trends of drug abuse has been accomplished through a survey undertaken in collaboration with the UN0DC and ILO (Project D-83). This project has three major components viz. National Household Survey, Rapid Assessment Survey and Drug Abuse Monitoring System with sub-studies on drug abuse among rural population, prison population, women, and in border areas. The data emerging out of this survey and the studies undertaken through professional agencies would be used for future planning to address the multi-faceted problem of drug abuse.The survey and studies indicate a high concentration of drug addiction in certain social segments and high-risk groups, such as, commercial sex workers, transportation workers, and street children and in the northeastern states/border areas and opium growing regions of the country.The situation in northeast states has been little aggravated due to high incidence of Intravenous Drug Use (IDU), especially in the state of Manipur, leading to HIV/AIDS. The sero-positivity amongst them is about 70%.

Constitutional and Legal Framework

Article 47 of the Constitution of India directs the State to regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties, and, in particular, to endeavour to bring about prohibition of consumption, except for medicinal purposes, of intoxicating drinks and drugs which are injurious to health.

Section 71 of the Narcotic Drugs and Psychotropic Substances Act, 1985 (as amended) provides as under:

"Power of Government to establish centres for identification, treatment, etc., of addicts and for supply of narcotic drugs and psychotropic substances -

1. The Government may, in its discretion, establish as many centres as it thinks fit for identification, treatment, education, after-care, rehabilitation, social re-integration of addicts ....."
2. The Government may make rules consistent with this Act providing for the establishment, appointment, maintenance, management and superintendence of ..... the centres referred to in sub-section (1) and for the appointment, training, powers, duties and persons employed in such centres."

Demand Reduction Strategy - A Welfare Approach

The issues relating to drugs are tackled by the Government of India through its two-pronged strategy viz. supply reduction and demand reduction. Whereas the supply reduction is under the purview of the enforcement agencies with the Department of Revenue as the nodal agency, the demand reduction strategy is under the domain of social sector and the Ministry of Social Justice & Empowerment in Government of India is responsible for implementation of demand reduction strategy in the country. Over the years it was realized that the drug abuse is not only a problem arising out of the availability of such intoxicating drinks and drugs but it has a great deal to do with the social conditions which create the demand for or the need for consumption of such substances. The vulnerability of the modern society plays a catalytic role in promoting the consumption and abuse of narcotic and psychotropic drugs. With this the need arose for implementing strategies for prevention of drug abuse, educating the people about its ill effects and rehabilitation of the addicts. The recent UN documents have also stated Demand Reduction as the pillar of drug control strategies and have urged upon all the Members States to take immediate steps so as to make significant achievement by the end of year 2003 in controlling the demand for consumption of illicit drugs.The findings of studies/reports indicate to the relationship of drug abuse with the socio-economic conditions or the social dynamics of the population. Therefore, the approach is to recognize drug abuse as a psycho-socio medical problem, which can be best, handled through community based interventions.Keeping the aforesaid approach in view, the Govt. of India has a three-pronged strategy for demand reduction consisting of:Building awareness and educating people about ill effects of drug abuse Building awareness and educating people about ill effects of drug abuse dealing with the addicts through programme of motivational counselling, treatment, follow-up and social-reintegration of recovered addicts. To impart drug abuse prevention/rehabilitation training to volunteers with a view to build up an educated cadre of service providers. The objective of the entire strategy is to empower the society and the community to deal with the problem of drug abuse.

Treatment and Rehabilitation of Addicts - Govt - NGO Collaboration

The Ministry of Social Justice & Empowerment, as the focal point for drug demand reduction programmes in the country, has been implementing the Scheme for Prohibition and Drug Abuse Prevention since the year 1985-86. As implementation of programmes for deaddiction and rehabilitation of drug addicts require sustained and committed/involved effort with a great degree of flexibility and innovation, a State-community (voluntary) partnership appears to be particularly strong mechanism for service delivery. Accordingly, under the Scheme, while major portion of the cost of services is borne by the Government, the voluntary organisations provide actual services through the Counselling and Awareness Centres; Deaddiction cum Rehabilitation Centres, Deaddiction Camps, and Awareness Programmes.

Under this Scheme, the Ministry is assisting around 390 voluntary organisations for maintaining more than 400 Integrated Rehabilitation Centres for Addicts (IRCAs) spread all over the country. Average annual allocation for this programme has been to the tune of Rs. 40 Crore. The basic objective in creating facilities for treatment, at Centres run through voluntary organisations, is to ensure that the support of the family and the community is mobilized to the maximum. These Centres adopt a wide variety of approaches, systems and methodologies for treatment and rehabilitation of the addicts suitable and adaptable to the social customs, traditions and culture. However this do not in any way undermine adoption of scientific, modern and established systems of treatment.The rehabilitation and social reintegration of an addict is the mainstay of any such initiative. Therefore all programmes for treatment of addicts must compulsorily integrate into delivery system, programmes for psychosocial counselling of the addict and his family/peer groups; programmes for vocational training/rehabilitation and comprehensive programme for after-care and follow-up. To attain these objectives, all Centres are equipped with a cadre of experts from various fields including doctors, counsellors, community workers, social workers etc. Thus, it is a multi-disciplinary approach being applied according to the needs of individual cases. They work in coordination with the community resources as well infrastructure and services available under other related agencies. To facilitate the medical treatment of hard-core addicts who require intensive long-term medical attention, 100 Deaddiction Centres are being run in Government hospitals/Primary Health Centres, etc.

Awareness and Preventive Education

The Counselling and Awareness Centers are engaged in a wide range of awareness generation programme in varied community settings including village panchayats, schools etc. Besides these Centers, the Ministry has been actively utilizing the various media channels, print as well as audio-visual for educating the people on the ill effects of drug abuse and also disseminating information on the service delivery. The overall approach is based on the need to comprehensively address the widespread ignorance and lack of information on the ill- effects of drug abuse prevention/rehabilitation services and to build up a climate of abstinence from drugs through sensitising the community at large. In this perspective, the strategy for public awareness about the damage consequences of drug abuse takes into account the culture-specific aspects of the problem. A differential approach has been adopted towards educating the public vis-à-vis groups at risk.

Training and Manpower Development - Development of Service Providers

The Government has established a National Centre for Drug Abuse Prevention (NC-DAP) under the aegis of the National Institute of Social Defence, New Delhi, to serve as the apex body in the country in the field of training, research and documentation in the field of drug abuse prevention. To meet the growing demand of rehabilitation professionals in the country, the Centre has been conducting three months' Certificate Course on Deaddiction Counselling and Rehabilitation of Drug Abusers. The Centre has been conducting advocacy programmes, seminars, conferences and training courses all over the country in collaboration with the State Govt. Institutions and NGOs for sensitisation, awareness generation and training. The NC-DAP is mandated to serve as a Centre of Excellence in the region with an in-house team of experts as faculty, being complemented and supported by eminent experts and professionals as guest faculty.

Inter-Sectoral Collaboration

The problem of alcoholism and drug abuse is a social malaise and is dealt holistically by targeting all spheres of human activity. The Government of India has been following an integrated approach involving all concerned Ministries and Departments who could complement and supplement the initiatives being taken by each other. The initiatives being taken include imparting education on drugs and positive alternative to the youth through appropriate modification in school curriculum and sensitisation of school environment. Programmes are being developed for the sensitisation of the teachers, parents and the peer groups in a school environment through the participation of the Non-Government Organisations. The cooperation of the media and various youth organisations has also been solicited for dissemination of information on ill effects of alcohol/drugs and in engaging the community in positive/healthy alternatives.Available Government infrastructure and services have been integrated with the services offered by the NGO sector for dealing with associated health problems such as TB, HIV/AIDS, Hepatitis etc. Efforts are also being made to provide the medical professionals in the health sector with the knowledge on rehabilitation and after-care of alcohol and drug dependents. Simultaneously, steps have been initiated for providing training to the NGO professionals on various medical inputs for providing effective service to the clients. One of the successful initiatives towards inter-sectoral collaboration has been the integration of HIV/AIDS prevention programme into the substance abuse programme of 100 NGO run Deaddiction Centres supported by the Ministry of Social Justice and Empowerment.

International Cooperation - An Enrichment Process

The Ministry of Social Justice & Empowerment, in collaboration with the International Labour Organization and UNODC, implemented a project on "Developing Community Drug Rehabilitation and Workplace Prevention Programmes", to sensitise and train the voluntary organisations and workplace settings on prevention of alcoholism and substance abuse in workplace. It is viewed that the work environment of an individual is the most important area of preventive intervention for a potential addict as he still enjoys economic security. The loss of a job further aggravates the addictive behaviour. This aspect was not getting its due importance under the on-going programme. With the sincere efforts made under the project, a number of corporate institutions have also volunteered their involvement in the project.

This was followed up with two community-based interventions in collaboration with UNODC and ILO, namely:

1. Community Wide Demand Reduction in India
2. Community Wide Demand Reduction in North-Eastern States of India

These initiatives were primarily addressed towards strengthening the delivery of services through capacity building of the service providers, developing infrastructure for decentralization of programme monitoring at the regional levels, developing networking and linkages amongst the NGOs, the concerned agencies and the Government as well as sister UN organisations drawing upon the experience gained in the earlier project. The project for the Northeast was specifically designed keeping in mind the local customs, cultural traditions, community bonding as well as infrastructural inadequacies. The projects have adopted a comprehensive approach to the development of the target communities of these States.

Areas of Strength - Success Stories

Quality Assurance and Minimum Standards: The sheer size of population and geographical expanse of the country with cultural diversity makes it a real challenge to ensure delivery of quality services across the country. The quality assurance has, however, been ensured by developing a Manual of Minimum Standards of Services with adequate flexibility for adaptations to suit regional requirements, and by making institutional arrangements for professional training of service providers.

Professional Manpower Development: The assurance of quality in delivery of the services being the benchmark, creation of infrastructure of professionally trained service providers has been in the centre stage of Government agenda. National Centre for Drug Abuse Prevention (NCDAP) has come up as an apex institution with the mandate for training, research and development in the drug sector. Training requires regional and local variations.

Further to ensure that training is imparted indigenously, eight non-government organisations (NGOs) have been established as Regional Resource and Training Centres (RRTCs). These objectives have been realized under the collaborative projects of the Ministry of Social Justice and Empowerment, UNODC and ILO, popularly known as E40 and E41.

Networking of Service Providers: The uniform delivery of services across the vast country with basic minimum standards is considered paramount in drug prevention programme. FINGODAP (Federation for Indian NGOs in Drug Abuse Prevention) is a movement to facilitate networking amongst member NGOs (essentially those funded by the Government of India) so as to gain from each other's experience, and also to ensure self-restraint towards implementation of minimum standard of services.

Focused Interventions for Vulnerable Targets: The work places prone to drug addiction among the employees have warranted focused interventions to check the prevalence of drug abuse at these places. The Workplace Prevention Programme (WPP), a collaborative effort of the Government, ILO, NGOs and corporate sector has come up as a result. This collaboration has led to the formation of an effective group of various stakeholders, known as ARMADA, the Association of Resource Managers against Alcohol and Drug Abuse.

Inter-sectoral Convergence: Since drug demand prevention has to be addressed at the level of individuals, families and communities, India has adopted a holistic approach by way of convergence of advocacy, prevention and rehabilitation programmes of all relevant Government departments as also of other non-government activities. This convergence has been concretised by way of dovetailing the drug issues in the curriculum of schools/colleges, educational and informative programmes of media, activities of youth and sports organisations and health programmes.

Conclusion

While all round efforts are being made for prevention and containment of drug abuse in our society, a long journey is yet to be covered before we can draw some satisfaction. The problem having transnational causes and implications shall require Herculean efforts on the part of all the institutions. The empowerment of society through sensitisation and awareness is the only solution to support the efforts of enforcement agencies in containing the proliferation of drug trafficking and drug abuse.

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Drug and Alcohol Abuse - Challenges for School-Based Drug Abuse Prevention

***K.Ravi(Ph.D) Research Scholar, Department of Public Administration, Osmania University,Hyderabad-500007.**

Introduction

Drug and alcohol abuse are important problems that affect school-age youth at earlier ages than in the past. Young people frequently begin to experiment with alcohol, tobacco, and other drugs during the middle school years, with a smaller number starting during elementary school. By the time students are in high school, rates of substance use are remarkably high. According to national survey data, about one in three twelfth graders reports being drunk or binge drinking (i.e., five or more drinks in a row) in the past thirty days; furthermore, almost half of high school students report ever using marijuana and more than one-fourth report using marijuana in the past thirty days. Marijuana is the most commonly used illicit drug among high school students. However, use of the drug ecstasy (MDMA) has seen a sharp increase among American teenagers at the end of the twentieth century, from 6 percent in 1996 up to 11 percent reporting having tried ecstasy in 2000. Indeed, at the beginning of the twenty-first century, ecstasy was used by more American teenagers than cocaine.

Many educators recognize that drug and alcohol abuse among students are significant barriers to the achievement of educational objectives. Furthermore, federal and state agencies and local school districts frequently mandate that schools provide health education classes to students, including content on drug and alcohol abuse. The Safe and Drug-Free Schools Program is a comprehensive federal initiative funded by the U.S. Department of Education, which is designed to strengthen programs that prevent the use of alcohol, tobacco, drugs, and violence in and around the nation's schools. In order to receive federal funding under this program, school districts are expected to develop a comprehensive education and prevention plan, which involves students, teachers, parents, and other members of the community. Thus it is clear that schools have become the major focus of drug and alcohol abuse education and prevention activities for youth. This makes sense from a practical standpoint because schools offer efficient access to large numbers of youth during the years that they typically begin to use drugs and alcohol.

Since the 1970s several approaches to drug and alcohol abuse education and prevention have been implemented in school settings. Traditionally, drug and alcohol abuse education has involved the dissemination of information on drug abuse and the negative health, social, and legal consequences of abuse. Contemporary approaches include social resistance and competence-enhancement programs, which focus less on didactic instruction and more on interactive-skills training techniques.

The most promising contemporary approaches are conceptualized within a theoretical framework based on the etiology of drug abuse and have been subjected to empirical testing using appropriate research methods. Contemporary programs are typically categorized into one of three types: (1) *universal* programs focus on the general population, such as all students in a particular school; (2) *selective* programs target high-risk groups, such as poor school achievers; and (3) *indicated* programs are designed for youth already experimenting with drugs or engaging in other high-risk behaviors.

Traditional Educational Approach

Information dissemination: The most commonly used approach to drug and alcohol abuse education involves simply providing students with factual information about drugs and alcohol. Some information-dissemination approaches attempt to dramatize the dangers of drug abuse by using fear-arousal techniques designed to attract attention and frighten individuals into not using drugs, accompanied by vivid portrayals of the severe adverse consequences of drug abuse.

Methods: Informational approaches may include classroom lectures about the dangers of abuse, as well as educational pamphlets and other printed materials, and short films that impart information to students about different types of drugs and the negative consequences of use. Some programs have police officers come into the classroom and discuss law-enforcement issues, including drug-related crime and penalties for buying or possessing illegal drugs. Other programs use doctors or other health professionals to talk about the severe, often irreversible, health effects of drug use.

Effectiveness: Evaluation studies of informational approaches to drug and alcohol abuse prevention have shown that in some cases a temporary impact on knowledge and antidrug attitudes can occur. However, 1997 meta-analytic studies by Nancy Tobler and Howard Stratton consistently fail to show any impact on drug use behavior or intentions to use drugs in the future. It has become increasingly clear that the etiology of drug and alcohol abuse is complex, and prevention strategies that rely primarily on information dissemination are not effective in changing behavior.

Contemporary Educational Approaches

Social resistance approach: There has been a growing recognition since the 1970s that social and psychological factors are central in promoting the onset of cigarette smoking and, later, drug and alcohol abuse. Drug abuse education and prevention approaches are increasingly more closely tied to psychological theories of human behavior. The social resistance approach is based on a conceptualization of adolescent drug abuse as resulting from pro-drug social influences from peers, persuasive advertising appeals, and media portrayals encouraging drug use, along with exposure to drug-using role models. Therefore, social influence programs focus extensively on teaching students how to recognize and deal with social influences to use drugs from peers and the media. These resistance-skills programs focus on skills training to increase students' resistance to negative social influences to engage in drug use, particularly peer pressure.

Methods: The goal of resistance-skills training approaches is to have students learn ways to avoid high-risk situations where they are likely to experience peer pressure to smoke, drink, or use drugs, and/or acquire the knowledge, confidence, and skills needed to handle peer pressure in these and other situations. These programs frequently include a component that makes students aware of prosmoking influences from the media, with an emphasis on the techniques used by advertisers to influence consumer behavior. Also, because adolescents tend to overestimate the prevalence of tobacco, alcohol, and drug use, social resistance programs often attempt to correct normative expectations that nearly everybody smokes, drinks alcohol, or uses drugs. In fact, it has been proposed that resistance skills training may be ineffective in the absence of conservative social norms against drug use, since if the norm is to use drugs, adolescents will be less likely to resist offers of drugs.

Effectivenes:. Resistance skills programs as a whole have generally been successful. A comprehensive review of resistance skills studies published from 1980 to 1990 reported that the majority of prevention studies (63%) had positive effects on drug use behavior, with fewer studies having neutral (26%) or negative effects on behavior (11%)–with several in the neutral category having inadequate statistical power to detect program effects. Furthermore, several follow-up studies of resistance skills interventions have reported positive behavioral effects lasting for up to three years, although longer term follow-up studies have shown that these effects gradually decay over time, suggesting the need for ongoing intervention or booster sessions.The most popular school-based drug education program based on the social influence model is Drug Abuse Resistance Education, or Project DARE. The core DARE curriculum is typically provided to children in the fifth or sixth grades and contains elements of information dissemination and social influence approaches to drug abuse prevention. DARE uses trained, uniformed police officers in the classroom to teach the drug prevention curriculum. Despite the popularity of DARE, 1998 evaluation studies of DARE by Dennis Rosenbaum and Gordon Hanson examined the most scientifically rigorous published evaluations of DARE and concluded that DARE has little or no impact on drug use behavior, particularly beyond the initial posttest assessment. Some of the possible reasons why DARE is ineffective may be that the program is targeting the wrong mediating processes, that the instructional methods are less interactive than more successful prevention programs, and that teenagers may simply "tune out" what may be perceived as an expected message from an ultimate authority figure.

Competence enhancement approach: A limitation of the social influence approach is that it assumes that young people do not want to use drugs but lack the skills or confidence to refuse. For some youth, however, using drugs may not be a matter of yielding to peer pressure but may have instrumental value; it may, for example, help them deal with anxiety, low self-esteem, or a lack of comfort in social situations. According to the competence-enhancement approach, drug use behavior is learned through a process of modeling, imitation, and reinforcement and is influenced by an adolescent's pro-drug cognitions, attitudes, and beliefs. These factors, in combination with poor personal and social skills, are believed to increase an adolescent's susceptibility to social influences in favor of drug use.

Methods: Although these approaches have several features that they share with resistance-skills training approaches, a distinctive feature of competence-enhancement approaches is an emphasis on the teaching of generic personal self-management skills and social coping skills. Examples of the kind of generic personal and social skills typically included in this prevention approach are decision-making and problem-solving skills, cognitive skills for resisting interpersonal and media influences, skills for enhancing self-esteem (goal-setting and self-directed behavior change techniques), adaptive coping strategies for dealing with stress and anxiety, general social skills (complimenting, conversational skills, and skills for forming new friendships), and general assertiveness skills. These skills are best taught using proven cognitive-behavioral skills training methods: instruction and demonstration, role playing, group feedback and reinforcement, behavioral rehearsal (in-class practice) and extended (out-of-class) practice through behavioural homework assignments.

Effectiveness: Over the years, a number of evaluation studies have been conducted, testing the efficacy of competence-enhancement approaches to drug abuse prevention. These studies have consistently demonstrated behavioral effects as well as effects on hypothesized mediating variables. More important, the magnitude of reported effects of these approaches has typically been relatively large, with studies reporting reductions in drug use behavior in the range of 40 to 80 percent. Long-term follow-up data indicate that the prevention effects of these approaches can last for up to six years. In summary, drug abuse prevention programs that emphasize resistance skills and general life skills (i.e., competence-enhancement approaches) appear to show the most promise of all school-based prevention approaches.

Conclusion

In the final analysis, research-based prevention programs proven to be successful are unlikely to have any real public health impact unless they are used in a large number of schools. However, programs with proven effectiveness are not widely used. Drug prevention programs most commonly used in real-world settings are those that have not shown evidence of effectiveness or have not been evaluated properly. Thus an important area that deserves further attention is how effective school-based drug abuse prevention programs can be widely disseminated, adopted, and institutionalized. Furthermore, once effective programs are disseminated, steps must be taken to ensure that programs are implemented with sufficient fidelity. Regardless of how effective a prevention program may be, it is not likely to produce the desired results unless it is provided in full and by qualified and motivated staff.

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A comparative study on anthropometric and motor abilities among Sportsmen and Non-sportsmen of Gulbarga University, Gulbarga

Asundi Manjunath Kallappa and Dr.C.R.Bhairaddy
Research scholar Dept of Physical Education, Director Dept of Physical Education
Gulbarga University, Gulbarga

Abstract
Sports and motor activity is generally achievement oriented. Personal success in team and individual events can be evaluated against specific standards. The aim of the study was a comparative study on anthropometric and motor abilities among Sportsmen and Non-sportsmen of Gulbarga University, Gulbarga. The sample consists of 80 students UCPE B.P.Ed College sportsmen Gulbarga and Non-sportsmen, selected sample's motor fitness was measured in five motor ability tests-speed, endurance, flexibility, agility and strength and anthropometric training Further, the sample was given training for four weeks continuously during evening hours. After the training, motor fitness was again measured in terms of performance of the players in all the five motor ability tests used in pre-training condition. Thus the performance of the sample before and after training conditions was taken to assess the motor fitness. The data of both pre and post training conditions were analyzed statistically. It was concluded that there is a significant difference between sportsmen and non sportsmen in their motor ability tests of speed, endurance, agility and strength and also significant influence of training on the motor ability test of flexibility of the players.

Introduction
Sport is one of the most enduring of all human activities. Virtually from the beginning of any written human records, in civilizations across the world, accounts of sports and sport-related activities are found. For less than the last century sport has been studied scientifically, and sport psychology is an important part of that scientific study. It is an international field, holding the promise of becoming important and only to the understanding of competitive athletic abilities, but to areas of behavior that relate to many domains of human health and activity. Notwithstanding its benefits to the individual and the society at large, competitive sport is a war of nerves as well a war on nerves. Since the revival of the Olympic Games in 1896, sports and games have increasingly become a war like phenomenal requiring years and years of specialized training and practice with scientific and technological inputs. The rise of professionalism in sport and the human craze and quest for "winning" have transformed highly enjoyable sport into a complex behavioral conundrum. The athletes and coaches have to prepare themselves to face the extraordinary emotional and psychological situations to reach new horizons in performance. In sport, competition has gained ascendance over all its other worthily objectives-fitness, health, intellection, socialization, ethics and morality. Consequently, it has trigged off intense research in various aspects of human behavior and brought into existence sport bio-sciences such as exercise physiology, sport psychology, sport bio-mechanics, sport medicine etc with the sole objective of boosting human performance and making and breaking records. The entire perspective of sports as a joyful social activity has changed for the worse with far reaching behavioral consequences. Motor education and sport make an art-science combine dealing with movement motion, activity, play, recreation and the like. In essence, they are activity based endeavors, in function, they are enhancers of health and fitness, in objective they are developmental to the core, in nature, they are joyful, recreating and relaxing, and in purpose, they are and ought to be out and educational.

Objectives of the study To identify the effect of anthropometric and motor abilities among Sportsmen and Non-sportsmen of Gulbarga University, Gulbarga.

Hypothesis of the study
There is significant difference between the anthropometric and motor abilities among Sportsmen and Non-sportsmen of Gulbarga University Gulbarga.

Sample of the study
The sample consists of 80 students UCPE B.P.Ed College sportsmen Gulbarga and Non-sportsmen, selected sample's motor fitness was measured in five motor ability tests—speed, endurance, flexibility, agility and strength and anthropometric training Further, the sample was given training for four weeks continuously during evening hours. After the training, motor fitness was again measured in terms of performance of the players in all the five motor ability tests used in pre-training condition. Thus the performance of the sample before and after training conditions was taken to assess the motor fitness. The data of both pre and post training conditions were analyzed statistically

Tools of the study:

1. Personal data schedule was used to collect the information related to personal and socio-demographic status of the subject.
2. The following Motor ability tests have been used in the study.

1. Motor Ability Tests (AAHPER)

Sl. No.	Motor Ability	Test	Unit of Measure UCPE B.P.ED students
1.	Speed	50 yard dash	Time
2.	Endurance	12 min. Run & Walk	Distance
3.	Flexibility	Sit & Reach test	Inches
4.	Agility	Shuttle run 10x4 yards	Time
5.	Strength	Pull Ups	Score

The procedure and scoring of selected motor ability tests is done as per the norms given in the manual of tests and scales.

Statistical Analysis: To meet the objective of the study and to verify the formulated hypotheses the data were statistically analyzed. The't' test was calculated and data were organized.

Table-1
Means SD and t-values of Motor fitness tests of sportsmen and non sportsmen in their pre- training

Groups	Speed	Endurance	Flexibility	Agility	Strength
sportsmen					
M	**10.12**	**428.5**	**2.11**	**13.02**	**17.28**
SD	**1.43**	**162.9**	**1.04**	**1.29**	**2.68**
Non sportsmen					
M	**9.50**	**312.8**	**2.14**	**12.41**	**15.60**
SD	**1.57**	**164.6**	**1.69**	**1.69**	**2.18**
t-values	**2.95***	**4.98****	**0.15**	**2.90****	**4.94****

****Significant at 0.01 level**

Table-1 reveals the mean scores of both sportsmen and non sportsmen in all the five motor ability tests pre training was given. It can be seen that in endurance the sportsmen and in agility test non-sportsmen have significantly higher means than the sportsmen. The t-values on both the two tests are significant which reveal the significant differences between the two categories. Thus sportsmen have outscored non sportsmen in majority of the motor ability tests in before training sessions.

Graph 1

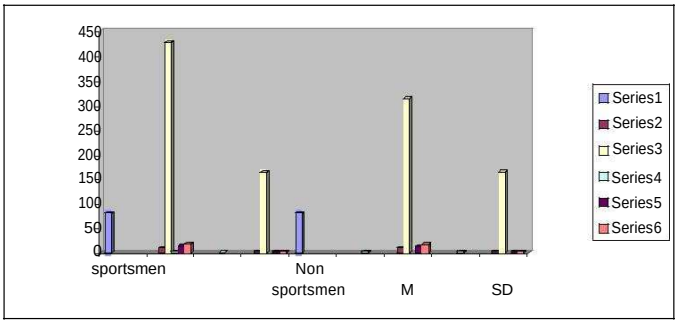


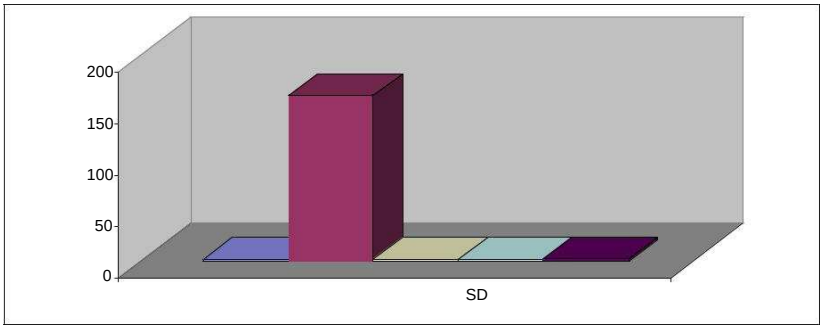
Table-2: Mean, SD and t-values of Motor fitness tests of sportsmen and non sportsmen in their post training

Groups	Speed	Endurance	Flexibility	Agility	Strength
Sportsmen					
M	**12.51**	**224.2**	**3.42**	**16.45**	**12.71**
SD	**1.21**	**174.3**	**1.22**	**2.21**	**2.49**
Non-Sportsmen					
M	**11.42**	**202.9**	**3.52**	**15.32**	**11.47**
SD	**1.77**	**161.9**	**1.76**	**1.82**	**2.78**
t-values	**5.19****	**8.30****	**0.476**	**4.03****	**3.35****

****Significant at 0.01 level**

An attempt is made to explore the differences in the motor ability tests in after training. The result given in Table-2 clearly reveals that there were significant differences in the motor test like speed endurance, agility and strength after training. The t-values on these tests are significant to suggest the significant differences in the ability.

Graph 2



FINDINGS

1. There is a significant difference in motor test of speed between before and after training: trained sample both sportsmen and non sportsmen has significantly higher performance in speed test than the trained.
2. There is a significant effect of training on the motor test of endurance of players of both the categories.
3. There is a significant difference in motor test of agility between pre and post training: Trained sportsmen have significantly higher performance in agility than the non sportsmen.
4. There is a significant influence of training on the motor ability test of flexibility of the players.
5. There is a significant difference in motor ability test of strength between trained and untrained players.
6. There is a significant difference between sportsmen and non sportsmen in their motor ability tests of speed, endurance, agility and strength.

CONCLUSION

The quest of understanding the human behavior is as old as human civilization. Because since ancient, medieval and modern period lot scholars have tried to understand the basics of human behavior and laid their theories on the basis of their findings. But all the findings and theories of all these researchers signify the single fact that human behavior is always goal directed, motivated and integrated. And the certain internal or external factors in the individual would drive him into particular behavior or action. And the individual exposed to the different environment atmosphere and socio-cultural conditions would tend to develop different types of personality traits and motivation is one important factor, which would help him to excel in his sport performance.The participation in sports rather influence all aspects of athlete's personality and help in gaining poise, and balance, refreshing the spirits, renewing the inner springs of faith and courage, mastering the skills and meeting the strains of modern life with ease and calmness. At the same time the participation in modern sports is influenced by various motor, physiological, sociological, and psychological factors. Until recently, the coaches have been paying inadequate attention to the psychological factors which although have been proved to contribute to performance in events in the higher competitive sports. So now the sports trainers and coaches have started giving more importance to the impact of training of the players and its resultant influences on their performance in the national and international competitions.

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An Assessment On The Sports Achievement Motivationand Anxiety Level Of Male Football And Cricket Players

DR. SUSANTA JANA
A.T., Bathanberia Srinibash Vidyamandir (H.S.), Purba Medinipur, W.B.
MR. KALIDAS KARAK
Department of Physical EducationSBSS Mahavidyalaya, Goaltore, Paschim Medinipur, W.B. E-mail ID :- karak.kalidas03@yahoo.com

ABSTRACT
The purpose of the study was to compare the Sports achievement Motivation and anxiety level between Male Football and Cricket players who used to take part in inter college matches and tournaments. Fifty (50) Football and Fifty (50) Cricket players (male age,18-25yrs) were randomly selected for the study. To measure Sports achievement Motivation between Football and Cricket players, a questionnaire developed by Kamlesh (1990) was employed. Spielberger's Anxiety Inventory questionnaire was employed for measuring level of Anxiety.For statistical analysis and Interpretation of data't' test was conducted. It was observed that there was no significant difference in Sports achievement Motivation and Anxiety level among Male Football and Cricket players.
Key Words : Motivation , Anxiety, Football, Cricket.

INTRODUCTION:
Football and Cricket are the two lungs of the Indian people. Football in India is believed to have started in the early 1800s. However, the tradition dates back to the 1880 in West Bengal, when the British Army Introduced organized soccer. The game became popular first in Bengal, before it spread to the other parts of the country. Cricket has been playing since 1844. Although, the International test cricket began in 1877. During this time the game developed from its origin in England into a game which is now played professionally in most of the Commonwealth countries. Sports Achievement Motivation has been discovered as a strong psychological factor in the display f behavior of a person. Achievement Motivation of an individual has been found to be rewarding in competitive sports. It is a force that engages a sports person in task which are challenging and hard to attain. The nature of sports and physical activities are generally achievement oriented. Personal success in team and individual events can be evaluated against standards. One of the reasons of variability in behavior of an individual is sports achievement situation is that sports person perceive situation in different ways, because they have different needs for sports excellence. Anxiety is one of the important psychological factors for determining athlete's performance. Performance is a by product of biological, psychological, sociological and physical makeup of an individual. In games and sports not only physiological factors but also psychological factors play an important role in determining the performance level of an individual. However, great important is assigned to psychological parameters in competitive sports (Schilling & Hayashi, 2001). Many experts advocated that individuals are affected not merely by their physical and techno-tactical ability but also by their psychological makeup.

METHODOLOGY:
Fifty (50) Football and Fifty (50) Cricket players (Male-age18-25years) were randomly selected from Vidyasagar University, Purba Medinipur. Football and Cricket players were those students who used to take part in inter college matches and tournaments. To measure Sports achievement Motivation between Football and Cricket players, a questionnaire (SAMT) developed by Kamlesh (1990) was employed. The data were collected from the various college players who used to take part in inter college matches and tournaments. The Questionnaire consists of twenty incomplete statements which can be computed by choosing either of two proposed parts against each statement was used. Spielberger's Anxiety Inventory questionnaire was employed for measuring level of Anxiety .The Bengali version of (Anxiety Inventory) was prepared by Spielberger himself in1986.The score range from 20 to 80. The higher the score, the greater is the level of Anxiety. For statistical analysis and Interpretation of data't' test was conducted.

RESULTS AND DISCUSSION:
The results are presented in tabular form as given here under.

Table – 1: Mean SD of Achievement Motivation and Comparison of t-test Between Means of Football and Cricket players.

Group	Mean	SD	MD	t-value
Football Players	24.35	4.51	01.55	0.64NS
Cricket Players	25.90	4.66		

NS is Not Significant.

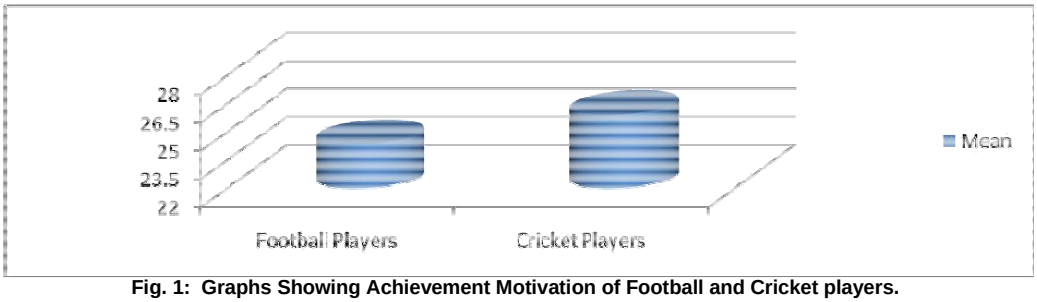

Fig. 1: Graphs Showing Achievement Motivation of Football and Cricket players.

Table-1 gives information regarding Achievement Motivation of Football and Cricket players. Table shows that there were no significant differences in Achievement Motivation of Football and Cricket players. The Mean of Achievement Motivation of Football and Cricket players were 24.35 and 25.90 respectively. 't' test was applied and t-value (0.64) appeared not significant. Graphical representation (Fig. 1) also indicates similar trend of this study.

Table – 2: Mean SD of Anxiety and Comparison of t-test Between Means of Football and Cricket players.

Group	Mean	SD	MD	t-value
Football Players	35.36	15.71	1.48	0.45NS
Cricket Players	36.84	16.63		

NS is Not Significant

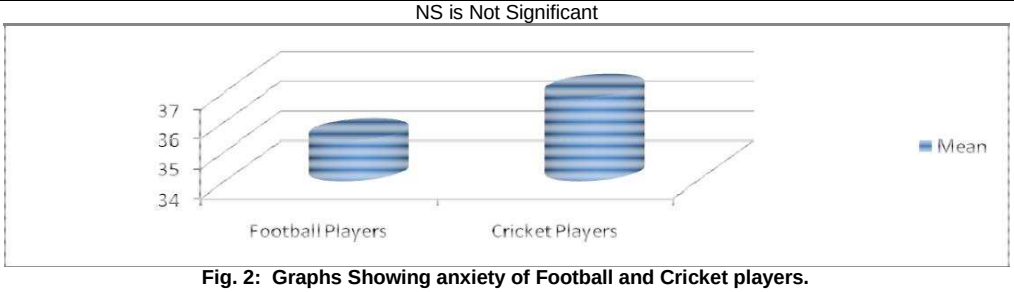

Fig. 2: Graphs Showing anxiety of Football and Cricket players.

Table-2 gives information regarding anxiety of Football and Cricket players. Table shows that there were no significant differences in anxiety of Football and Cricket players. The Mean of anxiety of Football and Cricket players were 35.36 and36.84 respectively. 't' test was applied and t-value (0.45) appeared not significant. Graphical representation (Fig. 2) also indicates similar trend of this study.

Discussion:

It is documented from the table that calculated 't'(0.64) was lesser than tabulated 't' (1.66) which indicated that insignificant difference between Football and Cricket players at 0.05 level of significance with 98 degree of freedom. The result may be corroborated with the findings Singh, Ahmad abd Hussain (2010), Sayed Tariq Murtaza, Mohd Imran and Arshi Saleem (2013).They found the similar result among male and female players.

Conclusion:

Based on the result of the present study and within the limitation, the following conclusions may be drawn.

There was no significant difference in Achievement Motivation of Football and Cricket players. There was no significant difference in Anxiety level of Football and Cricket players.

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Infuence Of Socio-Economics Factors On Aggressive Behaviour Of Sportsmen Status

Shri.Vishwanath Nadakatti Research Scholar, Dept Of Physical Education , Singahania University, Pacheribari, Jhunjhunu , Rajasthan.
Shri. Rajashekhar .D.Benakanahalli, Research Scholar, Govt.,First Grade Collage,Basavan Bagewadi District:Bijapur.

ABSTRACT

The paper is an empirical attempt to explore the influence of socio-economic status on the aggressive behavior of the sportsperson. A sample of 400 sportsperson in the age group of 19 to 25 years studied by using semi-structured interview schedule. It is explored that the socio-economic status of the sports person has something to do with the aggressive behavior of sportsperson.

Introduction:

There has always been interest in aggressive behavior and competitive sport. Several writers have mentioned that sport provides a necessary “safety value” or cathartic release for the aggressive drives of the human (Scott, 1970; Lorenz, 1966). Opponents of this position have posited that successful aggressive behavior facilities further aggressive behavior. Controlled research findings support this view and many writers have stated that sport should not be compromised as an excuse for punitive and criminal – like behavior (Mc Murty, 1974; Underwood, 1978; Vaz, 1976).

The arguments for and against aggression and violence in sport are often emotional debates. A major obstacle encountered in this discussion is that the discussants are frequently not talking about the same concept even though they are using the same term! When one begins to examine the various writings on aggressive behavior, it is clear that the term aggression has the misfortune of being defined in a multitude of ways. The use and misuse of the term is often confusing to players,coaches and researchers.

What does one mean by aggression or aggressiveness? Since these terms have taken popular connotations, they are often used to describe different classes of behavior rather than a unitary concept.

Unfortunately, research on aggressive behavior in sport has also been plagued by inconsistencies and vague definitions of “aggression” both as an independent and dependent variable. It appears that a clarification of the term aggression will benefit all who are interested in furthering the understanding of aggression and athletic performance.

Sherif and Sherif (1969) concluded that aggression is not an invariable response to frustration, for in both animal and human studies have produced highly different responses. Bateson’s study (1941) of the Balinese people indicated that both children and adults of this culture are willing to suffer frustration infinitely without becoming aggressive. Following his investigation of the Semai of Malaya, Alland (1972) concluded that aggression is not instinctive. The aggressive tendencies must be cultivated, for these exists no one instinct of aggression in humans or animals.

Methodology:

In view of above, the paper makes an empirical attempt to understand the socio-psychological correlates with the aggressive behavior of the sportsmen. A sample of 200 sports in the range of 19 to 25 years having equal representation of High SES (100) and Low SES (100) and also sports men from high socio-economic background and low socio economic background are studied. A semi-structured interview schedule is being administered to attain objectives of the study.

Results and discussion:

Mean, SD and ‘t’ values of Aggressive Behavior of High and Low SES Sportsmen

Variables	High SES	Low SES
Mean	9.83	12.83
SD	3.97	2.90
t-value	6.13**	

**** Significant at 0.01. Level**

It reveals the mean, SD and‘t’ values of aggressive behavior of sportsmen belonging to high and low SES. The mean score of high and low SES sportsmen on aggressive behavior is 9.83 and 12.83 respectively. This difference in their mean score suggests that the sportsmen belonging to high SES are moderate in their aggressive behavior when compared to the sportsmen of low SES, who are more aggressive.

The obtained 't' value 6.13 which is highly significant at 0.01 level suggest the fact that, there is a significant difference between the sportsmen of low and high SES sportsman in aggressive behavior. Therefore, the hypothesis that there is a significant difference in the aggressive behavior of sportsmen belonging to high and low SES is confirmed.

The sportsmen of high SES are more successful in keeping their aggression at moderate level than the low SES sportsmen. It is due to their quality education, exposure to the different sport competitions, proper training and ideal mental makeup. This is not so, in case of sportsmen of low SES, who are high aggressive in their behavior as they are deprived of quality education, proper training and exposure to the different sport competitions.

It is hypothesized that there is a significant difference in aggressive behavior between male and female sportsmen is postulated on the rationale that the women were having weak genetically make up, and are having lack of social support, socio-cultural obstacles, orthodox perception and negative attitude towards females, male dominated society and created culture might put her into the secondary and subsidiary role. Under these deprived conditions, she does not show aggression in sport competitions and in her performance.

Conclusions:

Sports have been on the world map from time immemorial. The importance and recognition, which sports have received from government, press and public indicates that sports are no more taken up for mere recreation or prestige purpose but also for mental and physical health of an individual. The participation in sports rather influence all aspects of athlete's personality and help in gaining poise, and balance, refreshing the spirits, renewing the inner springs of faith and courage, mastering the skills and meeting the strains of modern life with ease and calmness. At the same time the participation in modern sports is influenced by various physical, physiological, sociological, and psychological factors. Until recently, the coaches have been paying inadequate attention to the social and psychological factors which although have been proved to contribute to performance in events in the higher competitive sports. So now the sports trainers and coaches have started giving more importance to the impact of sociological factors on the psychological conditioning or building the mental makeup of the players and its resultant influences on their performance in the national and international competitions.

Aggressive behavior of the sportsmen is very important factor that is related to varieties of social, economic and psychological background of them. If they have good social and economic status and provided healthy psychological environment in the family as well as in society, they are likely to grow emotionally intelligent individuals. Aggression within the limit of emotional intelligence can yield better results. If it cross the limits it can results a lot of destruction. This has a bearing on better performance. Hence, government and responsible authorities should think positively to influence their socio-psychological background in order to have positive aggressive behavior in sport.

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Creativity & General intelligence of problem solving in pu level students

RAJESHEKHARA Research Scholar
Dr. BABANNA.H, Associate Professor
Deparment Of Education,Gulbarga University Gulbarga

Introducation:

Sternberg has proposed a triarchic theory of intelligence and a triangular theory of love. He is the creator (with Todd Lubart) of the investment theory of creativity, which states that creative people buy low and sell high in the world of ideas, and a propulsion theory of creative contributions, which states that creativity is a form of leadership.He is spearheading an experimental admissions process at Tufts to quantifiably test the creativity of an applicant.Sternberg has criticized IQ tests, saying they are "convenient partial operationalizations of the construct of intelligence, and nothing more. They do not provide the kind of measurement of intelligence that tape measures provide of height."In 1995, he was on an American Psychological Association task force writing a consensus statement on the state of intelligence research in response to the claims being advanced amid the *Bell Curve* controversy, titled "Intelligence: Knowns and Unknowns."

Triarchic Theory of Intelligence

Many descriptions of intelligence focus on mental abilities such as vocabulary, comprehension, memory and problem-solving that can be measured through intelligence tests. This reflects the tendency of psychologists to develop their understanding of intelligence by observing behaviour believed to be associated with intelligence.

Sternberg believes that this focus on specific types of measurable mental abilities is too narrow. He believes that studying intelligence in this way leads to an understanding of only one part of intelligence and that this part is only seen in people who are "school smart" or "book smart".

There are, for example, many individuals who score poorly on intelligence tests, but are creative or are "street smart" and therefore have a very good ability to adapt and shape their environment. According to Sternberg (2003), giftedness should be examined in a broader way incorporating other parts of intelligence.

The Triarchic Model

Sternberg (2003) categorizes intelligence into three parts, which are central in his theory, the triarchic theory of intelligence:

> Analytical intelligence, the ability to complete academic, problem-solving tasks, such as those used in traditional intelligence tests. These types of tasks usually present well-defined problems that have only a single correct answer.
>
> Creative or synthetic intelligence, the ability to successfully deal with new and unusual situations by drawing on existing knowledge and skills. Individuals high in creative intelligence may give 'wrong' answers because they see things from a different perspective.
>
> Practical intelligence, the ability to adapt to everyday life by drawing on existing knowledge and skills. Practical intelligence enables an individual to understand what needs to be done in a specific setting and then do it.

Sternberg (2003) discusses experience and its role in intelligence. Creative or synthetic intelligence helps individuals to transfer information from one problem to another. Sternberg calls the application of ideas from one problem to a new type of problem *relative novelty*. In contrast to the skills of relative novelty there is *relative familiarity* which enables an individual to become so familiar with a process that it becomes automatized. This can free up brain resources for coping with new ideas.Context, or how one adapts, selects and shapes their environment is another area that is not represented by traditional measures of giftedness. Practically intelligent people are good at picking up tacit information and utilizing that information. They tend to shape their environment around them. (Sternberg, 2003)Sternberg (2003) developed a testing instrument to identify people who are gifted in ways that other tests don't identify. The Sternberg Triarchic Abilities Test measures not only traditional intelligence abilities but analytic, synthetic, automatization and practical abilities as well. There are four ways in which this test is different from conventional intelligence tests.

This test is broader, measuring synthetic and practical skills in addition to analytic skills. The test provides scores on analytic, synthetic, automatization, and practical abilities, as well as verbal, quantitative, and figural processing abilities.

The test measures the ability to understand unknown words in context rather than vocabulary skills which are dependent on an individual's background.

The automatization subtest is the only part of the test that measures mental speed.

The test is based on a theory of intelligence.

Practical application

Sternberg added experimental criteria to the application process for undergraduates to Tufts University, where he was Dean of Arts and Sciences, to test "creativity and other non-academic factors." Calling it the "first major university to try such a departure from the norm," *Inside Higher Ed* noted that Tufts continues to consider the SAT and other traditional criteria.

Theory in cognitive styles

Sternberg proposed a theory of cognitive styles in 1997.

Sternberg's basic idea is that the forms of government we have in the world are external reflections of the way different people view and act in the world, that is, different ways of organizing and thinking. Cognitive styles should not be confused with abilities, they are the way we prefer to use these abilities. Indeed a good fit between a person's preferred cognitive profile and his abilities can create a powerful synergy that outweighs the sum of its parts.

The main three branches of government are the executive branch, legislative branch and judicial branch. People also need to perform these functions in their own thinking and working. Legislative people like to build new structures, creating their own rules along the way. Executive people are rule followers, they like to be given a predetermined structure in which to work in. Judicial people like to evaluate rules and procedures, to analyze a given structure.

The four forms of mental self-government are hierarchical, monarchic, oligarchic, and anarchic. The hierarchic style holds multiple goals simultaneously and prioritizes them. The oligarchic style is similar but differs in involving difficulty prioritizing. The monarchic style, in comparison, focuses on a single activity until completion. The anarchic style resists conformity to "systems, rules, or particular approaches to problems."

The two levels of mental self-government are local and global. The local style focuses on more specific and concrete problems, in extreme case they "can't see the forest for the trees". The global style, in comparison, focuses on more abstract and global problems, in extreme cases they "can't see the trees for the forest".

The two scopes of mental self-government are internal and external. The internal style focuses inwards and prefers to work independently. The external style focuses outwards and prefers to work in collaboration.

The two leanings of mental self-government are the liberal and conservative. These styles have nothing to do with politics. The liberal individual likes change, to go beyond exciting rules and procedures. The conservative individual dislikes change and ambiguity, he will be happiest in a familiar and predictable environment.

We all have different profiles of thinking styles which can change over situations and time of life. Moreover a person can, and often does, have a secondary preferred thinking style.

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A Study Of Teaching Apititude In Retation To Teaching –Compitance Acadamic Achivement And Intrest Of Secndary School Social Science Teacher.

Smt GEETA.H.INGINSHETTY.Research scholar
Dr. BABANNA.H Associate professor
Deparment of Education,Gulbarga university Gulbarga

Introduction

Job performance is a commonly used, yet poorly defined concept in industrial and organizational psychology, the branch of psychology that deals with the workplace. It's also part of Human Resources Management. It most commonly refers to whether a person performs their job well. Despite the confusion over how it should be exactly defined, performance is an extremely important criterion that relates to organizational outcomes and success. Among the most commonly accepted theories of job performance comes from the work of John P. Campbell and colleagues. Coming from a psychological perspective, Campbell describes job performance as an individual level variable. That is, performance is something a single person does. This differentiates it from more encompassing constructs such as organizational performance or national performance which are higher level variables.

Features of job performance

There are several key features to Campbell's conceptualization of job performance which help clarify what job performance means.

Performance versus outcomes

First, Campbell defines performance as behavior. It is something done by the employee. This concept differentiates performance from outcomes. Outcomes are the result of an individual's performance, but they are also the result of other influences. In other words, there are more factors that determine outcomes than just an employee's behaviors and actions.

Campbell allows for exceptions when defining performance as behavior. For instance, he clarifies that performance does not have to be directly observable actions of an individual. It can consist of mental productions such as answers or decisions. However, performance needs to be under the individual's control, regardless of whether the performance of interest is mental or behavioral.

The difference between individual controlled action and outcomes is best conveyed through an example. On a sales job, a favorable outcome is a certain level of revenue generated through the sale of something (merchandise, some service, insurance). Revenue can be generated or not, depending on the behavior of employees. When the employee performs this sales job well, he is able to move more merchandise. However, certain factors other than employees' behavior influence revenue generated. For example, sales might slump due to economic conditions, changes in customer preferences, production bottlenecks, etc. In these conditions, employee performance can be adequate, yet sales can still be low. The first is performance and the second is the effectiveness of that performance. These two can be decoupled because performance is not the same as effectiveness.

Another closely related construct is productivity. This can be thought of as a comparison of the amount of effectiveness that results from a certain level of cost associated with that effectiveness. In other words, effectiveness is the ratio of outputs to inputs—those inputs being effort, monetary costs, resources, etc.

Utility is another related construct which is defined as the value of a particular level of performance, effectiveness, or productivity. Utilities of performance, effectiveness, and productivity are value judgments.

Organizational goal relevance

Another key feature of job performance is that it has to be goal relevant. Performance must be directed toward organizational goals that are relevant to the job or role. Therefore, performance does not include activities where effort is expended toward achieving peripheral goals. For example, the effort put toward the goal of getting to work in the shortest amount of time is not performance (except where it is concerned with avoiding lateness).

Multidimensionality

Despite the emphasis on defining and predicting job performance, it is not a single unified construct. There are vastly many jobs each with different performance standards. Therefore, job performance is conceptualized as a multidimensional construct consisting of more than one kind of behavior. Campbell (1990) proposed an eight factor model of performance based on factor analytic research that attempts to capture dimensions of job performance existent (to a greater or lesser extent) across all jobs.

1. The first factor is **task specific behaviors** which include those behaviors that an individual undertakes as part of a job. They are the core substantive tasks that delineate one job from another.
2. On the other hand, **non-task specific behaviors**, the second factor, are those behaviors which an individual is required to undertake which do not pertain only to a particular job. Returning to the sales person, an example of a task specific behavior would be showing a product to a potential customer. A non-task specific behavior of a sales person might be training new staff members.
3. Written and oral **communication** tasks refer to activities where the incumbent is evaluated, not on the content of a message necessarily, but on the adeptness with which they deliver the communication. Employees need to make formal and informal oral and written presentations to various audiences in many different jobs in the work force.
4. An individual's performance can also be assessed in terms of **effort**, either day to day, or when there are extraordinary circumstances. This factor reflects the degree to which people commit themselves to job tasks.
5. The performance domain might also include an aspect of **personal discipline**. Individuals would be expected to be in good standing with the law, not abuse alcohol, etc.
6. In jobs where people work closely or are highly interdependent, performance may include the degree to which a person **helps out the groups and his or her colleagues**. This might include acting as a good role model, coaching, giving advice or helping maintain group goals.
7. Many jobs also have a **supervisory or leadership component**. The individual will be relied upon to undertake many of the things delineated under the previous factor and in addition will be responsible for meting out rewards and punishments. These aspects of performance happen in a face to face manner.
8. Managerial and administrative performance entails those aspects of a job which serve the group or organization but do not involve direct supervision. A **managerial task** would be setting an organizational goal or responding to external stimuli to assist a group in achieving its goals. In addition a manager might be responsible for monitoring group and individual progress towards goals and monitoring organizational resources.

Another taxonomy of job performance was proposed and developed for the US Navy by Murphy (1994). This model is significantly broader and breaks performance into only four dimensions.

1. Task-oriented behaviors are similar to task-specific behaviors in Campbell's model. This dimension includes any major tasks relevant to someone's job.
2. Interpersonally oriented behaviors are represented by any interaction the focal employee has with other employees. These can be task related or non-task related. This dimension diverges from Campbell's taxonomy because it included behaviors (small talk, socializing, etc.) that are not targeting an organization's goal.
3. Down-time behaviors are behaviors that employees engage in during their free time either at work or off-site. Down-time behaviors that occur off-site are only considered job performance when they subsequently affect job performance (for example, outside behaviors that cause absenteeism).
4. Destructive/hazardous behaviors

In addition to these models dividing performance into dimensions, others have identified different types of behaviors making up performance.

Different types of performance

Another way to divide up performance is in terms of task and contextual (citizenship and counterproductive) behaviors. Whereas task performance describes obligatory behaviors, contextual behaviors are behaviors that do not fulfill specific aspects of the job's required role. Citizenship behaviors are defined as behaviors which contribute to the goals of the organization through their effect on the social and psychological conditions. Counterproductive behaviors, on the other hand, are intentional actions by employees which circumvent the aims of the organization.

Determinants of performance

A meta-analysis of selection methods in personnel psychology found that general mental ability was the best overall predictor of job performance and training performance.

Campbell (1990) also suggested determinants of performance components. Individual differences on performance are a function of three main determinants: declarative knowledge, procedural knowledge and skill, and motivation.

Declarative knowledge refers to knowledge about facts, principles, objects, etc. It represents the knowledge of a given task's requirements. For instance, declarative knowledge includes knowledge of principles, facts, ideas, etc.

If declarative knowledge is knowing what to do, procedural knowledge and skill is knowing how to do it. For example, procedural knowledge and skill includes cognitive skill, perceptual skill, interpersonal skill, etc.

The third predictor of performance is motivation, which refers to "a combined effect from three choice behaviors—choice to expend effort, choice of level of effort to expend, and choice to persist in the expenditure of that level of effort" (Campbell, 1990). It reflects the direction, intensity, and persistence of volitional behaviors. Campbell (1990) emphasized that the only way to discuss motivation as a direct determinant of behavior is as one or more of these choices.

Campbell (1990) also mentioned several performance parameters that may have important implications for the job performance setting and should be investigated by industrial and organizational psychologists.

The first one is the distinction between speed and accuracy. This distinction is similar to the one between quantity and quality. Important questions that should be considered include: which is most valued by the organization, maximized speed, maximized accuracy, or some balance between the two? What kind of trade offs should an employee makes? The latter question is important because speed and accuracy for the same task may be independent of one another.

The second distinction is between typical and maximum performance. Sackett, Zedeck, and Fogli did a study on supermarket cashiers and found that there was a substantial difference between scores reflecting their typical performance and scores reflecting their maximum performance. This study suggested the distinction between typical and maximum performance. Regular work situations reflect varying levels of motivation which result in typical performance. Special circumstances generate maximum employee motivation which results in maximum performance.

Additionally,the impact of organizational justice perceptions on performance is believed to stem from Equity Theory. This would suggest that when people perceive injustice they seek to restore justice. One way that employees restore justice is by altering their level of performance. Procedural justice affects performance as a result of its impact on employee attitudes. Distributive justice affects performance when efficiency and productivity are involved. Improving justice perceptions improves productivity and performance.

Core self-evaluations

Job performance is a consistent and important outcome of core self-evaluations (CSE). The concept of core self-evaluations was first examined by Judge, Locke, and Durham (1997) as a dispositional predictor of job satisfaction, and involves four personality dimensions; locus of control, neuroticism, self-efficacy, and self-esteem. The way in which people appraise themselves using core self-evaluations has the ability to predict positive work outcomes, specifically, job satisfaction and job performance. The most popular theory relating the CSE trait to job performance argues that people with high CSE will be more motivated to perform well because they are confident they have the ability to do so. Motivation is generally the most accepted mediator of the core self-evaluations and job performance relationship. These relationships have inspired increasing amounts of research on core self-evaluations and suggest valuable implications about the importance this trait may have for organizations.

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Effect of Short-term Plyometric Training on Strength Performance of the Athletes

Dr. Subhabrata Kar,
Assistant Professor, Department of Physical Education,
Union Christian Training College, Berhampore, Murshidabadm, W.B.

Abstract:
The golden rule of any conditioning program is specificity. This means that the movement you perform in training should match, as closely as possible, the movements encountered during competition. Plyometric exercises combine speed movements with strength exercises to increase power. One can frame plyometric exercises for improvement of power of shoulder, chest and arm muscles and at the same time to improve the speed of the movement. The example of a reduced intensity plyometric exercises are medicine ball chest throw and clap push ups. In the present study two types of exercise treatment, such as Medicine ball chest throw and Clap push ups was introduced to male college students (22-25 yrs. Age gr.) for 4 weeks with their usual physical activities of Bachelor of Physical Education Course (B.P.Ed.). The treatment was given for 4 days per week and 30 min. per day. Before treatment Pre test for arm and shoulder explosive strength was measures for all subjects.According to post test data, the control group showed no improvement in explosive strength performance, extremely significant improvement was shown by Experiment Gr. No.-1 or EG1 (Treated with Medicine ball chest throw) and also significant improvement was found for EG2 (Treated with Clap push ups).

Introduction:
Speed and strength are integral components of fitness found in varying degrees in virtually all athletic movements. The combination of speed and strength is called power. For many years, coaches and athletes have sought to improve power in order to enhance performance. Throughout this century and no doubt long before, jumping, bounding and hopping exercises have been used in various ways to enhance athletic performance. In recent years, this distinct method of training for power or explosiveness has been termed plyometrics. Whatever the origins of the word the term is used to describe the method of training that seeks to enhance the explosive reaction of the individual through powerful muscular contractions because of rapid eccentric contractions. The golden rule of any conditioning program is specificity. This means that the movement you perform in training should match, as closely as possible, the movements encountered during competition. If you are rugby player, practicing for the line out or a volleyball player interested in increasing vertical jump height, then drop jumping or box jumping may be the right exercise. However if you are a javelin thrower aiming for a more explosive launch, then upper body plyometrics is far more appropriate. In order for plyometric training to be at its most effective it should follow a phase of maximal strength training. The purpose of plyometrics is to improve the athlete's capacity to apply more force more rapidly. Logically then, the greater the athletes ability to generate maximal force or strength to begin with, the more of it can be converted into sport-specific power. **Chelly et al.(2001)** suggested that the power that an individual can develop depends on both force and velocity, as determined by friction-loaded ergometers. How do plyometrics work? Think of muscles as springs. Every time you punch or kick, muscles coil and then spring back to their normal length. One reason they spring back is because they contract volitionally. Part of force generated, however comes from what scientists call the stretch reflex. Further force is supplied from natural elasticity of muscle and connective tissues. The stretch reflex and elastic components of force are not volitional, that is, they occur involuntarily. Though plyometric training, these involuntary sources of force can generate even greater volitional strength and speed. **De Villarreal et al (2008)** noted significant decreases in 20-m sprint time and jump height (CMJ and drop jump) if a 7-week plyometric training program was followed by 7 weeks of detraining. Plyometric exercises combine speed movements with strength exercises to increase power. Most of the exercises involve jumping movements, so use caution if you have any knee or ankle injuries. One can frame plyometric exercises for improvement of power of shoulder, chest and arm muscles and at the same time to improve the speed of the movement. The example of a reduced intensity plyometric exercises are medicine ball chest throw and clap push ups.

Methods:

Subjects: 45 male Bachelor of Physical Education students from Union Christian Training College, Berhampore, Murshidabad, W.B., India of age group 22-25 years were selected for the study. All 45 subjects were randomly divided into three groups and each group was consisted with 15 human subjects. Among three groups, one was Control group (CG) and other two groups were Experimental groups, such as EG1 and EG2. **Group Design:** All three groups were first of all tested for arm and shoulder explosive strength by putting the shot (16pounds). Here standing put was allowed. After that EG1 was treated with 4 weeks of Medicine ball (4kg) chest throw exercise (MBCT) and EG2 was treated with 4 weeks of Clap Push ups exercise (CPU). Both exercises were performed for 4 weeks, 4 days per week and 30 min. per day with other usual physical activities. Before exercise 15 minutes of warm up was mandatory for the subjects. It is to mention that all the groups were continuing their usual physical activity classes in treatment days. After 4 weeks of treatment all 45 subjects were tested for arm and shoulder explosive strength by putting the shot.

Statistical design: For analysis of pre-test and post test data of three groups paired sample t-test was conducted to compare between two separate means.

Treatment Procedure:

Medicine ball Chest Throw (MBCT): The exercise was done by following method:

The subject had to stand facing partner throwing distance apart with one foot forward. The first person held the medicine ball with both hands against chest. Partner had arms in front ready to receive ball. The first person threw medicine ball to partner's chest by forcefully extending both arms forward. Partner caught the ball in front of chest with both hands, recoils ball toward chest, and immediately throws ball back to first person in same manner. The first person caught the ball and repeats volley. They continued to throw ball back and forth. The whole exercise was done with optimum number (minimum of 20 Nos.) of repetitions by each subject. Between two sets of exercise proper interval time was allowed. Usually, 1 min. exercise repetition was followed by 1 min. of rest interval.

Clap Push-ups (CPU): The exercise was done by following method:The subject had to lie on floor face down and positioned hands on floor. With toes on floor they had to push body up with arms extended and body straight. Then they had to lower body to floor and immediately pushed body up as fast as possible. As the hands leave ground rapidly the subject had to clap hands together and to place back to original position, catching body before it fell. That process was repeated for 1 min. The subject had to keep hips and waist straight. After 1 min. of repetition, 2 min. of rest interval was allowed between two sets of repetitions.

Results & Analysis: The paired samples statistics for three groups such as, CG, EG1 and EG2 are presented in Table No.1. Pre and post test means of three groups are also presented in Fig. No.-1. Table N0.-2 shows the paired samples‘t’ test for control group, and Table No.3 & 4 show the same test result for EG1 and EG2 respectively. Fig. No.-2, 3 and 4 show the pre and post test performance of three groups.

Table No.- Paired Samples Statistics of three groups

		Mean	N	S.D.	SEM
CG	Pre	7.9007	15	1.0288	0.2656
	Post	7.8867	15	1.0327	0.2667
EG1	Pre	7.6280	15	1.2242	0.3161
	Post	7.7053	15	1.2267	0.3167
EG2	Pre	7.8207	15	0.9297	0.2401
	Post	8.0273	15	0.9650	0.2492

Fig No.-1 Presentation of Pre & Post test Means of three groups

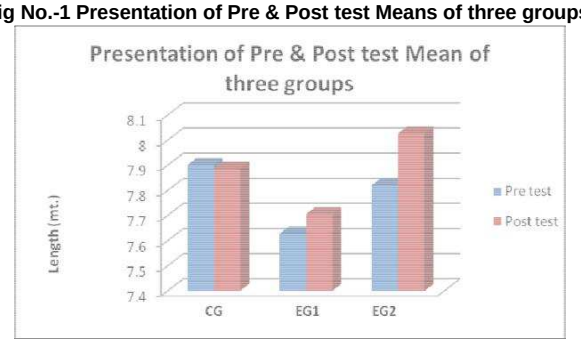


Table No.2 Paired Samples 't' test for CG

	Paired Differences						
	Mean	SED	95% Confidence Int. of the Difference		t	df	Sig. (2 tailed)
			Lower	Upper			
CG	0.0140	0.018	-0.0253	0.0533	0.7648	14	NS
Correlation	0.998						

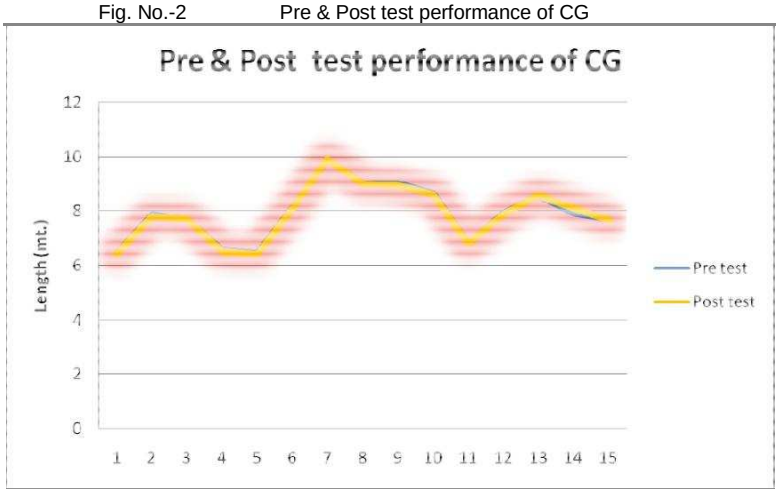
Table No.3 Paired Samples 't' test for EG1

	Paired Differences						
	Mean	SED	95% Confidence Int. of the Difference		t	df	Sig. (2 tailed)
			Lower	Upper			
CG	-0.0773	0.016	-0.1112	-0.0435	4.9006	14	0.001
Correlation	0.999						

Table No.4 Paired Samples 't' test for EG2

	Paired Differences						
	Mean	SED	95% Confidence Int. of the Difference		t	df	Sig. (2 tailed)
			Lower	Upper			
EG1	-0.2067	0.073	-0.3640	-0.0493	2.8172	14	0.05
Correlation	0.956						

Fig. No.-2 Pre & Post test performance of CG



According to Table No.-2, since calculated 't' for CG is lesser than tabulated't' at 0.05 levels. It may be concluded that the control group showed no significant improvement in putting the shot performance after 4 week. At the same time, Table No.-3 showed that calculated't' value is significant at 0.001 level, which indicated that 4 weeks of MBCT exercise had extremely significant effect on explosive strength performance of the subjects (EG1). 4 weeks of CPU exercise had also some impact on explosive strength performance of EG2, but

Fig. No.-3 Pre & Post test performance of EG1

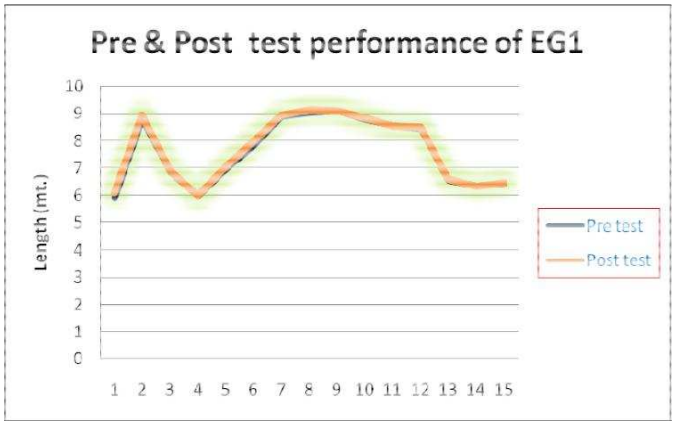
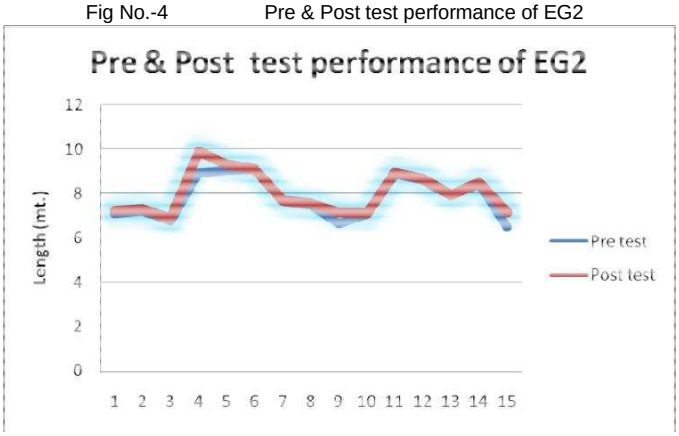


Fig No.-4 Pre & Post test performance of EG2



calculated't' was found significant at 0.05 only (Table No.-4). So, it may be concluded that MBCT exercise showed greater impact on arm and shoulder explosive strength performance than CPU exercise. **Carter et al. (2007)** concluded that 8 week course of high volume upper extremity plyometric training showed a significant improvement in baseball throwing velocity. **Lachowetz et al. (1998)** also reported significant improvement in throwing velocity after 8 weeks of generalized strength training routine in a group of collegiate baseball players. Present study is very much consistent with those studies and also tried to find out some specific plyometric exercises for upper extremities. **Carter et al. (2007)** again suggested that high volume upper extremity plyometric training can significantly improve throwing velocity and some measures of iso-kinetic strength. **Bak et al.(1997) & Swanik et al.(2002)** suggested that plyometric training protocols have resulted in increases in rate of torque development (power) and proprioceptive factors. Present study indicates that power of arm and shoulder can be improved through 4 weeks of plyometric exercises with other usual physical exercises.

Conclusion:

1. Four weeks of short-term plyometric exercise significantly affects the explosive strength performance of the athletes.
2. Exercise should be framed according to the movement of the sports activities, i.e. the movement one have to perform in training should match, as closely as possible, the movements encountered during competition. Therefore, specificity of exercise should be the most important criteria while selecting the strength training means.
3. Medicine ball chest throw (MBCT) exercise may have greater influence on explosive strength performance over exercise by Clap push ups.

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Relationship Between Achievement Motivation And Pre- Competition Anxiety To Performance In Table Tennis

Hasan MehdiLecturer, Department of Physical Education,Maulana Azad Institute of Humanities Science and Technology, Mahmudabad, Sitapur. (Uttar Pradesh), India
Contact no. 09838574870 Email- hasanmehdi1000@yahoo.com
Dr. Lilly Pushpam Isaac,Assistant ProfessorDepartment of Physical Education. Tamil Nadu Physical Education and Sports University Chennai-600127, India
Dr. Mohammad WahidAssociate ProfessorHalim Muslim P.G. College, Kanpur, Uttar Pradesh, India Email- wahidmohammad3@gmail.com

Abstract

Mental preparation is very essential to any competitive sports continually urge players to 'think' out to concentrate. Games are said to have been won as a result of mental preparation or lost of for the lack of it. The application of psychological principles to the improvement of performance in the sports has received greater attention in these days. There are certain accepted psychological principles which have to be applied so that the athletes and players are able to show their best in their performance. It is important to know about the role of emotional phenomenon like incentive motivation, achievement motivation and anxiety of the players during training as well as competitive situations.

INTRODUCTION

Today performance in sports not only demands systematic training to develop physical, physiological variable and technical aspect of sports but also demands training and consideration of psychological characteristics of success in this field.

The application of psychological principles to the improvement of performance in the sports has received greater attention in these days. There are certain accepted psychological principles which have to be applied so that the athletes and players are able to show their best in their performance. It is important to know about the role of emotional phenomenon like incentive motivation, achievement motivation, and anxiety of the players during training as well as competitive situations.

Anxiety is a state of mind in which the individual responds with discomfort to some event that has occurred or is going to occur. The person's about events their occurrences and consequences in general are the sources of anxiety. However anxiety can be either somatic or cognitive in nature. The symptoms of somatic anxiety comprise mental worries and fears. In simple words, it is a type of emotional disturbance.

Mental preparation is very essential to any competitive sports continually urge players to 'think' out to concentrate. Games are said to have been won as a result of mental preparation or lost of for the lack of it.

STATEMENT OF THE PROBLEM

The purpose of present study was to find out the relationship between achievement motivation and pre-competitive anxiety to performance in Table Tennis.

SELECTION OF SUBJECTS

30 Men Table Tennis players of were selected as subjects for this study.

Subjects were from undergraduate and post-graduate courses. Their age ranged between 17 to 24 years.

OBJECTIVE

The purpose of the test was to measure achievement motivation level of intercollegiate men Table Tennis players.

The purpose of test was to measure the sports competition anxiety level.

HYPOTHESIS

There would be significant relationship between achievement motivation and sports performance of intercollegiate men Table Tennis players.

There would be significant relationship between pre competitive anxiety (moderate anxiety) and sports performance of intercollegiate men Table Tennis players.

There would be no significant relationship between pre-competition anxiety (high anxiety) and sports performance of intercollegiate men Table Tennis players.

DELIMITATIONS

The study was delimited in intercollegiate men Table Tanis players, who participated in intercollegiate Table Tennis championship 2012-13 held in M.A.I.H.S.T. Mahmudabad, Sitapur, (U.P.) India.

The study was delimited to following questionnaire for the measurement of achievement motivation and pre competitive anxiety.

1. Sports Achievement Motivation Test (SAMT)
2. Sports Competition Anxiety Test (SCAT)

LIMITATION

The questionnaire technique used in the present study was considered as a limitation of the study.

SIGNIFICANCE OF THE STUDY

1. The finding of the study will help to reveal the relationship between achievement motivation and sports performance level among participants at intercollegiate level.
2. The result of the study may provide useful information to coaches, physical education teacher and player regarding the behavioral characteristics of sports persons and thus may be instrumental in effective psychological preparation of players.
3. The study may provide some useful information which may help to trace some aspects of the psychological profiles of intercollegiate level Table Tennis players
4. The study may be significant for the self assessment of men Table Tennis players.
5. The study may be help the coaches, selectors and experts to know the psychological stability of the players.

METHODOLOGY

To determine the relationship between Achievement Motivation and sports performance among intercollegiate level men Table Tennis players. Pearson's product moment method of correlation was used.

The level of significance will set at .05 in order to check the significance of calculated correlation and calculated't' value with tabulated value.

To determine the relationship between pre competitive anxiety (Moderate Anxiety) and sports performance among intercollegiate level men Table Tennis players Pearson's product moment method of correlation was used.

The level of significance will set at .05 in order to check the significance of calculated correlation and calculated't' value with tabulated value.

To determine the relationship between pre competitive anxiety (High Anxiety) and sports performance among intercollegiate level men Table Tennis players. Pearson's product moment method of correlation was used.

The level of significance will set at .05 in order to check the significance of calculated correlation and calculated't' value with tabulated value.

Table . I

Relationship between Achievement Motivation and sports performance of intercollegiate level men Table Tennis players.

Variable Correlated	Correlation Coefficient
Achievement Motivation and sports performance	.374

Significant at 0.05 level of confidence with 28 degree of freedom.
r.05(28)= .361

An example of table I clearly reveals that there is a significant relationship between achievement motivation and sports performance of intercollegiate level men Table Tennis players.

Since the correlation coefficient of calculated value is 0.374 which is significantly higher than the tabulated value required to be significant at 0.05 level of confidence.

Table. II

Relationship between moderate anxiety and sports performance

Variable Correlated	Correlation Coefficient
Pre competitive Anxiety (Moderate Anxiety) and Sports performance	0.397

Significant at 0.05 level of confidence with 27 degree of freedom.
r.05 (27) = .367

An example of table II clearly reveals that there is a significant relationship between moderate anxiety (pre competitive anxiety) achievement motivation and sports performance of intercollegiate level men Table Tennis players. Since the correlation coefficient of calculated value is 0.397 which is significantly higher than the tabulated value required to be significant at 0.05 level of confidence.

Table. III

Relationship between high anxiety and sports performance

Variable Correlated	Correlation Coefficient
Pre competitive Anxiety (High Anxiety) and Sports performance	0.139

Significant at 0.05 level of confidence with 17 degree of freedom.
r.05 (17) = .456

An example of table III clearly reveals that there is a no significant relationship between high anxiety (pre competitive anxiety) and sports performance of intercollegiate level men Table Tennis players.
Since the correlation coefficient of calculated value is 0.139 which is significantly lower than the tabulated value required to be significant at 0.05 level of confidence.
This value clearly indicated to negative relationship between high anxiety (pre competitive anxiety) and sports performance.

CONCLUSIONS

1. There is significant relationship was that between achievement motivation and sports performance of intercollegiate level men Table Tennis players.
2. There is significant relationship was that between Moderate anxiety (pre competitive anxiety) and sports performance of intercollegiate level men Table Tennis players.
3. There is a no significant relationship was that between High anxiety (pre competitive anxiety) and sports performance of intercollegiate level men Table Tennis players.

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A Study Of Angular Kinematic During Receiving In Volleyball

Nirmalendu Gayen * Arup Gayen Dr. Sumanta Kumar Mondal*****
***M.P.Ed Student, Visva-Bharati University. Address: Vidyasagar Pally, Makarampur, Bolpur, Birbhum, 731204, West Bengal, India. E-mail: gayenmahakaal@gmail.com**
****Research Scholar, Visva-Bharati University. Address: Sriniketan (Kalisayar), Bolpur, Birbhum, 731236, West Bengal, Inida. E-mail: gayen_arup@rediffmail.com**
*****Associate Professor, Dept. of Physical Education, Visva-Bharati University, Santiniketan, 731235, West Bengal, India. E-mail: sumantavb@gmail.com**

Abstract

The objective of the study was to compare the mean among three different angle positions of ankle and knee joints of both legs. In the present study 9 male M.P.Ed students ranging their age between 23-26 years were randomly selected from Visva-Bharati University, India as subjects. Three selected angle positions of ankle and knee joints of both legs for the study were Contact, Release and Follow through. The data were analyzed by applying one-way ANOVA in order to determine the significance of difference among the mean value of angles in three different positions of respective joints. In case of significant difference LSD test was employed to find out which of the differences in three different positions were significant. The level of significant was set as 0.05. The F-value of left leg for ankle and knee joints were 4.606 (>0.05) and 15.404 (>0.05), whereas right leg were 3.722 (>0.05) and 4.977 (>0.05) respectively.

Key Words: Volleyball, Ankle joint, Knee joint, Contact position, Release position, Follow through position.

Introduction:

Sport Science is a discipline that studies the application of scientific principles and techniques with the aim of improving sporting performance. Human movement (kinesiology) is a related scientific discipline that studies human movement in all contexts including that of sport. Sport and Exercise Biomechanics is a title that encompasses the area of science concerned with the analysis of mechanics of human movement. In other words it is the science of explaining how and why the human body moves in the way that it does. The identification of the optimal technique for enhancing sports performance. The analysis of body loading was to determine the safest method for performing a particular sport or exercise task, the assessment of muscular recruitment and loading. The analysis of sport and exercise equipment e.g., shoes, surfaces and racquets.

Cheng Tu Hsieh1 and Gary D. Heise2 studied on arm swing of volleyball spike jump performance between advanced and recreational female players. Numerous studies have shown that arm swing has a significant influence on jump height (e.g., Lees et al., 2004). These studies indicated that an arm swing increases the angular velocity and torque at lower extremity joints, COM height, and velocity at takeoff for a countermovement jump.

Objectives of the study:

To measure the angle of knee and ankle joint at the time of receiving the volleyball.
To compare the mean of ankle and knee joint angles of both legs at three different positions of skill execution.
To compare the increment of ankle and knee joint of both legs of angles at three different positions.

Delimitation:

1. The study was delimited to 9 male volleyball players of Visva-Bharati University.
2. Study was also delimited to measurement of kinematic parameters of ankle and knee joints at the time of contact, release and follows through position.

Methodology:

The subjects were selected from Santiniketan and Bolpur area in West Bengal, India. All the subjects participated in inter-university volleyball Tournaments. From a total population of 20 volleyball players, nine (9) male subjects were selected randomly.

The angle of Ankle and Knee joints at three different positions (Contact, Release and Follow through) of both legs were measured by using Video camera. Before the administration of the test the subject were given several chances to practice the prescribed test so that the subjects became familiar with the test and knew what exacting was to be done. To ensure uniform testing condition the subjects were tested only in the evening season. The subject asked to stand at the volleyball ground, another subject serves the ball from the opponent side court. First the subject received the ball with the under hand pass. Two video cameras were placed and movement of receiving was recorded in saggital plane and frontal axis. To find out the angles of ankle and knee joints at three different positions i.e. contact time, ball release and follows through. Stick figures were drawn by applying joint point method with the help of Kinovea Software 0.8.15 (copy right @ 2006-2011 Joan Charman and Cenyrib). At the time of recording the data, the height of the cameras were at 3 feet from the ground and both the cameras were placed at a distance of 4.5 feet from the side line of the volleyball court. The joint point was impressed in degrees.

Figure 1: Stick figure of Ankle and Knee joints at the time of Contact position

Figure 2: Stick figure of Ankle and Knee joints at the time of Release position

Figure 3: Stick figure of Ankle and Knee joints at the time of Follow through position

To compare the means among three different positions of ankle and knee joints of two legs, mean, standard deviation (SD) and one-way analysis of variance (ANOVA) was computed by means of SPSS Software version 17 (Statistical Package for the Social Sciences, version 17.0, SPSS Inc, Chicago, IL, USA).

Findings and Discussion:

To find out the mean and standard deviation of angles of ankle and knee joints at Contact, Release and Follow through position descriptive statistics was employed. Findings pertaining to this are presented in table

.

Table 1: Descriptive Statistics of Ankle and Knee joint at three different positions (contact, release & follow through) of both legs

Legs Joints	Positions Mean ± Standard Deviation		
Left leg	Ankle joint (Degree)		96.33±12.34
		Release time	97.11±16.81
		Follow through time	116.33±17.81
	Knee joint (Degree)	Contact time	112.88±19.04
		Release time	111.00±19.98
		Follow through time	151.44±12.27
Right leg	Ankle joint (Degree)	Contact time	94.33±7.58
		Release time	92.22±10.61
		Follow through time	108.55±20.05
	Knee joint (Degree)	Contact time	110.22±23.06
		Release time	114.77±25.20
		Follow through time	143.11±23.56

Table 1 shows that mean value of Left Ankle joint in Contact, Release and Follow through positions were 96.33, 97.11 and 116.33 degrees respectively whereas the standard deviation (SD) values of left ankle joint in that three different points were 12.34, 16.81 and 17.81 degrees respectively. It also revealed that mean value of Right Ankle joint in Contact, Release and Follow through points were 94.33, 92.22 and 108.55 degrees respectively whereas the SD values of left ankle joint in that three different points were 7.58, 10.61 and 20.05 degrees respectively.

Table 1 also shows that mean value of Left Knee joint in Contact, Release and Follow through points were 112.88, 111.00 and 151.44 degrees respectively whereas the SD values of left ankle joint in that three different points were 19.04, 19.98 and 12.27 degrees respectively. It also revealed that mean value of Right Knee joint in Contact, Release and Follow through points were 110.22, 114.77 and 143.11 degrees respectively whereas the SD values of left ankle joint in that three different points were 23.06, 25.20 and 23.56 degrees respectively.

The graphical representation of mean values of angles of Ankle and Knee joints at Contact, Release and Follow through positions is given below in figure 1 & 2.

Figure 4: Means of Left and Right Ankle at three different positions (Contact, Release & Follow through)

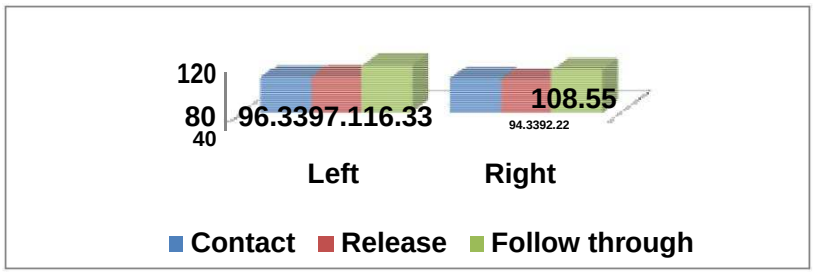
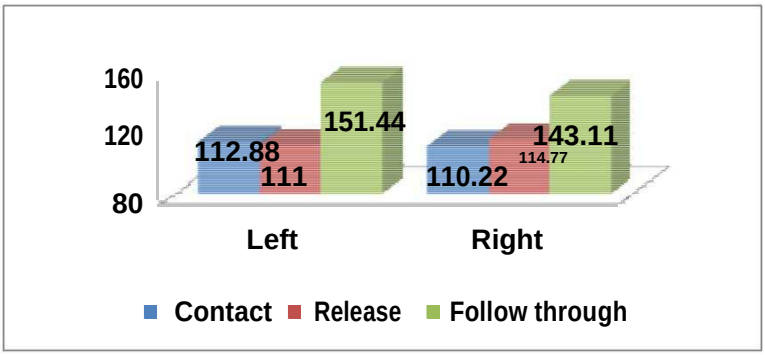


Figure 5: Means of Left and Right Knee at three different positions (Contact, Release & Follow through)



To find out the significance of mean difference among three different positions of ankle and knee joints of Left leg one-way ANOVA was employed and findings pertaining to these are presented in Table 2.

Table 2: Comparison of Ankle and Knee Joint at three different positions of Left leg

Joints	Source of Variation	Sum of Squares	df	Mean Square Variance	F value
Ankle Joint	Between Groups	2310.296	2	1155.148	4.606*
	Within Groups	6018.889	24	250.787	
Knee Joint	Between Groups	9377.556	2	4688.778	15.404*
	Within Groups	7305.111	24	304.380	

*Significant at 0.05 levels of confidence; $F_{0.05}$ (2, 24) = 3.40

Table 2 shows that the F value of the angle of left ankle and knee joints at the point of contact, release and follow through were 4.606 and 15.404 degrees respectively. Both were significant at 0.05 levels. To find out which of the differences between the means were statistically significant, LSD Post hoc test was employed and finding related to this are presented in table 3.

Table 3: Post hoc (LSD) test of Ankle and Knee joints at three different positions of Left leg

Joints	Contact position	Release position	Follow through position	Mean Difference	Critical Difference
Ankle joint	96.33	97.11		0.777	15.79
		97.11	116.33	19.222*	
	96.33		116.33	20.000*	
Knee joint	112.88	111.00		1.888	17.38
		111.00	151.44	40.444*	
	112.88		151.44	38.555*	

*Significant at 0.05 levels of confidence

Table 3 reveals that the LSD Post hoc comparison between contact & release; release & follow through and contact & follow through of the angle of left ankle joint were 0.777, 19.222 and 20.000 degrees respectively; whereas the angle of left knee were 1.888, 40.444 and 38.555 degrees respectively. The LSD Post hoc comparison of the angle of left ankle and knee joints at release & follow through and contact & follow through positions were significant at 0.05 levels. To find out the significance of mean difference among three different positions of ankle and knee joints of Right leg one-way ANOVA was employed and findings pertaining to these are presented in Table 4.

Table 4: Comparison of Ankle and Knee Joint at three different positions of Right leg

Joints	Source of Variation	Sum of Squares	df	Mean Square Variance	F value
Ankle Joint	Between Groups	1420.519	2	710.259	3.722*
	Within Groups	4579.778	24	190.824	
Knee Joint	Between Groups	5715.630	2	2857.815	4.977*
	Within Groups	13780.000	24	574.167	

*Significant at 0.05 levels of confidence; $F_{0.05}$ (2, 24) = 3.40

Table 4 shows that the F value of the angle of right ankle and knee joint at the point of contact, release and follow through were 3.722 and 4.977 degrees respectively. Both were significant at 0.05 levels. To find out which of the differences between the means were statistically significant LSD Post hoc test was employed and finding related to this are presented in table 5.

Table 5: Post hoc (LSD) test of Ankle and Knee joints at three different positions of Right leg

Joints	Contact position	Release position	Follow through position	Mean Difference	Critical Difference
Ankle joint	94.33	92.22		2.111	13.04
		92.22	108.55	16.333*	
	94.33		108.55	14.222*	
Knee joint	110.22	114.77		4.555	23.74
		114.77	143.11	28.333*	
	110.22		143.11	32.888*	

*Significant at 0.05 levels of confidence

Table 5 reveals that the LSD Post hoc comparison between contact & release; release & follow through and contact & follow through of the angles of right ankle were 2.111, 16.333 and 14.222 degrees respectively; whereas the angles of right knee were 4.555, 28.333 and 32.888 degrees respectively. The LSD Post hoc comparison of the angle of right ankle and knee joints at release & follow through and contact & follow through positions were significant at 0.05 levels of confidence.

Conclusions:

It is evident from the statistical analysis that no significant difference was found in the angles of ankle and knee joints between the phases of contact & release, but in case of phases between release & follow through significant difference was found in both the joint angles. Results may be attributed to the fact that in the technique of receiving a volleyball player first bends his lower body joint and then extend the angle at the time of execution of the skill. But the maximum effort is given at the time of release in comparison to effort being given at the time of contact. The force which plays the major role behind the correct supply of the ball to the setter is the force that a receiver applies during the time ball makes contact and leaves the hand. It is otherwise can be expressed as impulse which is the product of magnitude of force duration for which the force is applied. This impulse is particularly dominating factor in the phases between releases & follow through. Therefore, the significant different in the angle of the knee and ankle joint were found between these phases.

However, no significant difference in the angles of knee and ankle joints between phases of contact & release may be due to the reasons that a receiver cannot spend more time to make contact with the ball by extending his angles of the joint of lower limbs as it will hamper the skill by affecting the time adjustment.

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The comparative study of physical and physiological variables with short and medium distances runners

Dr.Rina Asst. Prof. Physical Education,Jecrc University Jaipur.
reenapoonia23@gmail.com.
Dr.Suren Rather D.P.E. Govt.College Thanagaji Alwar

Abstract
The purpose of the study was to compare the athletes of different events and know some physical and physiological variables of medium distance runners (800m & 1500m) and short distance racers (100m & 200m). The study followed the experimental method on a sample of 30 students randomly selected from Haryana played from India scheme test (SPAT). Their ages ranged from 14-20 years. The students were classified into two experimental groups. The first group is short distance runner had participated in Dist. Level (SPAT) held in Bahal Bhiwani. The second group is Medium Distance Runners were selected for Dist. Level (SPAT) held in Bahal Bhiwani). The two groups were compared on 20 physiological and physical variables, including height, weight, body surface, metabolism rate, respiration rate, vital capacity, blood pressure, pulse rate, vertical jump, reaction time, scholastic aptitude, speed & strength. The greatest differences were found in measures of pulse rate in vital capacity and in vertical jump ability. Medium distance runners tended to be somewhat taller but lighter than the sprinters and surpass sprinters on most measures of scholastic aptitude and achievement.

Introduction

Great athletes are not born, they are made -Seb Coe

Athletics is the basic sport for all and so it has assumed greater importance in recent years. The physical education, coaches and sports scientists are at present becoming more aware of scientific information related to the athletes potential proficiencies in competitions .An important feature in the development of track and field's events is by applying the knowledge of the mechanical principles which are essential to its skull.

Physical and physiological fitness are the total of various independent variables. Generally these variables are performance originated and depend upon the functioning of different systems of the body. Different sports events demand a combination of different physical variables for high quality performance there are certain physical fitness and physiological components, which are discussed at various levels in relation to performance. Some of them are height, weight, body surface, metabolism rate, respiration rate, vital capacity, blood pressure, pulse rate, vertical jump, reaction time, scholastic aptitude, speed & strength.

Human physiology is the bird in the house of the mechanical, physical, and physiological functions of human in good health there, organs, and the cells of which they are composed. The physiological factors of The athletes limiting one's performance in sports are also well known. It is the understanding of interaction of all these factors that can help us in designing the way for selecting the children's for appropriate game and training. Among the various physiological parameters characteristics play an important role in the attainment of high level of sports performance that can ultimately be realized by taking into consideration the various physiological variables. Physical and physiological variables may be defined as those variables which are directly linked with physical and physiological systems such as heart rate, blood pressure, vital capacity and physical components.

Methods

Subjects:-

The present study was carried out on Thirty track athletes (male). The sample was selected for the study, fifteen for short distances and fifteen for medium distance, who was participating in SPATE held in Behal Bhiwani from Haryana state. For short distance running we include 100m and 200m race and for medium distance running we include 800m and 1500m race. For this comparative study one of the facts which confirm the impression that they represent rather sharply defined athletic role. The Age of Subjects are ranged from 14 to 20 years.

Procedure:

For convenience of discussion, the variables on which the short distance runner and the medium distance runner were compared, divided into two groups, Physical and Physiological variables. The Physical variables in included Age, height, weight, Pull-ups, sit-up, shuttle run, standing broad jump and sit and reach test. Physiological variables include Vital capacity, systolic Blood pressure, Pulse pressure, Resting Heart Rate, Resting Respiratory Rate, Negative Breath holding Capacity, Positive Breath holding Capacity, Fat%, Lean Body Weight, Metabolism and Body Surface. All the variables were selected with the recommendation of Physical education experts and proper writers himself. Some data were collected from official records of the admission office. Mean, standard deviation of each variable of short distance runners and Medium distance runner were compared, and significance of the difference between the means was evaluated by means of t test at .05 level of confidence

Result and Discussion-

The scores of each physical and physiological variables are presented in the following Table. Table 1 and 2 summarize the results. Table-1 contains descriptive statistics and tests of significance between means for short distance runner and medium distance runner on each physical variable**.** Table-2 contains descriptive statistics and tests of significance between means for short distance runner and medium distance runner on each physiological variables.

Table-1
COMPARISONS OF SHORT DISTANCE AND MEDIUM DISTANCE RUNNERS ON PHYSICAL VARIABLE

Variables	Short Distance Runner			Medium Distance Runner			T-test
	N	Mean	S.D.	N	Mean	S.D.	
Age (years)	15	17.56	3.38	15	18.02	3.65	0.36
Height (in.)	15	69.01	1.5	15	67.92	2.1	1.64
Weight (kg.)	15	48.25	2.52	15	49.75	1.96	1.82
Pull-ups (count)	15	8.42	1.1	15	9.36	1.63	1.85
Sit-up (count)	15	30	3.55	15	34.21	3.42	3.31*
Shuttle Run (Sec.)	15	10.52	1.82	15	11.91	2.19	1.89
Standing Broad Jump (Mt.)	15	1.75	2.19	15	1.82	1.19	0.11
Sit and Reach Test (Cem.)	15	15.85	2.39	15	14.18	1.85	2.14*

* Significant at .05 level of significance too .05(28) =2.04

Age (years) of Short Distance Runner and Medium Distance Runner were compared with use of Birth Certificates. No significant difference Age (years) (Table-1 line 1), but means of short distance runner slightly higher.

Height (inch.):The mean height (table 1 Line 2) measured in inch by stadiometer for Short Distance Runner and Medium Distance Runner got less difference (69.01 & 67.92).

Weight (kg.):The mean Weight (nearest gram) for Short Distance Runner and Medium Distance Runner was about 48.25 kg. While Medium distance runner averaged 49.75 as shown in (Table-1 line 3), the difference in weight was statistically insignificant.

Pull-ups (count):No significant difference Pull-ups (count) (Table-1 line 4), was found in Short Distance Runner (8.42) and Medium Distance Runner was (9.36), but means of Medium distance runner were higher.

Sit-up (count):Most of Sit-up (count) of Short Distance Runner (30.00) and Medium Distance Runner (34.21) were found. The significant difference **(**Table-1 line 5) and Medium distance runner granted better performance.

Shuttle Run (Sec.)No significant difference was found in Shuttle Run (Sec.) (Table-1 line 6) means of shuttle run for Shuttle Run (Sec.) of Short Distance Runner (10.52 while Medium Distance Runner found higher mean (11.91).

Standing Broad Jump (Mt.):Standing Broad Jump (Mt.) of Short Distance Runner and Medium distance Runners means were (1.75) & (1.82) (Table-1 line 7) and no significance difference was found at .05 level of confidence.

Sit and Reach Test (Cem.) Show that significant difference was found & means of Short Distance Runner (15.88) was higher than the Medium distance Runner (14.18) at .05 level of confidence.

Table-2
COMPARISONS OF SHORT DISTANCE AND MEDIUM DISTANCE RUNNERS ON PHYSIOLOGICAL VARIABLE

Variables	Short Distance Runner			Medium Distance Runner			T-test
	N	Mean	S.D.	N	Mean	S.D.	
Vital Capacity (Liters)	15	3.25	1.05	15	2.91	1.15	2.17*
Systolic Blood Pressure (cm. Mercury)	15	122.57	6.93	15	124.87	8.01	0.84
Diastolic Blood Pressure (cm. Mercury)	15	78.28	5.92	15	79.37	7.82	0.43
Pulse pressure	15	48.13	7.82	15	47.02	9.01	0.36
Resting Heart Rate (Pulse Per Minute)	15	60.01	2.19	15	64.92	2.29	6.00*
Resting Respiratory Rate (Pulse Per Minute)	15	24.52	1.29	15	23.1	2.15	2.19*
Negative Breath holding Capacity	15	70.25	7.51	15	69.81	7.25	0.16
Positive Breath Holding Capacity	15	92.05	13.15	15	89.1	12.25	0.64
Fat Percentage	15	9.41	2.41	15	9.81	2.11	0.48
Lean Body Weight (Percentage)	15	48.88	3.06	15	51.92	2.99	2.75*
Metabolism (calories/hr.at STSP)	15	89.91	11.65	15	88.29	12.52	0.37
Body Surface (Sq. Meter)	15	1.84	0.06	15	1.86	0.09	0.96

* Significant at .05 level of significance too .05(28) =2.04

Vital Capacity of Short Distance Runner and Medium distance Runner were compared with use of Dry spirometer. A significant difference was found on Vital Capacity (Table-2 line 1), of both sections but mean of short distance runner slightly higher.

Blood Pressure

Table 2 (Line 5 & 6) Shows significant difference and means of Medium distance runner (64.92) were much higher than short distance runner (60.01) in resting Heart Rate while in Resting Respiratory rate means of short distance (24.52) was found being her that in Medium distance runner (23.1).

Resting Respiratory Rate (Pulse Per Minute)

Resting Respiratory Rate (Pulse Per Minute) of Short Distance Runner and Medium distance Runner was compared with the use of Tape. Significant difference Resting Respiratory Rate (Pulse Per Minute) (Table-2 line 6), but means of Short distance runner slightly higher.

Breath holding Capacity)

Negative & Positive Breath holding Capacity was founded insignificant difference (Table-2 line 7&8), but a means of Short Distance Runner (70.25 &82. 05) Were slightly higher than Medium distance Runner.

Fat Percentage & Lean Body Weight (Percentage)

Lean Body Weight (2.75) was found significant differences in Short Distance Runner & Medium distance runner (Table-2 line 10), while Fat Percentage obtained insignificant difference (Table-2 line 10), but a means of Medium distance runner were slightly higher.

Metabolism (calories/hr.at STSP)

Rate of Metabolism (Table-2 line 11) was not measured under based conditions but the readings were observed uniformly for short & medium distance runners. The measurements were made before the activity. Each subject was required to Sit for rest for 20 min before the metabolism rating were recorded. The Benedict. Both metabolism Apparatus was used. Short Distance Runner means the rate (89.91). Calories per hour was higher than the Medium distance Runner (88.29).

Body Surface:

Body Surface in Square meters was estimated from the Du-Bois Body surface chart developed by Booth by and Sandi ford of mayo clinic and reported by Clarke (1959). Body Surface of subjects was based on height and weight. As the shorter distance runners were their mean body surface were not much different. 1.84 squared meters for the short Distance runner and 1.86 square in for Medium distance runners.

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An Overview On Risk Vs Benifit Of Human Growth Hormome Used In Sport

Jaipal*
***M.Phil, NET: Phy Edu Teacher, Jawahar Navodaya Vidyalaya-Butana, Sonipat, Haryana (India)**
Email : jaipalomparkash@gmail.com

Abstracts

Background: Growth hormone was first isolated from the human pituitary gland in the 1950s. Its anabolic effects were soon recognized and athletes had begun to abuse it by the early 1980s, at least a decade before it was used therapeutically by adult endocrinologists. A number of high profile athletes have admitted using growth hormone. Detection of its abuse has been challenging and the lack of an effective test has undoubtedly encouraged its abuse. **Methods:** Analytical methods was used for this article by reviewing relevant publications, primarily based on the online sports medicine journals available on Internet, Wikipedia, Elsevier, PubMed, Google Scholar and National Anti Doping Agency literature. **Conclusion**: Human Growth Hormone (hGH) is in the list of prohibited substances of World Anti-Doping Agency's (WADA); the use of hGH is banned both in competition and out of competition and hGH are usually tested by authorized anti-doping laboratories of WADA. This review provides an overview on the use and misuse of hGH in sports and discusses their benefits and adverse effect on health.

Keywords: hGH, Adverse Effect, Health, Performance, World Anti Doping Agency

Introduction

HGH, human growth hormone, is a naturally occurring hormone that declines with age. As natural production of HGH diminishes in the body, human body starts to age. Few studies are available on the usefulness and dangers of HGH, but that hasn't stopped fans from using it. and it's manufactured by the pituitary gland that's located deep within the brain, just behind the eyes. It's the hormone that's in charge of promulgating proper development and growth in humans, hence its name. Adequate production of HGH is required in order to stimulate normal growth in children; in turn, it also plays a significant role in adult metabolism as well.Human growth hormone (hGH) is a hormone that is naturally produced by the body. It is synthesized and secreted by cells in the anterior pituitary gland located at the base of the brain. hGH is known to act on many aspects of cellular metabolism and is also necessary for skeletal growth in humans. The major role of hGH in body growth is to stimulate the liver and other tissues to secrete insulin like growth factor (IGF-1). IGF-1 stimulates production of cartilage cells, resulting in bone growth and also plays a key role in muscle and organ growth, hGH is prohibited both in- and out-of-competition under WADA's List of Prohibited Substances and Methods. (WADA 2013) A test for hGH was first introduced at the 2004 Summer Olympic Games in Athens, Greece. The test to detect hGH abuse is a blood test. The current test, based on immunoassays, is robust and reliable. Another blood test, in its final development stage, will be combined with the current test to further enhance the detection window for hGH abuse. This test, the development of which has been partly funded by WADA, is based on biomarkers. The concepts and development of both hGH tests have been systematically reviewed by international independent experts in such fields as hGH, endocrinology, immunoassay, analytical chemistry, pharmacology, laboratory work, anti-doping, etc, and published in international scientific journals. Research was initiated by the International Olympic Committee (IOC) and the European Union, and then taken over by WADA – created in late 1999 –when it launched its scientific research program in 2001.

According to the majority of international experts, the blood matrix is the most suitable matrix for the detection of hGH. Robust tests are available to detect GH and enforce the ban on its abuse in sports. Novel approaches that include gene expression and proteomic profiling must continue to be pursued to expand the repertoire of testing approaches available and to maintain deterrence of GH doping.
HGH in urine is found in extremely small quantities (less than 1% than that found in blood). WADA is collaborating with research teams to explore the development of urine-based detection methods for hGH. HGH can also increase the risk of diabetes and contribute to the growth of cancerous tumors.
Furthermore, if you get the drug illicitly, you may not know what you are really getting. Because of the high cost, HGH drugs have been counterfeited.

Methodology: This survey is an analysis of literature on of up to now research conducted on Diuretics in sports medicine. The analysis involves a dozen scientific databases, examined in order to find out the health hazard approach in sports. The data are gathered from the online sports medicine journals available on Internet, Wikipedia, Elsevier, PubMed and National Anti Doping Agency, World Anti Doping Agency literature and NDTL.

History and Development of HGH

The attempt to synthesize hGH began in the 1930s when Dr. Choh Hao Li, at the University of California's Experimental Biology Laboratory, sought to isolate hormones. In 1971 he successfully synthesized hGH from the pituitary glands of human cadavers. Over his career, Dr. Li isolated and purified 6 out of the 8 known hormones secreted by the pituitary gland. He won many awards and honorary degrees for his breakthroughs, including the Lasker Award, the Nichols Award and Awards from the American Cancer Society and the Endocrine Society. Doctors used hGH synthesized from humans until it was linked to Creutzfeldt-Jakob disease, a fatal neurological disorder.

The synthetic version of hGH, released in 1985, worked seamlessly with the body's natural growth hormone. The drug is mostly used to correct stunted growth in children and to treat AIDS wasting. In contrast, by 1989 some scientific studies were beginning to show potential anti aging benefits to the use of human growth hormone, prompting even more interest in the drug.

In terms of normal usage, HGH is usually administered to children with HGH deficiency that stunts their growth. To put it more simply, it helps children become taller, or at least grow normally. HGH is ineffective against growth stunting caused by reasons other than HGH deficiency. The more famous or perhaps infamous use of HGH roots from its application in the field of athletic performance enhancement. Many athletes claim that Humatrope and other HGH products help a lot in stamina development and body building.HGH has been all over the news lately. If you are considering Using Human Growth Hormone it is highly recommended that not only you check out HGH benefits but also HGH side effects as well.

Misuse in Sports:

Athletes sometimes take HGH to increase muscle size. This increase in muscle size results in an increase in strength, and therefore in athletic performance. It is more effective in increasing performance in sports where quick bursts of muscular power are desired, and where the muscles are allowed to recover after exertion. Artificially increasing HGH in the body might have temporary performance increases, but there are severe side effects, including increases in the size of the jaw and brow, enlarged tongue, and damage to the heart, liver and kidneys.

Benefit of Human Growth Hormone:

The benefits of HGH are immense, even today new research pops up regularly that reveals new uses for it. HGH is present in the body at a rate of 500 micrograms at any time in the blood of males between the ages of 20 and 30.It's produced by the anterior pituitary gland under the stimulation of the Hypothalamus (like LH, the testosterone precursor). The effects on our system are tremendous:

HGH promotes and increases the synthesis of new protein tissues, such as in muscle recovery or repair. This is the way new muscle is built.

Recent research suggests its involvement in the metabolism of body-fat and its conversion to energy sources. Tests were conducted in obese people and medical use in treating obesity was proven beyond a doubt. Pro's have used GH as a way of maintaining and increasing lean mass while dieting for years.

It improves the sleeping pattern, makes for less unintended awakenings and betters REM-stage sleep.

HGH produces more energy

It may improve sexual performance

It builds stronger bones

Improves the quality and duration of heart and kidneys

So we can say the benefits are not few. What's an even bigger card in the weighing of HGH against testosterone and its derivatives is that it is not androgenic, causes no aromatization and shows no side effects in limited doses. It just makes you bigger, huge even in combination with testosterone.

Side-Effects of Human Growth Hormone:
The side-effects of hGH are vast and some serious:
Gigantism in younger athletes (or pituitary gigantism or giantism. Refers to abnormally excessive growth in height, considerably above average)

Acromegaly in adult athletes (a condition where the pituitary gland produces too much hGH, resulting in the growth and swelling of body parts, typically hands, feet, nose but can progress to brow and jaw protrusion and swelling of internal organs)

Hypothyroidism (low production of the thyroid hormone which disrupts metabolic rate and protein production)
Cardiomypathy is disease of the cardiac muscle, increasing the risk of arrhythmia and sudden cardiac death which is caused by hGH use.

Hypercholesterolemia: It is presence of high levels of cholesterol in the blood also resultant the use of hGH.

Ischemic heart disease: is a lack of blood to the heart often due to coronary artery disease
Myopathy is a neuromuscular disease affecting the function of muscle fibres which is caused by hGH use.

Other Adverse effects of hGH use is Arthritis, Cardiac failure, Diabetes, Impotence, Osteoporosis, Menstrual irregularities in women.

CJB (Creutzfeldt-Jakob disease or mad cow disease). This is only possible when the hGH is maintained from cadavers (corpses) rather than synthetic production.

Conclusion:
Use of hGH in the world of sports has become an easier methods of boosting the performance. The use of hGH is banned both in competition and out of competition by the World Anti-Doping Agency. HGH is in the list of prohibited substances and usually tested by authorized anti-doping laboratories of WADA. HGH to increase muscle size this increase in muscle size results in an increase in strength, and therefore in athletic performance. In comparison of these benefits the adverse effect on health are much greater. Some common adverse effects of use of hGH is Gigantism, Acromegaly, Hypothyroidism, Cardiomypathy, Hypercholesterolemia, Ischemic heart disease, Myopathy, Arthritis, Cardiac failure, Diabetes, Impotence, Osteoporosis, Menstrual irregularities in women. The use of hGH is illegal and it is very harmful to health.

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Study Of Toughness In Kabaddi Players Of Mangalore University

***Mohammed Rafeek. K . PhD Research Scholar DEPARTMENT of Physical education ,Rayalseema University Kurnool –A.P**
***Prasanna .B.K PhD Research Scholar(S.U.R) DEPARTMENT of Physical education **Dr.Nagalingappa DEPARTMENT of Physical education mangalore University**

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Abstract

Significant gap in the literature. Many popular literature sources such as Loehr (1986) and Kuehl, Kuehl, and Tefertiller (2005), attempt to define and develop toughness programs. These sources provide inconsistent descriptions of toughness, not essential components. The empirical research on the construct of toughness is very sparse. In fact, Jones et al. (2002) is the first empirical source that attempted to identify the components or attributes of toughness or a construct surrounding toughness. In 2002, Jones et al. recognized the need for clarification of toughness and attempted to define and identify the attributes of toughness as perceived by ten elite sport performers. This empirical study resulted in a definition of toughness and the identification of 12 attributes of a mentally tough performer. In 2004, Cal Ripken, whom most would recognize as a mentally tough performer, identified eight characteristics of an individual who demonstrates perseverance (Stratton, 2004). During Cal Ripken's career he played 2,632 consecutive games which set the longest consecutive-games played streak in major league baseball history, breaking Lou Gehrig's record of 2,130 consecutive games. Ripken's professional accomplishments make him an ideal source to suggest the components of perseverance. A combination of the characteristics from these two sources will provide a starting point for this study. Another contributor to the lack of clarity regarding this topic is a result of the term toughness being used synonymously with other constructs such as persistence, perseverance, resiliency, and hardiness. This lack of clarity has increased the confusion regarding toughness and results in wide interpretations (Jones et al., 2002). Currently there is much concern and debate over whether these mental skills or psychological characteristics are teachable (trainable). There is no conclusive empirical research that shows that psychological characteristics are inherited. This study allowed each individual coach to decide to what degree the psychological characteristics of toughness are teachable or learned through practice

KEY WORDS; characteristics of toughness are teachable or learned through practice KABADDI PLAYERS

Introducation

. Physical education plays a vital role in the students' development and growth. According to recent medical studies, physical well being of a student is directly related to his or her performance whether in class or in the office. The article will give you reasons to agree.

It's a link to good health**.**

The value of physical fitness can never be overstated. It's only in physical educational classrooms that students learn the value of taking care of themselves thru proper grooming, healthy eating and regular exercise.

It's a preventive measure against disease.

Physical Education Programme can also be so planned and conducted that they contribute to the development of a co-operative attitude. This can be done by giving students both leadership and followership experiences, by having them work co- operatively on an assigned task, and by one another. Physical Education can contribute to the development of attitudes conductive to the practice of democracy in home by including co-educational activities in the programme and by conducting these activities in such a manner as to lead to mutual respect of the sexes

BENEFITS OF PHYSICAL EDUCATION:

Physical Education is useful in many ways. Perhaps, this subject has been repeatedly taken every year. That is something that you do not have to be ashamed of. In fact, you should be grateful enough to acknowledge how physical education can be beneficial. Physical education also exposes individuals to different sports and other physical activities to improve physical well beinSport serves vital and important role in social and cultural functioning for each individual. In the last few decades sports have gained tremendous popularity all over the globe. The popularity of sports is still increasing at a fast pace and this happy trend is likely to continue in the future also

1.10 KABADDI:

Kabaddi is a South Asian sport. The name is derived from the Tamil word "kai" (hand), "pidi" (catch), which is translated into “Holding Hands”. Two teams occupy opposite halves of a small swimming pool or field and take turns sending a “raider” into the other half, in order to win points by tackling members of the opposing team; then the raider tries to return to his own half, holding his breath and chanting the word "Kabaddi" during the whole raid. The raider must not cross the lobby unless he touches any of his opponents. If he does so then he will be declared as “out”. There is also a bonus line which ensures extra points for the raider if he manages to touch it and return to his side of the field successfully.

Amar:

In the 'Amar' form of Kabaddi, whenever any player is touched (out), he does not go out of the court, but stays inside, and one point is awarded to the team that touched him. This game is also played on a time basis, i.e. the time is fixed. This form of kabaddi is played in India (Maharashtra and Punjab), Canada, England, New Zealand, USA, Pakistan and Australia. In the Amar form of Kabaddi, each team consists of 5–6 stoppers and 4–5 raiders. At one time, only 4 stoppers are allowed to play on the field. Every time a stopper stops the raider from going back to his starting point, that stoppers team gets 1 point. On the other hand, every time the raider tags one of the stoppers and returns to his starting point, his team gets one point..12 DEVELOPMENT OF KABADDI:

Women playing Kabaddi/Sadugudu in Tamil Nadu

Modern Kabaddi is a synthesis of the game played in various forms under different names. Kabaddi received international exposure during the 1936 Berlin Olympics, demonstrated by Hanuman Vyayam Prasarak Mandal, Amaravati, Maharashtra. The game was introduced in the Indian Olympic Games at Calcutta in 1938. In 1950 the All India Kabaddi Federation came into existence and compiled standard rules. The Amateur Kabaddi Federation of India (AKFI) was founded in 1973. After formation of the Amateur Kabaddi Federation of India, the first men's nationals were held in Madras (renamed Chennai), while the women's were in Calcutta (renamed Kolkata) in 1955.The AKFI has given new shape to the rules and has the right to modify them. The Asian Kabaddi Federation was founded under the chairmanship of Mr. Janardan Singh Gehlot.

COMPETITIONS AND TOURNAMENTS:

The second Kabaddi World Cup tournament was held in 2007 with India winning over Iran in the final round. The Punjab government organized a Circle Style 2010 Kabaddi World Cup from 3 April 2010 to 12 April 2010. On 12 April 2010 Indian team emerged as the winner after beating pakistan in the finals

STATEMENT OF PROBLEM:

The Discussion presented above that available research literature about this game reveals that the present status of this game. With all the popularity that sport is gaining and the increasing nerve racking moments that it produces, there is a growing belief that, ultimately it is the mind, which influences how a body has to perform. The purpose of the problem to find out the toughness of the Mangalore university kabaddi and kho-kho players. “A COMPARITIVE STUDY OF TOUGHNESS IN KABADDI IN A PLAYERS OF MANGALORE UNIVERSITY”.

18 HYPOTHESIS OF STUDY:

The psychological wellbeing of Mangalore university kabaddi and kho-kho players are average. It was hypothesized that there would be significant difference between kabaddi and kho-kho players

1.19 LIMITATIONS OF STUDY:

The study is limited to the information gathered from the mangalore university kabaddi and kho-kho players. At the collection of data the player’s behavior and thus academic work load were behind the control of the researcher.

1.20 DELIMITATION OF STUDY:

The study was constrained to the mangalore university kabaddi and kho-kho players only. The study was restricted only to the mangalore university team.

The proposed study will have the following delimitations:

The proposed study will be delimited to select 150 subjects age ranging from 20 to 25 years of DK, Kodagu, Udupi, who has participated in Inter-University and National of Kabaddi and Kho-Kho competition.

The study was delimited to men kabaddi and kho-kho players

The proposed study will further be delimited to 150 male players’ at colleges levels, out of which 75 players of Kabaddi and 75 Kho-Kho players will be selected finally.

The proposed investigation will be delimited to the specific variables such as: physical and psychological parameters mentioned here as under:

1.21 SIGNIFICANCE OF STUDY:

The study is deemed significant for the following the reasons:

The proposed study may seek the significance through the comparison of the factors between the of Kabaddi and Kho-Kho players

The study will provide effective tools for measure the toughness of kabaddi and kho-kho players.

Coaches can use this study in order to know the co-ordination of physical and mental ability while selecting for potential competitions.

The study may be help to find the toughness levels of kabaddi and kho-kho players.

It also helps to coaches to train physically and mentally.

The proposed study may have significance of proposing guideline and index for future researchers in the field of Kabaddi and Kho-Kho.

The study will be a useful contribution to the kabaddi and kho-kho field

1.22.1 PHYSICAL EDUCATION:

Washington D.C. (1972) defined "physical education is an integral part of total education process in a field of endeavors that has its aim, the improvement of human performance, through the medium of physical activities that have been selected with a view to realizing this outcome.

TOUGHNESS:

"The toughness is deals with the ability and physical development of the sports person's. In early age toughness is the word meaning psychology wellbeing. But toughness is a modern word; toughness is included motivation, emotions, stress, anxiety, rebound ability, handle pressure, concentration, confidence etc."

METHODOLOGY

In the present study the investigator returns to explore the "toughness" of the Mangalore University Kabaddi in a players. Since the study is empirical in nature or sample of 100 students from related area were surveyed through a standardized questionnaire.For this purpose a systematic study and approach was made to collect the data. The procedure for collection of necessary data for the study has been presented in the chapter.

3.1 METHODS OF DATA COLLECTION:

The subject chosen for this study were Kabaddi in a players, belonging to of Mangalore University.

3.2 INSTRUCTIONS:

Gen given the following clear instructions here Questions regarding the way you behave, feel and act. After each question in space for a answering "True" or "False". Read each question carefully. Try to decide whether "True" or "False" represents your usual way of acting or feeling. Then mark either true or false work slowly and don't spend too much time over any question. We want your first reaction, not a long drawn out thought process. Be sure not to omit any questions. Now turn the page over and go ahead. Work quickly and remember to answer every question. There are no right or wrong answer, and there is measure of the toughness.

Through questionnaire was administered to subjects that covered following areas:

Rebound ability of player's skill at ly bouncing back from setbacks and mistakes: Rebound ability is very important aspects of toughness. The ability to handle pressure while playing matches. Without the ability to stay calm in the clutch, a player will always under achieve. These also clear one of the aspects of the toughness.

All the Kabaddi in a players need to be trained in the way of handling the pressure to show good performance. The concentration ability of the player is the ability to focus on what is important and block everything else is one of the

Have a strong will to succeed: don't let setbacks stop you from achieving your goal.

believe that any of the above components should be combined to form an individual, essential component of toughness.

• Since the questionnaire was administered, can you identify and describe any other components of toughness that you have experienced?

• Do you feel that the components that resulted from this study capture the essence of toughness?

• Do you feel that you recruit athletes who show characteristics of toughness?

• Do you attempt to develop the characteristics of toughness with your team? If so, with the team as a whole or with individuals?

• Why do you feel that coaches, in general, do not spend a lot of time on developing the characteristics of toughness?

• Do you think a program designed to develop the characteristics of toughness would be useful to your program?

• Do you think other coaches would use it?

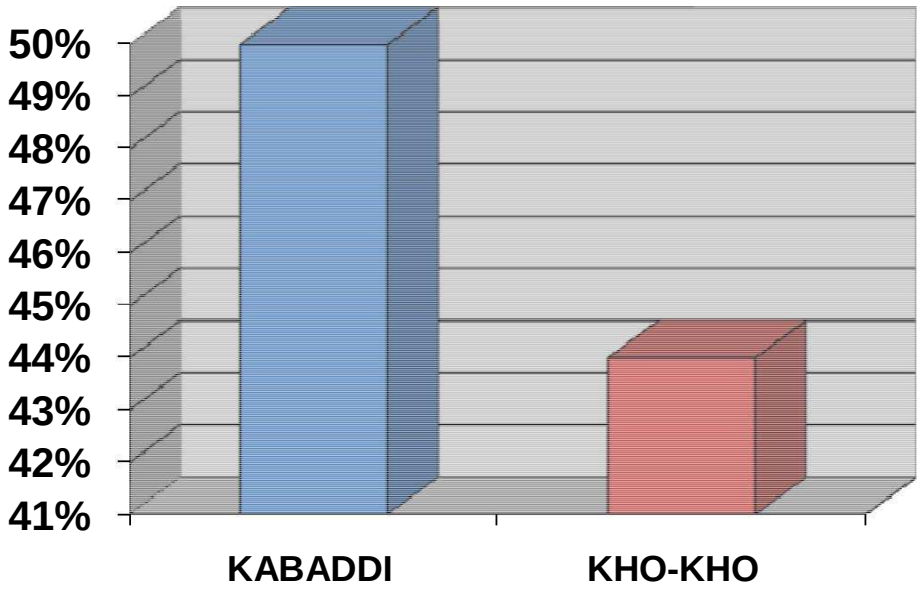
ANALYSIS AND DISCUSSION

Toughness can be a means to keep the players to sharpen the skill they need to deal effectively designing the training or competition. The toughness act like a spring board to launch players into better situation. But toughness can also become an end itself. When properly done, the mental movement becomes a form of art a marvel of beauty. When players thinking becomes an aesthetic pursuit.

The research titled analysis of toughness among Mangalore University Intercollegiate Kabaddi players. The researcher selected and 75Kabaddi players for the study.

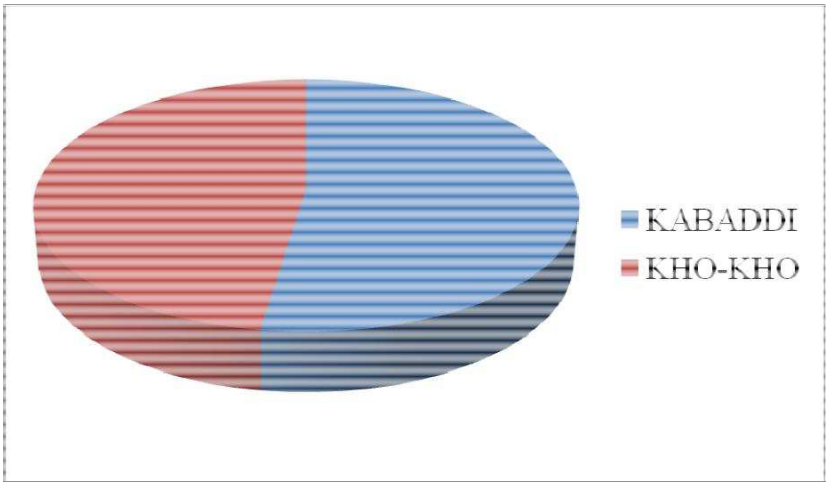
4.1 Graph 1:

Graph shows the Rebound ability of the Mangalore University Kabaddi in a players.



4.1.1 Pie Chart 1:

Pie Chart shows the Rebound ability of the Mangalore University Kabaddi in a players.



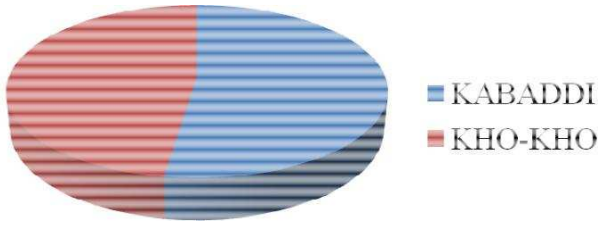
The above Graph and Pie chart shows that rebound ability or players skill at ly bouncing back from setbacks and mistakes. Toughness depends on player's ability to quickly leave the mistakes and failure behind player. Hanging into the mistakes will get the player into big trouble performance wise.

As per the scoring system followed in this test, player has to score 100 out of 100 to consider under strength in rebound ability. Kabaddi players showed average rebound ability score of 50% (total score 72) and same as in a players showed rebound ability score of 44% (total score 63). The study highlighted that all the players need to be trained in rebound ability to show good performance in the intercollegiate competitions

The following table shows the toughness score of the Kabaddi in a players:
comparative 1 and 1A = Rebound ability 2 and 2A = Ability to Handle Pressure

Sl.No.	Name of the game	1	1A	2	2A	3	3A	4	4A	5	5A	Total	Average
1.	Kabaddi	72	50%	108	75%	113	78%	132	92%	136	94%	561	78%

3 and 3A = Concentration Ability 4 and 4A = Level of Confidence
5 and 5A = Motivation



The above table and charts shows that Kho-Kho players scored average 73% and Kabaddi players 78%. This shows that Kabaddi players participated in intercollegiate competition with high toughness.

SUMMARY

Performance in competitive sports also determined by various morphological, physical, technical, tactical, psychological and sociological factors. The role played by these factors differ from sport and sport, personality characteristics play an important role in achieving high performance in Kabaddi. Emotional stability, stress, anxiety, rebound ability, handle pressure, concentration, confidence, motivation these aspects are covered in this study. As some of the toughness that players significant role in physical excellence in sports.

Toughness plays an important role in high performance in all fields of life including games and sports. The present investigation has been conducted to determine the role of toughness of Mangalore University Intercollegiate Kabaddi in a players which participated in the inter collegiate competition in the year 2010-2013. For the collection of data toughness inventory scale was administered on the selected subjects. For this study the researcher selected 75 Kabaddi players, and n a from Mangalore University. Kabaddi is a game of glorious uncertainty till the last Minute of the match. Hence the Kabaddi players should have the ability of bouncing back from difficult situation to win the match.

CONCLUSIONS:

From the test conducted on rebound ability, concentration, confidence, handling the pressure, motivation of Kabaddi, in a players. There has been a feeling in toughness of Kabaddi players differ from other game because of the nature of play. In Kabaddi a player gets many chances to prove his caliber, that to he will be coordinating with other teammates on the field. On the basis of the data analysis, limitations and findings of the present study, the following conclusions were drawn:

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The significant difference was found in the Sit and Reach Test. The group had better hips and legs flexibility in comparison to the Kabaddi players' group.

The significant difference was found in the One Minute Sit-ups, a test to measure muscular strength endurance in relation to the Kabaddi and players. The Kabaddi players' group had better muscular strength endurance of abdomen muscles group, showing greater muscular endurance ability than the

greater heart and lungs' capacity than the group of Kabaddi players.

The significant difference was found in the Psycho-motor Ability in relation to the Kabaddi in players. group had better Psycho-motor Ability or Eye-hand Co-ordination, proving better and physical Coordinative Ability than the Kabaddi players.

There was no significant difference found in relation to Concentration Ability measured through Grid Test between Kabaddi inplayers.

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RECOMMENDATIONS:

In light of the findings and conclusions drawn from the present study, the following recommendations were made for further academic and research pursuit in the field of physical education and sports:

Similar study can be carried out in other games also.

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Similar study can also done to a particular team to specify how much percentage of rebound ability, motivation, confidence, concentration and ability to handle pressure these quality has required for achieving higher goals.

The similar nature of studies may be undertaken on female players or counter part of male Kabaddi IN A players.

The similar studies may be conducted by taking others variables which may affects the performance of the Kabaddi IN Aplayers along with others important variables such as: physical, physiological and psychological.

The similar nature of studies may also be undertaken by comparing the players of the other team games sports' competition.

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Analysis of the Transformation on Heart Rate and Stroke Volume Responses to Exercise Stress with Aerobic and Anaerobic Training

* **Mr. Sathyanarayana & ** Dr. Syed Kareemulla**
*** Research Scholar, Department of Physical Education, Dravidian University**
** **Deputy Director and Head, Department of Physical Education, Dravidian University, Kuppam**

Abstract

The study was intended to evaluate the alterations on heart rate and stroke volume responses to exercise stress with aerobic and anaerobic training among untrained male college students. Forty-five untrained male college students, in the age group of twenty to twenty-five years were selected as participants, and they were segregated into three groups namely: control, aerobic and anaerobic training groups. The duration of experimentation period was restricted to twelve weeks and the frequency of training was thrice a week. The other independent variable confined to this study is aerobic exercise stress testing using Bruce treadmill protocol to evaluate its influence on heart rate and stroke volume. The data on heart rate and stroke volume were measured at rest and after exercise conditions from all the three groups, before and after twelve weeks of experimentation. The data thus collected was subjected to three-way factorial ANOVA with repeated measures on last two factors. The findings of the study revealed that the heart rate and stroke volume at rest and after exercise conditions of aerobic and anaerobic training groups altered significantly for better as a result of respective training, where aerobic training has the upper hand as compared to anaerobic training for its effectiveness on heart rate and stroke volume.

Introduction

Human beings acclimatize in a variety of ways depending upon the stresses to which it is exposed. Reactions to excessive stresses are modified by the individual attributes of each person. The length of exposure to stresses modifies the nature of changes and the resiliency of those changes. Thus, upon exposure to an active stress, the body undergoes a hierarchy of responsive changes, the physiological and biochemical changes to increase oxygen supply to body tissues are noticeable in those body systems that are directly related to oxygen delivery, but the changes probably occur in all organ systems.

In physiological response to acute exercise, there are several components that dictate what will be the magnitude and direction of the physiological response. The key components of “acute exercise” are the intensity at which the exercise is performed and the duration of the individual exercise bout (McArdle, Katch & Katch, 1996; Pollock & Wilmore, 1990). Typically the greater the intensity of exercise, the greater the degree of stress placed upon the physiological system. Relative to duration, typically extending the length of time of an exercise bout at any given intensity tends to amplify the physiological response; that is, as a person exercises longer and longer, one can see a gradual and further increase in the physiological and biochemical levels (Galbo *et al*., 1977).

Exercise, a common active stress, can elicit cardiovascular abnormalities not present at rest. Dynamic exercise is preferred for testing because it puts a volume stress rather than a pressure load on the heart and because it can be graduated. When dynamic exercise is begun or increased, oxygen uptake by the lungs quickly increases. After the second minute, oxygen uptake usually remains relatively stable at each intensity of exercise. During steady state of exercise, heart rate, cardiac output, blood pressure, and pulmonary ventilation are maintained at reasonably constant levels (Rowell, 1986).The body’s response to dynamic exercise consists of a complex series of cardiovascular adjustments to provide active muscles with the blood supply appropriate for their metabolic needs, to dissipate the heat generated by active muscles, and to maintain the blood supply to the brain and the heart.Exercise is an incredibly important part of a healthy person's life. Exercising regularly helps to hone one's athletic skills by strengthening the muscles across the bodies, and also by enhancing the functioning of all internal organs. When the body engages in exercise training several times a week or more frequently, each of these physiologic systems undergoes specific adaptations that increase the body’s efficiency and capacity. The magnitude of these changes depends largely on the intensity and duration of the training sessions, the force or load used in training, and the body’s initial level of fitness.

Exercise is considered to be a more intensive physical activity than the normal activities of daily living. There are two main types of exercises: aerobic exercise and anaerobic exercise. Aerobic exercise is a physical activity that increases the activity of the pulmonary and cardiovascular systems. It requires an increase in oxygen to be used and transported to the muscle. Conversely, anaerobic exercise is physical activity of a short duration and of less intensity than aerobic exercise. It does not requires an increase in oxygen to be used and transported to the muscle.

Aerobic and anaerobic training focuses on very different results on the body, it is easy to assume there are many different adaptations the body must make if one were to choose to only exclusively train aerobic or anaerobic. There is a scarcity of research work carried out to identify the impact of training modalities on heart rate and stroke volume responses to exercise stress. Hence, the investigator proposed to examine whether heart rate and stroke volume responses to exercise could be significantly influenced by different training protocols.

Methods and Procedures

Forty-five untrained male college students, in the age group of twenty to twenty-five years were selected as participants, and they were segregated into three groups namely: control, aerobic and anaerobic training groups. The participants were selected from Visakapattinam of Andhra Pradesh.

The aerobic and anaerobic training programs were used as experimental treatment. The duration of experimentation period was restricted to twelve weeks and the frequency of training was thrice a week. The other independent variable confined to this study is aerobic exercise stress testing using Bruce treadmill protocol to evaluate its influence on the criterion variables namely: heart rate and stroke volume. The data on heart rate and stroke volume were measured at rest and after exercise condition during both pretest and posttest. The standardized testing procedures and instruments used to collect the data on selected criterion variables were as presented in the table-1.

Table – 1: Dependent Variables and their Respective Tests

Variables	Instruments/methods	Unit of Measurement
Heart rate	Digital blood pressure monitor	beats/min.
Stroke volume	Doppler Ultrasound	ml/beat

Experimental Design and Statistical Techniques

The experimental design used in this study was random group design involving forty-five untrained male college students, who were segregated into three groups of fifteen each. The data thus collected from experimental and control groups at rest and after exercise condition during pre and post test have been analyzed by three-way factorial ANOVA with repeated measures on last two factors. In all the cases level of confidence was fixed at 0.05 for significance.

Results of the Study

The data on heart rate have been analyzed by three-way factorial ANOVA (3x2x2) with repeated measures on last two factors and the results thus obtained are presented in table 2.

Table 2 also indicates that the three-way interaction of groups, training and exercise conditions confers the existence of significant difference on heart rate among groups in relevance to testing at rest and after exercise during pre and post tests.

Since, the interaction effect is significant, the simple effect test has been applied as follow up test and it is presented in table-3.

Table – 2: Three Way Factorial ANOVA on Heart Rate

Source of Variance	Sum of Squares	df	Mean Squares	Obtained "F" ratio
Groups	568.433	2	284.217	97.792*
Error (Group)	122.067	42	2.906	
Training	1513.800	1	1513.800	391.339*
Groups and Training	723.233	2	361.617	93.483*
Error (Training)	162.467	42	3.868	
Exercise	607377.422	1	607377.422	122095.653*
Group and Exercise	151.144	2	75.572	15.192*
Error (Exercise)	208.933	42	4.975	
Training and Exercise	245.000	1	245.000	69.778*
Training, Exercise and Group	160.033	2	80.017	22.790*
Error	147.467	42	3.511	

**Significant at .05 level of confidence*

(Table values required for significance at .05 level with df 1 & 42 and 2 & 42 are 4.07 and 3.23 respectively.)

Table-3exhibits that heart rate did not vary significantly between groups during pretest period at rest and after exercise conditions, while, significant difference exists on heart rate between groups at rest and after exercise conditions during posttest period (*for which the post hoc test was performed and presented in table 4 & 5*).

In addition, it reveals that resting heart rate and the heart rate in response to exercise of aerobic and anaerobic training groups altered significantly for better as a result of respective training, while no significant changes on resting heart rate and the heart rate in response to exercise of control group were found. The heart rate of all the three groups elevated significantly in response to exercise during pretest and posttest period.

Table - 3: The Simple Effect Scores on Heart Rate

SOURCE OF VARIANCE	SUM OF SQUARES	DF	MEAN SQUARES	"F" RATIO
Groups at rest during pre test	2.023	**2**	1.0113	**0.288**
Groups after exercise during pre test	1.089	**2**	0.544	**0.155**
Groups at rest during post test	712.297	**2**	356.148	**101.44***
Groups after exercise during post test	86.01958	**2**	43.00979	**12.25001***
Tests at rest and group I	1267.5	**1**	1267.5	**361.0083***
Tests at rest and group II	997.6449	**1**	997.6449	**284.1484***
Tests at rest and group III	0.133467	**1**	0.133467	**0.038014**
Tests after exercise and group I	**246.5305**	**1**	**246.5305**	**70.2166***
Tests after exercise and group II	**128.1313**	**1**	**128.1313**	**36.49424***
Tests after exercise and group III	**2.133867**	**1**	**2.133867**	**0.607766**
Tests during pre test and group I	97584.09	**1**	97584.09	**27793.82***
Tests during pre test and group II	96673.58	**1**	96673.58	**27534.48***
Tests during pre test and group III	97356.15	**1**	97356.15	**27728.89***
Tests during post test and group I	**110413.5**	**1**	**110413.5**	31447.87*
Tests during post test and group II	**109686.7**	**1**	**109686.7**	**31240.86***
Tests during post test and group III	**96219.92**	**1**	**96219.92**	**27405.27***
Error	**147.467**	**42**	**3.511**	

*Significant at .05 level of confidence

(Table values required for significance at .05 level with df 1 & 42 and 2 and 42 are 4.07 and 3.23 respectively.)

TABLE - 4: SCHEFFÈ S TEST FOR THE DIFFERENCES BETWEEN PAIRED MEANS ON HEART RATE OF GROUPS AT REST DURING POST TEST

Aerobic Training Group	Anaerobic Training Group	Control Group	Mean Difference	Confidence Interval
57.333	59.133		1.800*	1.739
57.333		70.067	12.734*	1.739
	59.133	70.067	10.934*	1.739

*Significant at .05 level of confidence

Table 4 demonstrates that there is a significant difference among groups confined to this study on heart rate at resting condition during posttest period. It is inferred that the heart rate of aerobic training group is significantly better than anaerobic training group at resting condition during posttest period.

Table – 5: Scheffè S Test for the Differences between Paired Means on Heart Rate of Groups after Exercise during Post Test

Aerobic Training Group	Anaerobic Training Group	Control Group	Mean Difference	Confidence Interval
178.667	180.067		1.400	1.739
178.667		183.333	4.666*	1.739
	180.067	183.333	3.266*	1.739

*Significant at .05 level of confidence

Table 5 reveals that significant differences exists between aerobic training and control groups; and anaerobic training and control groups on heart rate after exercise condition during posttest period. It is found that the heart rate in response to exercise during posttest of aerobic and anaerobic training groups didn't differ significantly.

The data on stroke volume have been analyzed by three-way factorial ANOVA (3x2x2) with repeated measures on last two factors and the obtained results are presented in table-6.

Table – 6: Three Way Factorial ANOVA on Stroke Volume

Source of Variance	Sum of Squares	df	Mean Squares	Obtained "F" ratio
Groups	4051.744	2	2025.872	185.509*
Error (Group)	458.667	42	10.921	
Training	8120.450	1	8120.450	757.909*
Groups and Training	4003.300	2	2001.650	186.8218*
Error (Training)	450.000	42	10.714	
Exercise	143312.450	1	143312.450	23993.315*
Group and Exercise	138.433	2	69.217	11.588*
Error (Exercise)	250.867	42	5.973	
Training and Exercise	107.339	1	107.339	41.259*
Training, Exercise and Group	49.144	2	24.572	9.445*
Error	109.267	42	2.602	

*Significant at .05 level of confidence

(Table values required for the df of 1 & 42 and 2 & 42 are 4.07 and 3.23 respectively)

Table 6 indicates that significant differences exist in the three way interaction of groups, training and exercise conditions on stroke volume. Since, the interaction effect is significant, the simple effect test has been applied as follow up test and it is presented in table-7.

Table – 7: The Simple Effect Scores on Stroke Volume

Source of Variance	Sum of Squares	df	Mean Squares	"F" ratio
Groups at rest during pre test	3.355344	2	1.677672	0.644763
Groups after exercise during pre test	3.466333	2	1.733167	0.66609
Groups at rest during post test	1464.874	2	732.4372	281.4901*
Groups after exercise during post test	2649.617	2	1324.809	509.1502*
Tests at rest and group I	2881.2	1	2881.2	1107.302*
Tests at rest and group II	1888.141	1	1888.141	725.65*
Tests at rest and group III	0.3	1	0.3	0.115296
Tests after exercise and group I	4368.121	1	4368.121	1678.755*
Tests after exercise and group II	3141.644	1	3141.644	1207.396*
Tests after exercise and group III	0.833167	1	0.833167	0.320202
Tests during pre test and group I	23352.3	1	23352.3	8974.75*
Tests during pre test and group II	22632.51	1	22632.51	8698.119*
Tests during pre test and group III	21816.09	1	21816.09	8384.353*
Tests during post test and group I	27300.8	1	27300.8	10492.24*
Tests during post test and group II	26581.6	1	26581.6	10215.84*
Tests during post test and group III	21924.06	1	21924.06	8425.849*
Error	109.267	42	2.602	

*Significant at .05 level of confidence

(Table values required for significance at .05 level with df 1 & 42 and 2 and 42 are 4.07 and 3.23 respectively.)

Table 7 indicates that stroke volume did not vary significantly between groups during pre test period at rest and after exercise conditions, however, significant difference exists on stroke volume between groups at rest and after exercise conditions during posttest period (*for which the post hoc test was performed and presented in table 8 & 9*).

The result of the study also indicates that stroke volume at rest and in response to exercise of aerobic and anaerobic training groups altered significantly for better as a result of training. However no significant changes on stroke volume were found among tests at resting and in response to exercise condition of control group. Furthermore, the findings indicates that stroke volume of all the three groups elevated significantly in response to exercise during pretest and posttest period.

Table - 8: The Scheffè S Test for the Differences between Paired Means on Stroke Volume of Groups at Rest during Post Test

Aerobic Training Group	Anaerobic Training Group	Control Group	Mean Difference	Confidence Interval
84.200	81.067		3.133*	1.497
84.200		65.733	18.467*	1.497
	81.067	65.733	15.334*	1.497

*Significant at .05 level of confidence

Table 8 shows that significant differences exists between aerobic and anaerobic training groups, aerobic training and control groups and anaerobic training and control groups on stroke volume at resting condition during post test period. It is inferred from the result of the study that the stroke volume at resting condition of aerobic training group is significantly better than anaerobic training group during post test period.

Table – 9: The Scheffè S Test for the Differences between Paired Means on Stroke Volume of Groups after Exercise during Post Test

Aerobic Training Group	Anaerobic Training Group	Control Group	Mean Difference	Confidence Interval
144.533	140.600		3.933*	1.497
144.533		119.800	24.733*	1.497
	140.600	119.800	20.800*	1.497

*Significant at .05 level of confidence

Table 9 shows that significant differences exists between aerobic and anaerobic training groups, aerobic training and control groups and anaerobic training and control groups on stroke volume after exercise condition during post test period. It is inferred from the result of the study that the stroke volume in response to exercise of aerobic training group is significantly better than anaerobic training group during post test period.

Discussions on Findings

The results of the present study are in conformity with the findings of the previous research studies. It is fact that numerous physiological variables change as a result of exercise to maintain homeostasis and muscular work. Increased aerobic fitness is also indicated by a lower heart rate at matched submaximal work rates (McInnis & Balady, 1994).

Heart rate is acutely elevated immediately following a work bout (Fleck, 1988). Interestingly, in terms of chronic adaptations, there appears to be a reduction in heart rate from training, which is considered beneficial (Stone *et al*., 1991).

Piira and others (2010) assessed the heart rate (HR) dynamics and found that cardiac vagal outflow is attenuated and vasomotor sympathetic activity elevated during exciting sports events.

The stroke volume in highly trained persons can continue to increase up to near maximal rates of work (Scruggs *et al*., 1991; Gledhill, Cox & Jamnik, 1994). Several factors contribute to the increase in stroke volume from sports training. The athlete's heart structure augments stroke volume. Left ventricular end-diastolic internal diameter and left ventricular end-diastolic wall thickness increase in parallel so that their ratio is not significantly altered (White, *et al*., 1987). Stroke volume increases in parallel with the increased end-diastolic volume so that muscle fiber shortening is maintained.

Conclusions

Based on the findings of the study it was concluded that the heart rate and stroke volume at rest and after exercise conditions of aerobic and anaerobic training groups altered significantly for better as a result of respective training, where aerobic training has the upper hand as compared to anaerobic training for its effectiveness on heart rate and stroke volume.

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Digital Childhood: To Study The Time Spent By Children On Sunday

Dr. T. Prabhakar Reddy, Director of Physical education, Kakatiya Medical College, Warangal

ABSTRACT:

Objective : to study the time spent by the children on Sunday in children aged 6 years to 12 years.

Design: Prospective study.

Participation: total 300 children were included in the study. The age group between 6 to 12 years

Introduction:

Recent years have seen an explosion in electronic media marketed directly at the very youngest children in our society: a booming market of videotapes and DVD's aimed at infants aged 1 to 18 months, the launching of the entire television networks specifically targeting children as young as 12 months, the development of variety of handled video game players for preschoolers, and a multimillion – dollar industry selling computer games for children as young as 9 months. Despite this plethora of new medial aimed at the very young, little is known about children's use of such media. Thus, the total time spent by children on holiday need to be reviewed in relation to medial and other factors. Few existing studies focus on the media use of children who are younger than 5. In this article, we provide a brief overview of time spent by children on Sunday in age group of 6 years to 12 years.

METHODS:

This prospective study was undertaken in the department of paediatrics during 1st June 2011 to 31st May 2012. Cases were children of age group 6 years to 12 years coming to the paediatric OPD during the study period.

The study included 300 children who were aged 6 years to 12 years. Parents of these children were asked about how their children spent their Sunday. Of those 300 parents, 284 parents responded well in the subsequent visit and provided the details of the activities which their children do on Sunday. Therefore, the sample used comprised information for 284 children.

Parents were asked to report what their child did the following on the Sunday: watched television, watched a video or DVD, played video games or mobile games, played computer games, usd the computer for something other than games like internet, read story books or news papers, did painting, listened to music, went for tuitions, did homework, slept, chatted with their parents or grandparents, played indoor or outdoor games, went for friend's birthday, parents were then asked to report on the amount of time their children spent using these various activities on the Sunday.

Also parents were asked about the details of their family like total number of television sets in their home, availability of television set in bedroom or child's room. Data were entered in MS Excel, cleaned and completeness checked.

TABLE –I

Activity	Average time spent hours , minutes	
	boys	Girls
Watching television	04.30	00.44
Watching a video/DVD/movie	00.40	00.23
Playing video games on a console	01.01	00.39
Playing hand-held video games or mobile games	00.43	00.38
Playing computer games	00.54	00.50
Using computer for something other than games like internet	00.35	00.31
Reading story books / news papers	00.30	00.44
Painting	00.18	00.50
Listening to music	00.46	01.15
Tuitions	00.45	00.50
Doing homework	01.05	01.15
Sleeping	00.45	00.50
Chatting with their parents or grandparents	00.31	00.35
Playing indoor games(chess or caroms)	00.44	00.50
Playing outdoor games	00.50	00.30
Going for friend's birthday	00.20	00.30
Day to day activity (bath, tea, lunch dinner etc)	01.00	01.30
Total	16.00	16.00

RESULTS:

Total 300 children coming to the paediatrics OPD between age group 6 years to 12 years were studied. Out of these 300 cases, 284 gave proper feedback. In those 284, 154 were boys & 130 were girls. 8 hours of night sleep is considered for both boys & girls. Rest 16 hours were studied for the activites & the average distribution of their day- time showed as per given in table no. 1. in those 16 hours, averagely 1 hour is spent on day to day activities like bathing, tea, lunch, dinner, etc. about 25 % time is spent for watching television averagely, with some variation between boys & girls. The total time spent by boys on electronic based equipments is 9 hours 12 minutes (57.5%) & by girls is 8 hours (50%).

TABLE-2

Parameter	yes	No
Number of televisions =2	42	242
Bedroom television	28	256
Access to either cable or satellite based channels	225	57
Video game corsole	140	144
Hand held video game or mobile games	227	256
Computer	85	146
Internet access	28	200

The parameters study shows that most of them are living in homes with at least 1 of each product: nearly 15% live in home with 2 televisions. 80% children in this age live in homes with access to either cable or satellite based channels. Approximately 50% of the households had a video game console, and about 80% had access to a hand held video game or mobile games. Even more households (30% reported having a computer, and 10% of all households have internet access. Although none of this is perhaps surprising, we did find it surprising that many of these young children have televisions in their own bedrooms. This was true for almost 10% of children. The most common reason that parents named for having a television in their child's bedroom was that it frees up other television in the house so that other family members can watch their own.

DISCUSSION

The impetus for this study came from the striking lack of empirically based knowledge about the extent of exposure to and use of media and technology by young children. This study provides the most recent information available regarding the extent of media use and media access of school going children between age group 6 years to 12 years.

In addition, the results of this survey make it clear that young children today are growing up in a media saturated environment. For this cohort of children and presumable for future cohorts as well, access to and use of media have become part of the fabric of their daily lives.

Much has been made of the vast array of media and technology that are used by children today, and it is clear that they have far more choices available to them than previous generations. However, it is also true that this study indicates that children's use of electronic media is still, by and large, dominated by television. Also, young children do play video games or use the computer. The use of these media is for as same duration as they spend for watching television, which is not a trivial amount of time in a young child's day.

To state that television and DVD ownership was virtually ubiquitous in the homes of young children does not adequately capture the extent of media saturation in these homes. Overall, it seems clear that these children will be very different from previous generations of children with respect to their comfort with technology and the extent to which they use all forms of technology in their daily lives. An environment that directly exposes children in television-that is, being in a constant television household and having television in the child's bedroom-is related to higher chances of decreasing outdoor games.

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Effects Of Meditation On Sociability And Self-Concept Among School Girls

DR. KUNTAL THAKUR
Assistant Teacher, BGCA Vidyamandir, Howrah, West Bengal, India, Cell phone: +919477373487 Email. - kuntalthakur007@gmail.com
DR. SANDIP SANKAR GHOSH
Assistant Professor, State Institute of Physical Education for women, Hastings House, Alipore, Kolkata-700027, West Bengal, India, Cell phone: +919432486653 Email. - sandipsankarmal@gmail.com
MR. ARIJIT KUMAR
Assistant Teacher, M.C.K. Vidyapeeth, Howrah, WB, India, Cell Phone+919432837174 Email- kumararijit07@gmail.com

Abstract
Meditation helps an individual overcome these emotions to facilitate a calm peaceful mind and healthy and stress free body. Meditation promotes relaxation, develops self-concept, self-confidence, positive attitude and socialability and reduces stress as well as anxiety. The purpose of the present study intended to find out of effects of meditation on social ability and self-concept of school boys.

Methodology: Total ninety private school girls (N=90) of District Howrah, West Bengal State were selected at randomly as subjects for the present study. The age limit of the subjects was 17-19 years. All the subjects were divided into two equal groups such as Gr. M and Gr. C. Group. M was experimental group and Gr. C served as control group. Socialability Questionnaire designed by Berent Jonathan and Self-concept Questionnaire designed by Dr. Beena Shah and both questionnaires were employed to all the subjects of Gr. M and Gr. C and thereafter specific meditation as a treatment was given to Gr. M for five days in a week and continued six months and finally the subjects were retested on criterion measures. The data were analysed by paired t–test to find out the effects of the treatment. **Results**: The results of the present study showed that the social ability and self-concept were improved significantly at .05 level of confidence among meditation practitioners group after six month treatment. **Conclusion:** Social ability and self-concept of meditation practitioners group was improved significantly after six months treatment.
Keyword: Meditation, Social ability, Self-concept, Social-anxiety.

Introduction: The English word ‘meditation’ is derived from the Latin word ‘meditatio’ which means “to think, contemplate devise, ponder, and meditate. The greatest help to spiritual life is meditation. In meditation we divest ourselves of all material conditions and feel our divine nature. We do not depend upon any external help in meditation. Meditation is universal. It transcends all divides like religion, country and culture. It is a gift given to mankind to access the infinite sprite not limited by any identity. It is the only tool that can aid a person to return to innocence. In modern life style has high exposure to anger, hate, fear and other negative emotion. Meditation helps an individual overcome these emotions to facilitate a calm peaceful mind and healthy and stress free body. Meditation promotes relaxation, develops self-concept, self-confidence, positive attitude and socialability and reduces stress as well as anxiety. Social ability refers to the ability or characteristic of a person who deals easily with social performance situation. On the other hand, self-concept refers to the person perception about himsilf. Singh M. P et. al.(2009) studied on socialability between IIT Gandhinagar engineering students and VGEC Ahmedabad engineering students and results showed that the both institutes confronts to the same level of academic stress which requires almost similar level of attention towards the academics. Jadhav (2006) investigated the impact of yoga practices on self-concept among fifty naturopathy and yogic science college students and fifty MBBS students both male and female. Result revealed that naturopathy and yogic science college students have better self-concept than MBBS students. Deshpande, Nagendra and Raghuram (2009) studied the practice of integrated yoga module consisted of asanas, pranayama, meditation, notional correction and devotional session on personality and self-esteem in normal adult, compared with the mild moderate physical exercise group. Shapiro et al. (2007) and Javanbhakt et al. (2009) observed significant decrease in state and trait anxiety among 34 women following Pranayama training programme of two months. Khalsa et al. (2009) showed similar results among adolescents.

PURPOSE:

The purpose of the present study intended to find out the effects of meditation on socialability and self-concept of school girls.

METHODOLOGY:

Total ninety private school girls (N=90) of District Howrah, West Bengal State were selected at randomly as subjects for the present study. The age limit of the subjects was 17-19 years. All the subjects were divided into two equal groups such as Gr. M (n=45) and Gr. C (n=45). Gr. M was experimental group and Gr. C served as control group. Socialability Questionnaire designed by Berent Jonathan and Self-concept inventory designed by Dr. Beena Shah and both questionnaires were employed to all the subjects of Gr. M and Gr. C and thereafter specific meditation as a treatment was given to Gr. M for five days in a week and continued six months and finally the subjects were retested on criterion measures. The data were analysed by paired t–test to find out the effects of the treatment.

TREATMENT CONSISTS OF FOLLOWING MEDITATION:

Prayer is the best to begin all session of meditation. It helps to concentrate our mind, so investigator used to start all the session of meditation with prayer. Then girls of Gr. M practised slow breathing exercise for three minutes. After breathing exercise they practised following meditation treatment:

Phase-1: 1st Month meditated with the word of mantra (Guru Mantra) played by audio system and sited in sukhasana.

Phase-2: 2nd and 3rd Month meditated with a slow imaginary speech by the investigator and sited in ardha padmasana.

Phase-3: 4th and 5th month meditated with imaginary speech along with slow audio music and sited in padmasana.

Phase-4: 6th month meditated with full of silence sited in padmasana, they Concentrated deeply towards the point between their eyebrows. Keep their mind focused and energy internalized, Continued for at least seven to eight minutes, Finished with a prayer to the Divine, offering themselves into the light of God.

All type of meditation like mindfulness meditation, focus meditation, movement meditation, mantra meditation and spiritual meditation were included in treatment programme. Investigators took help from yoga experts for preparing the design of programme.

RESULTS AND DISCUSSIONS:

Socialibility scores and self-concept score were analyzed by paired t-test and level of significance was set up at .05 level of confidence.

TABLE-I

Group means increase in Socialability among Gr. M and Gr. C after one year treatment

Variable	Type of test	Gr. M (n=45)			Gr. C (n=45)		
		Mean	SD	t	Mean	SD	t
Socialability	Pre-test	19.91	1.15	62.5	19.78	1.28	0.2
	Post-test	27.47	1.14		21.11	1.21	

Significant at .05 level of confidence

Table-I represents the mean values of pre and post test for socialability of Gr. M and Gr. C. The mean values of pre-test and post-test of Gr. M were 19.91 and 27.47 respectively in socialability. On the other hand, mean values of pre-test and post-test of Gr. C were 19.78 and 21.11 respectively in socialability. The t-value of sociability of Gr. M was 62.5 and the t value of Gr. M in relation to improvement of sociability was significant at .05 level of confidence after six months treatment. The t-value of sociability of Gr. C was 0.2. To be significant at .05 level of confidence the t-value should be greater than 2.01. The t-value of Gr. C was not improved significantly at .05 level of confidence after six months treatment.

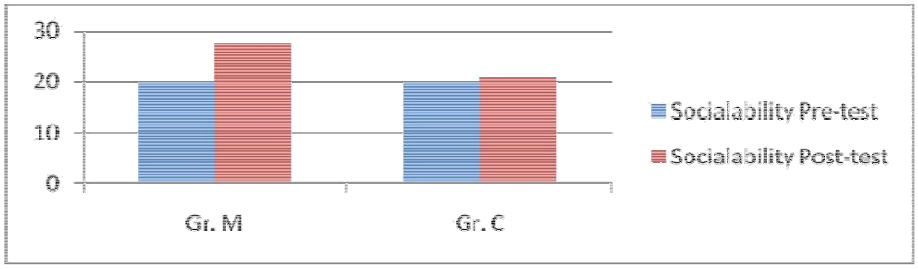

Fig. 1: A comparison of means of pre and post test data on socialability among Gr. M and Gr. C.

Social ability refers to the ability or characteristic of a person who deals easily with social performance situation. Socialability includes psychological and social attributes, which can influence individual's attitudes, habits, beliefs and ideas. Sports contribute a great deal to the development of socialization utilized by an individual to understand himself and others, to direct his own behaviour. Table-I represents meditation group improved socialability significantly at .05 level of confidence. These improvements have been presented by bar graph (Fig.1). Singh, M.P. (2009), Deshpande (2009), Eilin Ekeland (2004 have reported that yogasanas have greater impact on socialability as well as self-concept and self-esteem.

TABLE-II
Group means increase in Self-concept among Gr. M and Gr. C after one year treatment

Variable	Type of test	Gr. M (n=45)			Gr. C (n=45)		
		Mean	SD	t	Mean	SD	t
Self-concept	Pre-test	233.75	2.08	3.41	233.69	2.12	0.73
	Post-test	257.91	3.35		233.82	1.95	

Significant at .05 level of confidence

Table-II represents the mean values of pre and post test for self-concept of Gr. M and Gr. C. The mean values of pre-test and post-test of Gr. M were 233.75 and 257.91 respectively in self-concept. On the other hand, mean values of pre-test and post-test of Gr. C were 233.69 and 233.82 respectively in self-concept. The t-value of self-concept of Gr. M was 3.41 and the t value of Gr. M in relation to improvement of self-concept was significant at .05 level of confidence after six months treatment. The t-value of self-concept of Gr. C was 0.73. To be significant at .05 level of confidence the t-value should be greater than 2.01. The t-value of Gr. C was not improved significantly at .05 level of confidence after six months treatment.

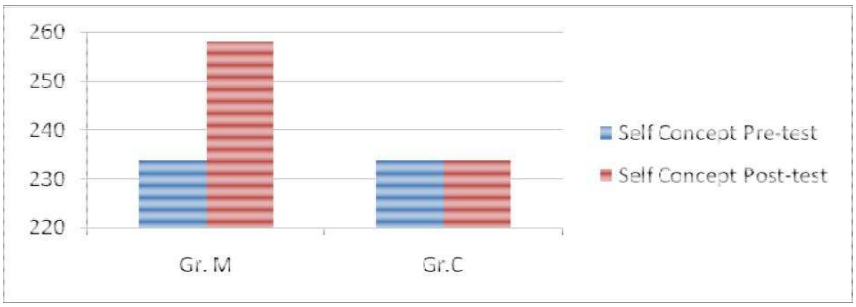

Fig. 2: A comparison of means of pre and post test data on self-concept among Gr. M and Gr. C.

Meditation or Dhana , a part of astanga yoga play great role for the improvement of self-concept which has been reported by Anderson and Freshman (1982), Bhole and Karambelkar (1971), Deshpande, Nagendra and Raghuram (2009), Morison and Ibrahim (1981) and Yadhav (2006). In this study, Meditation group improved significantly after six months treatment. Meditation have a greater impact on the mind and the senses than other exercises with the result that meditation help to develop one's physical and mental powers to make the mind clam and control the emotion. Yoga involves and includes eight paths (i.e. astanga yoga – yama, niyama, asana, pranayama, pratyahara, dharana, dhyana and Samadhi.). The astanga yoga based on idealistic approach, a real road to attain god consciousness, self-consciousness and self-concept.

CONCLUSION

Under the conditions of the present study the results seem to be concluding that the following:

Significant improvement of socialability was observed by administering six months treatment of meditation among school going girls but no significant improvement was observed among control group in comparison of socialability after six months treatment.

Significant improvement of self-concept was observed by administering six months treatment of meditation among school going girls but no significant improvement was observed among control group in comparison of self-concept after six months treatment.

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Sports Spirit And Influence Of Economic Factors

Chaithanya Kuchana
(Ph. D) Research Scholar, Department of Economics, Osmania University, Hyderabad - 07.

Introduction

How good a professional sports team is depends, of course, on the quality of its players. Because teams compete for better players by offering higher salaries, the quality of a team depends largely on how strong it is financially. The financially stronger teams will, on average, be the better teams. And they will also, on average, be the ones in bigger cities, because more revenues can be made in bigger cities. In baseball, equivalent win records in New York, Los Angeles, or Chicago yield three times the revenue as in Kansas City, Milwaukee, or Pittsburgh. That is why professional sports teams in cities with large populations tend to have records above .500, while teams in cities with small populations tend to have records below .500. Major league sports, as every reader of the sports pages knows, is a major league business. As a result, economics has a lot to say about how players, teams, and leagues will act under different circumstances. But would you believe that economics can be used to predict which teams will win and which will lose? It can.

Exceptions to the rule that financially stronger teams are better are some small-market teams, such as Oakland and Montreal that, for certain periods of time, develop high-quality players in their farm-team system. These “diamonds in the rough” are better than the market. Such a strategy can produce relatively competitive teams in a small market while keeping player salaries relatively low. Of course, the exception proves the rule. Once these players win substantial salary increases through arbitration or become free agents, big-market teams often hire them away. It is easy to see why large-market teams do better in the era of free agents, when a star player can move to whichever team will pay him the most. But, as I will explain below, this differential between large and small city teams also existed when teams “owned” player contracts and players were not free to accept a higher offer.

One factor that matters for team revenues and for competitive balance is the league’s rule for dividing the gate receipts. In basketball and hockey, the home team gets all of the gate receipts and the visitor gets nothing. The gate division is 85:15 in baseball and 60:40 in football. When the home team gets to keep more of the gate receipts, the teams in bigger cities get more of the benefit from their inherent financial advantage. When the split is more equal, the financial advantage of being in a bigger market is less.

Partly for this reason, financial disparity is least in the National Football League (NFL).But in all sports, revenues from national television contracts have grown as a percentage of total revenues, and TV revenues are divided equally among the clubs. As a result, the differences in the financial strength of teams have narrowed. Big-city domination, though not completely eliminated, has diminished.

By their very nature, sports leagues are **CARTELS** that exclude **COMPETITION** from other companies. You cannot start a baseball team and hope to play the Yankees unless you can get Major League Baseball (the cartel) to grant you a franchise. The **ANTITRUST** laws prohibit cartels, but professional sports is the only private business in the United States that is largely exempt from those laws. Ever since a 1922 court decision (Federal Baseball Club of Baltimore v. National League et al.), baseball has been totally exempt. No other sport enjoys such a blanket exemption from antitrust, but all professional team sports have a labor exemption and, since the Sports Television Act of 1961, a broadcast exemption.

All of the leagues have collusive agreements that govern the selection, contractual arrangements, and distribution of players among the teams. Collectively, these agreements grant a degree of monophony power (MONOPOLY power over the right to buy something—in this case, player services) to owners. The owners exploit this power by paying the players less than their incremental contribution to revenue. Athletes enter most professional team sports through a drafting procedure. The common feature of the drafts is that they grant one team exclusive bargaining rights with each prospective player. Once drafted, the athlete negotiates with that team alone, and others cannot offer higher salaries to get him. In some instances, signing bonuses for draft choices are very high. Such instances are relatively rare and depend on the quality of the player and the labor-market structure of the sport.

In baseball, where drafted players usually are assigned to the minor leagues, face relatively long careers on average, are not constrained by a salary cap, and are paid their salaries for the length of their contracts which can be for several years large signing bonuses for amateurs are rare. In football, where players face a salary cap, careers are short less than three years, on average and salary is not guaranteed if the player fails to make the team or is injured during the season, signing bonuses can be high for impact players. The rules affecting the amateur draft have been weakened somewhat over the years, but competitive bidding for beginning players remains impeded. Once the player has come to terms with the drafting team, he must sign a uniform player's contract that allows him to sell his services only to the team holding the contract. Although player contracts vary from sport to sport, all contain some basic prohibitions against player-initiated moves to other teams. That is, owners are free to "trade" (sell) players to other teams, but players are not totally free to offer their services to competing teams.

Owners claim that restrictions on player movement are necessary to maintain competitive balance and prevent financial powerhouses such as the old Yankees from buying up all the best talent and completely dominating the sport. That, owners say, would make the sport duller for fans and hurt everyone. Economists have always been skeptical about the owners' motives—and about the evidence. There never was any disagreement over the fact that star players would wind up on big-city teams. But economists believe that this would happen regardless of whether or not leagues restrict moves initiated by players. If players were free to move between teams, then, assuming they were indifferent about location, they would play for the team that pays the most. The team that pays the most is the one that expects the largest increment in revenue from that player's performance. Since an increment in the win-loss record yields more revenue in, say, New York than in Kansas City, the best players go to New York rather than to Kansas City.

That point, which is made by those who justify restrictions on mobility, is correct. But limiting the ability of players to initiate moves should not have any effect on where players end up playing. When players are not free to move, does a small-city team that acquired a star player in the draft keep him? For a small-city franchise, the team holding the player's contract expects him to contribute, say, one million dollars in incremental revenue to the club. In a large city, that same player's talents might contribute three million dollars. Because the player is worth more to the big-city team in either case (and the big-city team will pay more for him), the small-city franchise has an incentive to sell the player's contract to the big-city team, and thereby make more money than it could by keeping him. Thus, players should wind up allocated by highest incremental revenue, with or without restrictions on player-initiated movement.

The evidence supports that conclusion. Since the advent of free agency, which made it easier for players to jump from one team to another, the total movement of players (trades, sales, minor league transfers) has been about the same as it was before. So, although restrictions on player-initiated movement should not affect the allocation of player talent within a league, they substantially affect the division of income between owners and players. Under free agency, the players earn what they contribute to incremental revenue; under league restrictions on player-initiated transfers, the owners keep more of the revenues. The dramatic rise in player salaries since the mid-1970s, notably in baseball and basketball, is largely the result of the relaxation of restrictions on player-initiated transfers.

The most important antitrust issue in sports today relates to the formation of new leagues. The collusive arrangement in the allocation of broadcast rights between the television networks and the existing leagues constitutes a formidable barrier to entry for a new league. In particular, football programming is very valuable because football games attract large audiences. Large audiences mean high ADVERTISING revenues and, therefore, large network television revenues to the NFL. By allocating games to several networks instead of just one, the NFL has become a partner with the networks in the broadcast enterprise. Further, the contract stipulates that the networks cannot broadcast another professional football league's games within forty-eight hours of an NFL game. This relegates any competing league's games to midweek, which is hardly attractive to the networks.

Television, by building fan recognition and loyalty, builds attendance and gate receipts. Thus, a competing league may not be able to exist without access to television. The NFL has an exclusive, multiyear contract with the networks that is a barrier to entry for a competing league. Only when the network-NFL contract expires is there the possibility of a point of entry. But for that to happen, the networks would have to consider a new league's games suitable substitutes for NFL games. Because teams in new leagues are inferior to established teams (the established teams already have the best stars), the networks have little incentive to make such a substitution. Partly because of the broadcast exemption to antitrust law, and partly because of the judicious expansion of the leagues in all of the professional team sports, fans are unlikely to see competing sports leagues arise.

Some seventy-three million fans attended major league baseball games in 2004, and fan interest remains high in other professional team sports. The explosion of new sport facilities since 1990 has contributed to increased attendance. These expensive facilities, usually financed by taxpayers, are leased to the teams at relatively low prices. These implicit annual subsidies to teams are about ten million dollars or so per team, and a new facility adds twenty million or more to a team's revenue. These added revenues and subsidies add to a franchise's value.

Conclusion

Economists have found that the benefits from the government subsidies, such as increased employment, expanded consumer leisure spending, economic development, or other economic effects, are a fraction of the subsidies. Proponents of public spending on sports facilities claim that income generated in the community is ten dollars for every one dollar spent by the team's fans. Economists are skeptical that the impact is more than twice that of club revenues. Many other public projects rank well above sport facilities in generating benefits for a given subsidy. But politicians and bureaucrats are in a poor bargaining position relative to the monopoly leagues. These leagues keep one or more sites open and threaten to relocate or deny expansion to the locality that will not build a new facility. Politicians want to provide popular projects that their constituents favor, and a sports team is considered part of the local culture and quality of life. Often, special bond elections are held to approve public spending for sport facilities. Such elections seldom draw voter turnouts of more than 10 percent. Relatively more fans turn out to vote than the general public. Moreover, these facilities often are financed by increased taxes on tourists. But one must also turn to psychological and sociological explanations for the popular support of sports monopolies.

One important area of economic activity that this article leaves out is that of amateur sports. The economic importance of amateur sports, measured by the value of time and other resources spent by participants and fans, is comparable in order of magnitude to the importance of professional sports.

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Influence Of Physical ComponentsFor Effective Bowling In Cricket

S.Sanjay kumar and B.Krishna Deepika
Research Scholar ,kakatiya university Warangal. **Assistant Professor, University College of Physical Education & Sports Sciences Acharya Nagarjuna University, Guntur, A.P.

Introduction:

The Origen of cricket is very vague, and many theories have been put forward suggesting its origins. Extensive studies and research have been conducted to trace its history and they have come out with different versions. However it is commonly accepted that the game originated from a very old leisure activity indulged by shepherd's .The shepherds used crook and other fame equipments to hit a ball like deceive which used to be made up of wool or stone.

The first evidence of cricket being played was recorded in the year 1550, by the pupils of Royal Grammar school, Guildford. In the year 1611 it is reported that two young men from Sussex were punished for playing cricket instead of going to the church. The first match is recorded to have been played Cox heath in Kent in the year 1646.

Earlier cricket used to thrive greatly as a gambling game. People used to place huge amounts of bets in matches and thus the games started to get reorganization. Cricket was in fact a major gambling sport towards the end of the seventeenth century. it is recorded that in the year 1679,11-a side match was played with stakes as high as 50 guineas for per side.

During the 18th century cricket survived and thrived due to the huge amount of money via monetary backing and gambling. The first instance of a match to be played between counties in England is recorded tube on 29th June in the year 1709.The watch was played between surrey and Kent at Dart ford Brent.

In the year 1787,the Marylebone cricket club also known MCC was created.the MCC has since then gone on to become one of the most prominent bodies in world cricket.Cricket in its initial days were restricted to the aristocratic class of England. Cricket gradually went on to become the national game of England.

The Problem:

The study has been undertaken to identify a ***'Influence Of Physical Components For Effective Bowling In Cricket'***. Hence a experimental study attended in this aspect.

Statement Of The Problem:

The present focuses on cricket game and its development from the different aspects of the sports environment. Cricket players who representing universities, districts and Nationals where considered for the present study, different aspects which have promoted a influence of physical components for effective bowling of the players were discussed here.

The study answers the following questions**:**

Is there any real difference between cricket players in relation to their speed (30 mtr sprints) and bowling performance?

Is there any real difference between cricket player in relation to their strength endurance push-up 1minute) and bowling performance?

Is there any real difference between cricket player in relation to their flexibility (bend& reach) and bowling performance?

Signficance Of The Study:

The present investigations will emphasis its significance as shown in the following paragraphs. The talent selection in cricket coaching of teams in various levels, is greatly include by predicting the future potential of cricket probable while selecting for nationals, districts and universities with the help of the measurement and evaluation procedure. At the beginning of the training of cricket it is very important to predict the talent to find out the early /late maturing children among these trainees.

Development mainly organic, neuro-muscular, explosive strength, strength endurance and speed, interpretive, social and emotional development of cricketers can only be studied by applying the methods of measurement and evaluation.

Significance Of The Problem:

The present study has been under taken to answer such questions which promote the cricket game from the lower level to higher level of competition. The present study is a pioneering study in the field of sports which studies the complete details pertaining to influence of physical components for effective bowling.

The study under the report focuses the aspects which promoted the performance of the players.

The study might help to find out where there is any significant difference between cricket player in relation to their speed (30 Mtr sprint) and bowling performance.

The study might help to find out where there is any significant difference between cricket player in relation to their strength endurance (push-up 1 minute) and bowling performance.

The study might help to find out where there is any significant difference between cricket player in relation to their flexibility (bend & reach) and bowling performance.

Objective Of The Study:

To find out the existing difference among cricket players in relation to their speed (30 mtr sprint) & bowling performance.

To find out the existing difference among cricket players in relation to their strength endurance (push-ups 1minute) and bowling performance.

To find out the existing difference among cricket players in relation to their flexibility (bend & reach) and bowling performance.

Hypothesis:

There will be any significant difference among cricket players in relation to their speed (30 mtr sprints) and bowling performance.

There will be any significant difference among cricket players in relation to their strength endurance (push-up 1minute) and bowling performance.

There will be any significant difference among cricket players in relation to their flexibility (bend & reach) and bowling performance.

Delimitations:

The study will delimit in the following aspects:

The study will conduct on 30 cricket players at Hindi Maha Vidyalaya arts college cricket ground.

The physical component test will adopt to find out the motor qualities for the sample selected such as strength endurance, speed and flexibility.

Performance test will conduct bowling performance for male cricket players.

Limitations:

The study was limited to the following aspects:

The factors like food habits, climatic conditions, diet, lifestyle and family back ground were beyond the control of the investigator.

The parental background will not consider for this study.

The socio-economic status of the subject will not consider for the study**.**

Operational Definitions:

Speed:

"It is the performance prerequisite to do motor action under given conditions (moment task, external factors, individual prerequisites) in minimum of time." [Schnabel 1987)]

Strength Endurance:

It is a combination of strength and endurance. Any sports activity which involves strength this activity will be done under the condition of fatigue.

Flexibility:

Flexibility may be defined as the range of motion around a joint as determined by their elasticity of the muscles, tendons and ligaments associated with the joint under consideration. In other words flexibility is the ability of a person to move the parts of the body through as wide a range of motion as possible without under strained to the joints and its muscle attachments.

Cricket:

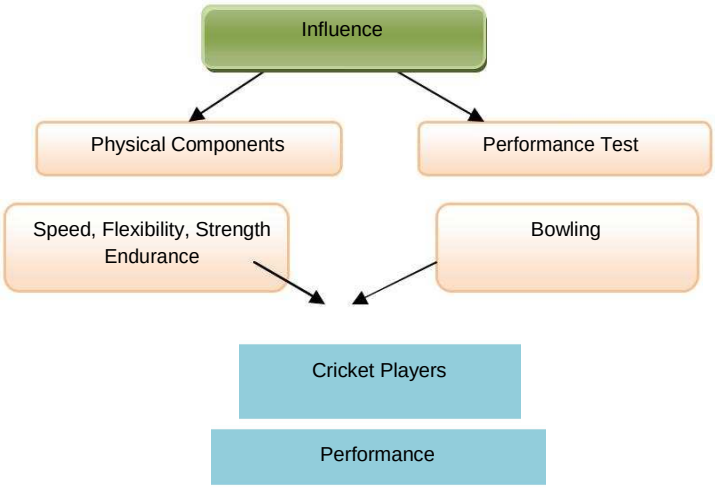
Cricket is a team game played with the ball and bat consisting of eleven players each side played under specific rules and regulations under the banner of "international cricket council."

Methodology

In the preceding chapters the researcher has presented the review of related literature pertinent to the present study, the problem was discussed, the significance of the problem stated, the objectives were focused and formulated the hypothesis; the delimitations of the study were specified.

In the present chapter, the discussion on the methodology of the research is proposed to be presented. This chapter focuses about the design of the study, sample considered, tools used, the methods followed for data collection and finally the statistical techniques adopted.

Design Of The Study



Sample Of The Study:

For the present research, the researcher has to collected data from total of 30 men Healthy cricket players were considered as the sample of the study. All these subjects are receiving regular and systematic training from qualified coaches and consuming proper nutritional diet.

Showing the sample of the study

S. NO.	Name of the category	Subjects
1.	Cricket players	30

TOOLS:

Table: Showing the tools that are used for present study

Group	Tests	Physical parameters	Unit of measurement
A	Motor Qualities		
	AAHPER Test	Speed (30 m sprint)	SECS
	AAHPER Test	Strength endurance (pushup 1 min)	COUNTS
	AAHPER Test	Flexibility (bend & reach)	CMS
B	PERFORMANCE Test	Bowling test	COUNTS

Results and Discussions:

The result pertaining to the hypothesis-1 (speed measurement) is presented in the following sections.

SPEED (30M sprint):

The result pertaining hypothesis-1 are presented in the Table-1

The mean and standard deviation of speed in seconds for the subjects along with the entire 30 subjects is show in Table-1 below.

	N	Minimum	Maximum	Mean	Std. Deviation
Speed 30m sprint	30	3.56	5.87	4.3607	0.52504

Discussions:

To test the hypothesis of differences in the speed between the intra groups of 30 subjects as shown in the table. The minimum speed is 3.56 and maximum speed is 5.87. the mean value is4.3607 and the standard deviation is 0.52504.The mean value and standard deviation is found to be which is statically significant indicating among 30 subjects in their speed.

The results pertaining to the hypothesis to-II (strength endurance measurements) are presented in the following sections.

STRENGTH ENDURANCE (push-ups 1 minute):-

Results pertaining Hypothesis-II presented in the tables-2.the mean and standerd deviation of strength endurance (push-ups 1 minute) for the subject along with for the entire 30 subjects is shown in table-2 below.

Table 2:

	N	Minimum	Maximum	Mean	Std. deviation
Strength Endurance Push Ups 1 min	30	10	50	29.33	9.466

Discussions:

To test the hypothesis of difference in the strength endurance(push-up 1min)between the intra groups of 30 subjects as shown in the table. The minimum push-ups in 1min is 10 and maximum push up in 1min is 50.the mean value is 29.33and the standard deviation is 9.466.the mean value and standard deviation is found to be which is statically significant indicating among 30 subjects in their push-ups in 1min.

The results pertaining to the hypothesis to-III (flexibility)are presented in the following sections.

FLEXIBILITY (bend and reach in cms):

Results pertaining Hypothesis-III presented in the tables-3.the mean and standard deviation of flexibility (bend and reach in cms) for the subject along with for the entire 30 subjects is shown in table-3 below.

Table 3:

	N	Minimum	Maximum	Mean	std.deviation
Flexibility (bend and reach in cms)	30	1	17	8.93	4.913

DISCUSSIONS:

To test the hypothesis of difference in the flexibility (bend and reach in cms) between the intra groups of 30 subjects as shown in the table the minimum flexibility(bend and reach in cms) is 1 and maximum flexibility(bend and reach in cms) is 17. The mean value is 8.93 and the standard deviation is 4.913. The mean value and standard deviation is found to be which is statically significant indicating among 30 subjects in their flexibility (bend and reach in cms).

Table 4:

Performance test bowling accuracy

		Frequency	Percent
Valid	1	5	16.67
	2	11	36.7
	3	9	30.0
	4	5	16.67
	Total	30	100.0

DISCUSSIONS:

Table 4 showing the bowling accuracy for the 30 subjects are presented to given an idea of the intra group distribution of performance in the subject of Cricket players. The highest percentage is 36.7 and the frequency is 11 and lowest percentage is 16.67 and the frequency is 5 and the medium value percentage is 30 and the frequency is 9.

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Analysis On The Effect Of Resistance Training And Consequent Detraining Of Different Durations On The Strength And Strength Endurance Among Young Women

***Ms. G. Sarah Sarojini **Dr.Siva Sankara Reddy**
*** Research ScholarAssistant Director (Selection Grade)**
Department of Physical Education, Sri Padmavathi Mahila Viswavisyalayam ** Associate Professor & Guide Department of Physical Education S.V.University, Tirupathi – 517502, Andhra Pradesh, India

Introduction:
The word Fitness is all important in the modern day living. It may be to maintain optimum health status or to excel in the sporting performances. Though fitness has got so many dimensions and still experiencing dynamic transformation in the modern era, human being has to keep pace with all these dynamic changes and be thoroughly informed about the needful. The capacity of muscular strength is largely determined by physiologic factors such as size and type of muscle fiber as well as by the anatomic lever arrangements of bone muscle. Muscular endurance which is also recognized as strength endurance is an important common component of both the Health related physical fitness and skill related physical fitness.

Objectives:
To find out the effect of different exercises protocol on the strength factor
To find out the effect of different exercises protocol on the strength endurance factor
To find out the time period for significant reduction in strength & strength endurance factor from the gaining values through the previous training.

Hypotheses:
1. Two months training is less responsive for the components of strength and strength endurance, when compared to the four months of training with the selected protocols of exercises.
2. Four months of training may be more effective in consolidating the components of strength and strength endurance and might be less prone to influence of detraining than two months of training.
3. Different combinations of resistance training might cause to change the status of the strength and strength endurance of the subjects differently.

Methodology:
The experimentation required five groups of fifteen subjects in each group. A total of 150 women students of Sri Padmavati Mahila University, Tirupati in which the research scholar has been working as the Head, Department of Physical Education, were selected from among the volunteers. Though the subjects were selected from one single source of institution the university draws women students from all places of the Andhra Pradesh state of India. Subjects selected for the study were never involved in any kind of regular exercise training, though some might have got some kind of exercise experience in general. The age of the subjects ranged between 20 to 24 years. The subjects were assigned to various experimental groups on random basis without any bias and at the same time the importance of the Control group was also explained to those subjects who were actually interested in exercise protocols. The following five groups were formulated for the sake of research study.
1. 2 months Weight Training and Plyometrics group.
2. 2 months Plyometrics and Weight Training group.
3. 4 months Weight Training and Plyometric group
4. 4 months Plyometrics and Weight Training group.
5. Control Group.

Variables selected for the research study:
A. Experimental variables: Weight training and Plyometric exercises were selected as experimental variables along with time duration of two months and four months. Hence, the variables for the experimentation were two months and four months of weight training and plyometrics in combination. A total of four different combinations of time and exercises were selected for the experimentation.

B. Criterion Variables: Strength and Strength Endurance were taken for the research study as criterion variables. Effect of the experimental variables viz different protocols of exercise combinations of different durations were measured and analysed on the two criterion variables.

Strength: Bench Squat Strength in Kgs: Subjects flex the knees from the standing position to the half squat position taking the thigh parallel to the ground, at which point the subject automatically sits on the bench and then raises back to the standing position with the weighted barbell. The amount of weight was loaded on trial and error basis to the maximum possible limit of every individual. This measure represents the quadriceps, hamstrings group, adductor group, Gluteus group muscles strength of the subjects. Standing Vertical Arm Press in Kgs: Subjects pressed the barbell loaded with weights, standing slightly feet apart, while gripping the rod at shoulder width. The amount of weight was loaded on trial and error basis to the maximum possible limit of every individual. This measure represents the strength of deltoid, triceps, biceps small head, upper portion of the pectoralis major, upper portion of trapezius, sternocloidomastoid etc representing the upper body strength.

Strength Endurance: Sit ups test: To test the core muscle group strength the sit up test was adopted and the no of repetitions completed in one go was the score of the subjects.

a. Flexed arm hang: Subjects were asked to hang to a bar and raise themselves on the hand strength up to the chin level, keeping the flexed hands at ninety degrees and were asked to hang like that as long as they can sustain the same position and the time elapsed in seconds was the score of the subjects.

b. Half squat jumps: Subjects were asked to jump up with both feet from the half squat position fully extending the knees and the total no of repetitions executed by the subjects as the score of the subjects.

The scores of these three tests are in different measuring units like, Sit ups in no of completed repetitions, flexed arm hang in time representing no of seconds, and again half squat jumps in no of completed repetitions. So, the researcher converted all these three test raw scores of all the subjects into T scores and further analysis was done with the T scores only.

Statistical Technique:

A. To find the effects of experimental variables on criterion variables:

ANCOVA (Analysis of Covariance) statistical tool was used to analyse and find if the experimental variable brought any significant change in the strength and strength endurance of the subjects. Scheffe's Post Hoc Comparison tests were conducted to find out the source of significant difference among all the groups of experimentation for both the criterion variables.

B. To find the effects of detraining of different periods on the two criterion variables:

ANOVA (Analysis of Variance) statistical technique was used to analyse and find if there is any significant decrease occurred in the developed strength and strength endurance factors of the subjects. ANOVA was used to know the period in which there was significant decrease observed in the strength and strength endurance. Analysis of Variance was done with every weeks detraining values until there was significant decrease observed in the gained strength and strength endurance values through the previous experimental variables.

Level of Significance: Level of significance used for statistical verification was 0.05.

Results and Discussion :

1. Two months training is less responsive in the components of strength and strength endurance when compared to the four months training.

All the four protocols of the experimentation viz Four months of weight training followed by Plyometirc exercises in each session, four months of Plyometric exercises followed by weight training in each session, two months of weight training followed by plyometric exercises in each session and two months of Plyometric exercises followed by weight training in each session have brought significant increase in Strength and Strength Endurance variables. There is no significant difference between the same period protocols of two exercise combinations. It means, there is no significant difference appeared through analysis of covariance (ANCOVA) and post hoc comparisons between Four months protocol of Weight training followed by Plyometric exercises in each session and Four months protocol of Plyometric exercises followed by Weight training in each session. In the same way, there is no significant difference appeared through analysis of covariance(ANCOVA) and post hoc comparisons between Two months protocol of Weight training followed by Plyometric exercises in each session and Two months protocol of Plyometric exercises followed by Weight training in each session. But, post experimentation means adjusted on the pre experimentation mean values elicits that the Four months protocols have produced more significant increments in Strength and Strength Endurance when compared to the Two months protocols of exercises, hence, the hypothesis that 'two months training is less responsive in the components of strength and strength endurance when compared to the four months training' was accepted.

2. Four months training may be more effective in consolidating the components of strength and strength endurance and might be less prone to influence of detraining than two months training.

Analysis of Variance (ANOVA) on the detraining effects elicits the following:

a. With regard to Strength, detraining or complete rest after two months of training protocols of both the combinations of exercise in each session, caused significant decrements in strength factor in fourteen days, where as it took twenty one days to observe significant decrease in strength with four months protocols of both combinations of experimental exercises.
b. With regard to strength endurance, detraining or complete rest after two months of training protocols and also after four months of training protocols of both combinations have shown significant decrements within fourteen days.
Hence, that part of the hypothesis, that the four months training may be more effective in consolidating the components of strength and be less prone to the influence of detraining than two months training protocols is accepted and that part of the hypothesis, that the four months training may be more effective in consolidating the components of strength endurance and be less prone to the influence of detraining than two months training protocols is rejected.

3. Different combinations of resistance training might cause to change the status of the strength and strength endurance of the subjects differently.
Adjusted post experimentation mean values of strength and strength endurance of the subjects for all the four combinations of the experimentation protocols showed significant differences. And also the Analysis of Variance (ANOVA) applied for different periods of detraining after the four different selected protocols of two different durations depicted that there is difference in detraining values. Hence, the hypothesis that different combinations of resistance training might cause to change the status of the strength and strength endurance of the subjects differently is accepted.

Conclusions:
The following conclusions were arrived with the help of appropriate statistical techniques and further analysis:
1. All the four protocols of exercises viz four months of weight training followed by plyometric exercises in each exercise session, four months of plyometric exercises followed by weight training in each exercise session, two months of weight training followed by plyometric exercises in each exercise session, two months of plyometric exercises followed by weight training exercises in each exercise session have shown significant increase in Strength of the subjects.
2. All the four protocols of exercises viz four months of weight training followed by plyometric exercises in each exercise session, four months of plyometric exercises followed by weight training in each exercise session, two months of weight training followed by plyometric exercises in each exercise session, two months of plyometric exercises followed by weight training exercises in each exercise session have shown significant increase in Strength Endurance of the subjects.
3. Fourteen days of detraining or rest after two months of Weight training and plyometric exercises and two months of plyometric exercises and weight training caused for significant reduction in strength of the subjects.
4. Twenty one days of detraining or rest after four months of Weight training and plyometric exercises and four months of plyometric exercises and weight training caused for significant reduction in strength of the subjects.
a. But with regard to the strength endurance, significant reduction was observed within fourteen days of rest or detraining after all the four experimental protocols of exercises.
b. Strength endurance of the subjects reduced quickly when compared to the strength factor of the subjects because of the detraining.

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Comparative Study Of Physical Fitness Components Of Football And Basketball Players

Dr.A.Raghu, P.E.T. Z.P.High School, Visakhapatnam

Abstract

Physical Fitness is the ability to carry out daily tasks with vigour and alertness without fatigue and with ample energy to engage in leisure pursuits and to meet emergency situations. Physically fit persons recover faster than secondary persons. Physical fitness is essential for better performance in games and sports. Physical fitness is the base for excellence in performance.The present study was on two groups (60 Football and 60 Basketball) players. NPED physical fitness test was used to collect the physical fitness data Mean, Standard deviation 't' value was worked out for both the group.On the basis of the findings of the study it was found that the explosive power of leg, speed, arm explosive power, muscular endurance and cardio vascular respiratory endurance dominate in case of football players.

Introduction

According to current thinking in the physical education profession, physical fitness is either health related or performance related. Health-related physical fitness is concerned with the development of those qualities that offer protection against disease and are frequently associated with physical activity. For example, certain physiological and psychological factors often affected by physical activity are thought to cause some degenerative diseases. Thus, health related physical fitness is important to everyone and should be stressed upon by physical educator.

Performance – related physical fitness is associated with those qualities conducive to better performance in sports and other physical activities, such as those requiring strength, endurance, agility and speed.

The components of both health-related and performance-related physical fitness are similar. For example, cardio-vascular function, body composition, strength and flexibility. However, the degree of development of each varies with the two type of physical fitness. Compared to health-related fitness, a more extensive development of these components may be required to achieve an appropriate level of performance-related fitness. Performance-related fitness is often associated with sport. For example. Athletes may need to develop the fitness component of strength to a greater degree then average citizens interested in improving and maintaining their health.

Physical fitness is to the human body what tine-tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is "the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is major basis for good health and well-being".

"Physical fitness is the ability to carry out daily tasks with vigour and alertness, without undue fatigue and with ample energy to engage in leisure pursuits and to meet emergency situation".

Methodology

For the purpose of the study 120 male players (60 Football and 60 Basketball) were randomly selected as the subject for the study.In order to measure variables such as speed, explosive power of leg extensor muscles, arm/shoulder muscular endurance, NPED test were used.

NPED Test items and their purpose given below:

Sl.No	Items	Purpose of Test
1	100 Meters	Basic Speed
2	Long Jump	Explosive Power of leg
3	Shot Put	Arm/Shoulder muscular endurance
4	High Jump	Leg explosive power
5	800 Meters	Circulatory, respiratory endurance

RESULT AND DISCUSSIONS OF THE FINDINGS

Mean of 100 mtr, Run, Long Jump, Shot put, High Jump and 800 mtr. Run of Football and Basketball players given below.

Sl.No	Test Items	Football Players Mean	Basketball Players Mean	Mean Difference	Standard Error
1	100 Meters	12.46	13.10	0.64	0.733
2	Long Jump	5.53	4.46	0.57	0.407
3	Shot Put	9.60	9.33	0.27	1.074
4	High Jump	1.52	1.40	0.12	0.698
5	800 Meters	2.43	3.02	0.19	0.469

0.05 Level of significance

Test Items **Result**

100 m. Run:Football players showed better than Basketball players. There was significant difference between the speed of Football players. Basketball playersshowed better speed and were found statistically superior.

Long Jump : Football players were better than Basketball players. There was significant difference between the leg power of Football and Basketball players. Football players showed better leg power. **Shot put**:Football players showed better arm/shoulder explosive power then Basketball players. There was no significant difference between arm/shoulders muscular power of Football and Basketball players.

High Jump: Basketball players showed greater explosive leg power. There was significant difference between the explosive power leg of Football and Basketball players for jumping to a height.

800 m. Run :Players showed better cardio-vascular respiratory endurance. There was no significant difference between endurance of Football and Basketball Players.

Conclusions

On the basis of the findings of the study it was found that the explosive power of leg, speed, arms explosive power, muscular endurance and cardiovascular respiratory endurance dominate in case of Football players

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Comparision Of Anxiety And Aggression Among Engineering College Women Athletes And Non Athletes

Ms R.Rajeswari, LPE, C.B.I.T. Gandipet
Prof. N.S. Dilip, Secretary Sports Board, J.N.T.U. Hyderabad

Abstract

The aim of this study was to compare anxiety and aggression among engineering college women athletes and non athletes. 30 women players of engineering colleges and 30 non players were randomly selected from engineering colleges in twin cities of Andhra Pradesh in the age group of 22 with standard deviation of $\pm$ 2.3 years. The selected subjects were assessed of their anxiety and aggression using standard questionnaires. The responses obtained were statistically analyzed using 't' test The results proved that there was significant differences between players and non players ($P<0.05$) on anxiety and aggression. The results proved that comparing between players and non players, players had significantly lesser anxiety and aggression levels. It was concluded that engineering college women can be involved in active games, which would be more helpful for managing anxiety and aggression.

Key Words: Engineering College Players, Non Players, Anxiety, Aggression

Introduction

Anxiety before or during athletic competitions can hinder the performance as an athlete. The coordinated movement required by athletic events becomes increasingly difficult when the body is in a tense state. A certain level of physical arousal is helpful and prepares us for competition. But when the physical symptoms of anxiety are too great, they may seriously interfere with the ability to compete. Similarly, a certain amount of worry about how one perform can be helpful in competition, but severe cognitive symptoms of anxiety such as negative thought patterns and expectations of failure can bring about a self-fulfilling prophecy. If there is a substantial difference between how one perform during practice and how one do during competitions, anxiety may be affecting their performance.

Aggression can be defined as any behavior directed toward intentionally harming or injuring another living being. There is "good" aggression and the "bad" aggression. Regardless of "good" or "bad" aggression, there are a couple of key factors that need to be present in order to describe the behavior as being aggressive. There are two primary categories that psychologist label aggression as: hostile or instrumental. Hostile aggression is where the primary goal is to inflict injury or psychological harm on another while instrumental aggression is where aggression occurs in the quest of some non aggressive goal.

Lundqvist C, et.al. (2011) examined the differences in anxiety ratings of elite and sub-elite athletes Han DH, et.al. (2011) compared anxiety between starters and non-starter athletes. Schaal K, et.al. (2011) highlighted important differences in psychopathology between male and female athletes, demonstrating that the many sex-based differences reported in the general population apply to elite athletes. Mosewich AD, et.al. (2011) found compassion development may be beneficial in cultivating positive sport experiences for young women. Ziaee V, (2012) found total anger scale karateka and swimmers had a significantly lower score compared to judoka and non athletes. Sysoeva OV, et.al. (2010) polymorthism and aggression was studied in control group of males and females and in the athletes and found the sport activities were found to decrease the aggression: the effect persist for the synchronized swimmers and for the wrestlers. Control group of males were characterized by higher aggression scores than females. Maxwell JP. (2007) documented that in 2007 Pedersen's findings that undergraduate students' ratings of 16 common sports based on their perceptions of the aggression in each sport. The theoretical foundations laid by previous researches cited proved that comparison of anxiety and aggression among athletes and non athletes would be beneficial for determination of anxiety and aggression levels of the groups concerned which in turn would be helpful for suitable psychological preparations. This research article

was intended to compare psychological variables, anxiety and aggression among engineering college women players and non players.

Methodology

To achieve the purpose of the study, the investigator randomly selected 30 women athletes who have represented their colleges in different levels of sports competitions and 30 non athletes who have not involved in any sports competitions. The subjects were chosen from randomly selected 5 engineering colleges from Hyderabad and Secunderabad, which are known as twin cities of Andhra Pradesh. The subjects were in the age group of 22 with standard deviation of $\pm$ 2.3 years. To measure the anxiety of the subjects, Taylor Manifest Anxiety Scale (TMAS) containing 50 item version found to be reliable at test retest reliable correlation of 0.82 over three weeks interval was used. To measure aggression of the subjects, aggression scale developed by Guru Piyari and Rajkumari (2002) consisting of 55 statements to be answered among 5 alternatives and found reliable through test retest correlation of 0.81 over three weeks interval was used. The questionnaire was administered among the subjects and responses were scored following the norms prescribed. The obtained scores were subjected to statistical treatment for comparison using 't' test. In all cases 0.05 level was fixed as significant level of differences.

Results

The comparison between women engineering college students on anxiety was statistically made through 't' test and the results are presented in Table I.

Tab I: Differences on Anxiety and Aggression between Women Players and Non Players of Engineering College Students

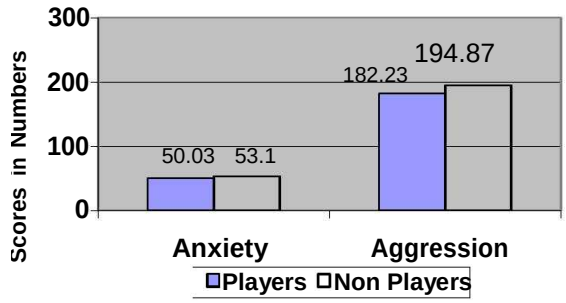
Variables	Group	Mean	MD	SD	SDM	't'	Required 't'
Anxiety	Players	50.03	-3.07	3.14	1.34	2.29*	1.699
	Non Players	53.10		6.63			
Aggression	Players	182.33	-12.53	24.77	5.34	2.35*	1.699
	Non Players	194.87		15.58			

*Significant at 0.05 level.

The results obtained proved that women players of engineering college mean was 50.03 with standard deviation $\pm$ 3.14 and non players was 53.10 with standard deviation of $\pm$ 6.63. The statistical analysis using 't' test proved that the obtained 't' value 2,29 was greater than the required table 't' value of 1.699 to be significant at 0.05 level. Hence, it was proved that there was significant difference on anxiety level between women players of engineering college and non players. And it was proved that level of the players was significantly less than non players.

The results on psychological variable aggression, obtained proved that women players of engineering college mean was 182.33 with standard deviation of $\pm$ 24.77 and non players was 197.87 with standard deviation of $\pm$ 15.58. The statistical analysis using 't' test proved that the obtained 't' value 2,29 was greater than the required table 't' value of 1.699 to be significant at 0.05 level. Hence, it was proved that there was significant difference on aggression level between women players of engineering college and non players. And it was proved that level of the players was significantly lesser than non players.

The results are presented through bar diagram as follows



Discussions

The results proved that there was significant difference between women players of engineering college and non players on psychological variable, anxiety. Abrahamsen FE, et.al. (2008) predicted that the female athletes would report more performance worries and concluded that fostering a mastery climate helps elite athletes tackle competitive pressure. Thus it was found that players by repeatedly involved in practical sessions and competitions reduce their anxiety than non players. And the findings of this study are in agreement with this study. It may be due to the fact that the players regularly participate. Sysoeva OV, et.al. (2010) studied aggression in control group of males and females and in the athletes and found the sport activities were found to decrease the aggression and males were characterized by higher aggression scores than females. The findings of this study proved that there women players were reduced aggression than non players and are in agreement with the findings of the previous research. Thus, the research found that women players of engineering college had reduced anxiety and aggression than non players.

Conclusions

The results of this study proved that women players had lesser anxiety and aggression than women non players, it was concluded that engineering college women can be involved in active games, which would be more helpful for managing anxiety and aggression.

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Nutritional Awareness Among Inter University Women Players Of Andhra Pradesh

Prof. N.S. Dilip, Secretary, Sports Board, J.N.T.U. Hyderabad
Ms. Uma Maheswari, Ph.d Scholar, J.N.T.U. Hyderabad

Abstract
The foremost aim of physical education has been to inculcate a healthy mind in a healthy body. The aim of this study was to find out the nutritional awareness among interuniversity women players in Andhra Pradesh. To achieve the purpose of the study, the investigator developed an awareness questionnaire consisting of 25 statements and administered among 50 women interuniversity players of different disciplines. The administered questionnaire has the four dimensions for assessing the nutritional awareness. Each statement was responded by the respondents for a 5 point scale, strongly agree, Agree, Neutral, Disagree and Strongly disagree. The score for each of the dimensions were discussed as positive (those who strongly agreed and agreed) and negative (those who strongly disagreed and disagreed). The results presented on four different dimensions on nutritional awareness of women interuniversity players proved that the players have adequate awareness on nutrition and helpful for general health, however they do not believe that nutrition would tone up muscles and specific food would help to improve specific fitness. Further the women players were not aware that proper nutrition could improve performance of them as revealed by their responses. It was concluded that the importance of nutritional awareness among women players must be emphasized and popularized so that they could follow suitable nutritional habits for their all round development.

Key Words: Nutrition, Awareness, Women Players

Introduction
Nutritional deficiency is almost impossible to avoid in these modern times. With our busy lifestyle, the ever-tempting convenience of fast food, it is now very difficult to enjoy excellent daily nutrition. The foremost aim of physical education has been to inculcate a healthy mind in a healthy body. Our body is indeed an instrument satisfying all our needs. Its maintenance and upkeep has always been a serious concern of formal education. It finds expression as health education and organisation of games and sports. Players always tend to improve their performance through vigorous physical activities and training and do not give more attention for their nutritional food habits. Women players were found to be more conservative than men players in taking nutritional food.
Formulated theoretical background made by Melissa C. Mullinix (2003) stated that female soccer players reported an energy intake of 34 kcal/kg body weight (total 2015 kcal/day). The contribution of protein, fat and carbohydrate to total energy intake were 15%, 30% and 55%, respectively. Dietary intakes of vitamins D and E were less than two-thirds of the recommendations and intake of all minerals was greater than two-thirds of the recommendations. The self-reported health status suggests that this was a healthy group of female athletes. Responses to the nutrition attitude questions suggest that these athletes may benefit from appropriate education regarding the role of nutrients in health and performance. From a review of energy intake of male and female athletes in different sports, Burke *et al* (2001) concluded that the energy intake of female athletes, expressed relative to body mass, is about 70% of that of their male counterparts. This can be explained by the lower intensity, frequency and duration of the training programmes of most female athletes. Many studies, however, report that some athletes seem to be in negative energy balance, and such observations seem to apply more often to female athletes than to their male counterparts: these observations and the potential explanations have been reviewed in detail by Loucks (2004) . It does seem that some female athletes are in precarious energy balance, and maintain a low body mass and low body fat content by prolonged energy restriction, including some periods of negative energy balance. This is not unique to female athletes, in many societies women are under greater pressure to maintain a low body fat content. At a time when the prevalence of obesity is increasing rapidly, some parts of the population are moving in the opposite direction. In a comprehensive review of match activities, patterns of play and energy demands of both training and match play, Bangsbo *et al* (2006) were able to present little information on the female player. There also seem to be rather few data on

the energy intakes of female players and most of those are based on short term measurements (typically three days) using household measures to estimate portion sizes that were then recorded in a food diary. The food intake, especially nutritional food intake depends on an individual awareness and attitude. And in these circumstances, this research is devoted to find out the nutritional awareness among interuniversity women players in Andhra Pradesh.

Methodology

To achieve the purpose of the study, the investigator developed an awareness questionnaire consisting of 25 statements and administered among 50 women interuniversity players of different disciplines. The administered questionnaire has the following four dimensions

Tab I: Dimensions of Nutritional Awareness And Statements Numbered

Dimension	Total No of Statements	Statements Numbered
Awareness on Nutrition	6	8, 18, 20, 22, 23, 25
Nutrition for General Health	4	3, 5, 10, 16
Nutrition for Fitness	7	1, 4, 6, 9, 17, 21, 24
Nutrition for Performance	8	2, 7, 11,12, 13, 14, 15, 19

Each statement was responded by the respondents for a 5 point scale, strongly agree, Agree, Neutral, Disagree and Strongly disagree. The score for each of the dimensions were discussed as positive (those who strongly agreed and agreed) and negative (those who strongly disagreed and disagreed).

Results

Tab II: Analysis of Responses on Awareness on Nutrition Dimensions

Stt.No	Description	Positive		Negative	
		No	%	No	%
8	One must take at least three liters of water a day.	46	92	0	0
18	Players must not take fatty food	33	66	10	20
20	In order to reduce fat one should take balanced diet	46	92	4	8
22	Drinking milk daily helps build strong bones.	28	56	7	14
23	Vegetarians are healthier than non vegetarians.	36	72	11	22
25	Nutritional Food intake must be increased with increase in physical activity.	10	20	24	48

The results presented in Table II proved that the inter university level women players have fairly good nutritional awareness more than 66% to 92% for statements 8, 18, 20, 22, and 23. There was negative tendency for the statement “Nutritional Foot intake must be increased with increase in physical activity” as most of the women feel that increased intake corresponding to physical activity would make them fattier.

Tab III: Analysis of Responses on Nutrition for General Health Dimensions

Stt.No	Description	Positive		Negative	
		No	%	No	%
3	Proper balanced diet would maintain health	46	92	4	8
5	Nutritional foods helps to decrease diseases	41	82	9	18
10	Food in consultation with dietician would be helpful to maintain health	29	58	21	42
16	Asana would not help in maintaining good health.	46	92	4	8

The results presented in Table III proved that the inter university level women players have positive tendency that Nutrition and nutritional habits are for general health and the obtained percentages ranged from 58% to 92%..

Tab IV: Analysis of Responses on Nutrition for Fitness

Stt.No	Description	Positive		Negative	
		No	%	No	%
1	A Player must be aware of the benefits of nutritional habits	50	100	0	0
4	Nutrition contributes for toning up muscles	5	10	40	80
6	Heredity plays a role in health of an individual.	36	72	9	18
9	Specific nutritional foods help specific fitness	4	8	34	68
17	Health status should be measured for every player.	43	86	4	8
21	Every player must have nutritional awareness to improve physical fitness	34	68	16	32
24	BMI calculation for every player is needed for nutritional supplementation	32	64	11	22

Though all the players (100%) positively responded for "A player must be aware of the benefits of nutritional habits, most of them, that is 80% and 68% were not in agreement with the statement that "nutrition contributes for toning up muscles" and "Specific nutritional foods help specific fitness" respectively.

Tab V: Analysis of Responses on Nutrition for Performance

Stt.No	Description	Positive		Negative	
		No	%	No	%
2	Nutrition contributes for more energy	26	52	24	48
7	Anemic is due to lack of nutrition	19	38	15	30
11	Nutrition is directly related to physical fitness	17	34	30	60
12	Specific nutrition would improve performance	34	68	12	24
13	Nutrition is directly related to improved metabolism	50	100	0	0
14	Lack of nutrition would affect performance	9	18	38	76
15	Iron supplementation improves strength	41	82	9	18
19	Protein supplementation improves muscular strength	13	26	30	60

Though all the players (100%) positively responded for "Nutrition is directly related to improved metabolism", most of them, do not believe that nutrition can contribute for the improved performance as 60% responded negatively for "Nutrition is directly related to physical fitness", 76% responded negatively for "Lack of nutrition would affect performance" and 60% negatively responded for "Protein supplementation improves muscular strength".

Conclusions: The results presented on four different dimensions on nutritional awareness of women interuniversity players proved that the players have adequate awareness on nutrition and helpful for general health, however they do not believe that nutrition would tone up muscles and specific food would help to improve specific fitness. Further the women players were not aware that proper nutrition could improve performance of them as revealed by their responses. The findings of this study are in agreement with the findings of Loucks (2004) that some athletes seem to be in negative energy balance, and such observations seem to apply more often to female athletes than to their male counterparts. It was concluded that the importance of nutritional awareness among women players must be emphasized and popularized so that they could follow suitable nutritional habits for their all round development.

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Comparison Of Selected Physiological Variables Among House Wives Working Women And Regular Walkers

M. Usharani, Research Scholar, S.V.University, Tirupati and working as Lecturer in the Department of Physical Education, S.P.W. Degree and P.G. College, Tirupati.
Dr. C.S. Prasad Babu, Head and Director of Physical Education, SV University, Tirupati.

Introduction

Doing is very good, but that comes from thinking… fill the brain, therefore, with high thoughts, highest ideal, place them day and night before you, and out of that will come great work **- Swami Vivekananda.** Physical activities of different varieties, whether for occupation, Education or leisure the need of primitive men were basis but not complex. The learning of such skill are part of their education and the development and conditioning of the body, through vigorous physical activities were vital for efficient performance. The need to develop strong and enduring bodies has been recognized through the ages on vital for effective living.The word health is defined as the quantity resulting from total functioning of the individual that empowers has to achieve a personality to satisfy a social useful life. The field of physical education serves a lot for individual to be a healthy person. Research is the cause for the improvement in all fields, In the field of physical Education many research have been done in different areas Education is the manifestation of perfection in man, physical Education is no doubt an integral part of general Education. It is an Education not only for physique but also for psyche.

Objective Of The Study: The study aimed to examine and analyze was comparison of selected physiological variable among house wives, working women and regular walkers.

Statement Of The Problem: The purpose of the study was comparison of selected physiological variable among house wives, working women and regular walkers.

Hypothesis

With the intuition of the scholar it was hypothesized that the regular walkers and working women may be better in the selected physiological variables that house wives and there man he no significant difference between the regular walkers and working women.

Methodology

For the purpose of present study 30 women subjects were randomly selected for each selected category i.e., house wives working women and regular workers.House wives selected from the population who are above the poverty line with the help of the revenue inspectors of 2, 8, 15, 27, 29 wards of Tirupati Municipal Corporation from the list of 30 subjects were selected. Working women were selected from the population who are monthly income is more than Rs.10,000/-. Employees of S.V. University, S.P. Mahila University, T.T.D Administrative Office, Banks, TUDA Office etc.Regular walkers were selected the regular walker a brief survey has been conducted and potential walking areas identified in Tirupati. They were Alipiri Road, AIR Bypass Road, Municipal Park, TTD Administrative Office Area and S.V. University Stadium from the above four places. The walkers who are walking regularly for one year were listed from the text of 30 subjects were selected randomly.

All the ninety subject age was 40-45 years.

Statistical Procedure Applied

The study was comparison of selected physiological variable among house wives working women and regular walkers one way analysis of variance ANOVA used to find out.

1. Whether there is any significant variation between three groups on selected physiological variable (assigned as rows).
2. Whether there is significant variation among subjects variables (assigned as columns). Duncan's multiple range test (DMRT) was applied to determine which of the paired means aresignificantly differ. The level of significance selected to accept or reject the null hypothesis was 0.05 levels.

Results And Discussion

Analysis of the data (raw data presented in the appendices) collected is presented in this chapter. In the present study the selected physiological variables i.e., Blood pressure (systolic blood pressure and Diastolic blood pressure), pulse rate, skin fold at percentage – Tricept region, super iliac region, Thigh region Total of skin fold test and Fat percentage. Vital capacity Heart rate Tidal volume (TV). Inspiratory reserve volume (IRV) Expiratory reserve volume (ERV) and vital capacity VO_2 Maximum – percentile ranking. Heart rate VO_2 Maximum. Hemoglobin (HB%); low Density Lipoproteins (LDL); High Density Lipo proteins (HDL); Total Cholesterol (TC) were compared for the selected population i.e., regular walkers, working women and house wives aged between 40 to 45 years. Hence three groups are involved F-value, P-value was applied to determine the significant difference between the means. When even the 'f' value was found significant one way ANOVA and Duncan's multiple Rang tent (DMRT) was applied to determine which of the paired means are significantly differ. The level of significant selected to accept or reject the null hypotheses was .05 level.

Discussion

From the analysis of the data it was found that them was no significant difference a between the selected categories in Diastolic Blood Pressure, thigh Region Inspiratory reserve volume (IRV). Hemoglobin percentage (HB%) and High Density lipoprotein. As far as it was found that there was significant difference between the selection categories in systolic. Blood pressure Pulse Rate Tricept region, Super iliac region Total of skin fold test, Fat percentage, Tidal Volume; Expiratory reserve Volume (ERV) vital capacity, percentile ranking Recovery Heart rate, VO_2 Maximum low Density lipoprotein and Total Cholesterol when compared to House Wives and the is no difference between working women and regular walkers.The Less Percentage of body fat in working women and regular walker might have attributed due to the expenditure of Claries, food habits and due to awareness of fitness. The amount or severity of the exercise done by working women and regular walker; might not have sufficient to get a change in Diastolic Blood Pressure Hemoglobin Percentage and High Density Lipo Protein (HDC).

Recommendations And Suggestions

Based on the results of present study the following recommendation are made.

1. The women aged between 40 to 45 years can reduced their fat if they walk for about 45 minutes regularly.
2. Low to Medium intensity of walking would be highly beneficial in reducing significantly the LDL and TC of the Individual.
3. A similar study may be conducted on the subject of different age and sex groups.
4. A similar study may be conducted an Indian population to compare them with that of subjects from other country.
5. A similar study may be conducted to obtain the physiological variables of Indian Athletics of national and Inter National level.
6. It is also recommended that a similar study may be under take using parameter other those employed in their study.

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Impact of Varied Intensities of Bench Step Training on Certain Physiological Variables on Sports Persons of Osmania University

Dr. Janagama Prabhakar Rao
Principal, University College of Physical Education, Osmania University, Hyderabad, India
Dr.Rajesh Kumar
Chairman,Board of Studies in Physical Education, Osmania University, Hyd.

Abstract
Back Ground: Bench Step Training is usually associated with Cardio and develops high level of physical fitness. The aim of the study was to find the effect of varied intensities of bench step training on physiological variables like heart rate, cardio respiratory endurance and respiratory rate of the sportsperson of Osmania University.
Method: Ninety sportspersons of Osmania University from discipline acted as subjects whose age ranged between 18 -24 years and divided into three equal groups. Group I was low intensity training group (LITG), Group II was high intensity training group (HITG) and the third was control group (CG). Bench step training was administered thrice per week, one hour per day for 12 weeks separately for respective training groups. The physiological variables tested were resting pulse rate (RPR), cardio respiratory endurance (CRE) and respiratory rate (RR).The statistical tool used was Analysis of Variance (ANCOVA) to find out the significant difference between the LITG and HITG. **Result:** The results showed that the F ratio for RPR between the LITG and HITG from pre to post-test was, 9.56 and 26.62, for CRE the F ratio was 0.05 and 2.36 and for RPR the F ratio was 0.03 and 15.05 respectively. There was no change in the performance of the CG.
Conclusion: It was concluded that RPR, CRE and RR improved due to bench step training in both the experimental groups. Moreover, HITG resulted greater improvements than LITG and there was no change in the performance of CG. Further it is concluded that Bench Step Training is an exercise modality effective for enhancing total fitness profile by improving muscular performances, muscle morphology, and cardiovascular fitness.

Key Words: Respiratory rate, Heart rate, Cardio respiratory endurance, Bench Step Training

Introduction

Training is a program in which the exercise of various types is designed not only to increase his techniques and skills but also to increase the energy capacities of an athlete for a particular event. There are different methods of specific training programmes available for the development of speed, muscular strength, local endurance and cardio respiratory endurance to enhance the performance to the maximum level. Weight, Interval, Fartlek, Isotonic, Isometric, Isokinetic and bench step training are some of the methods used in this direction. It is not an easy task to select the training method for a particular sportsman. A clear understanding of what is required and what needs to be harnessed has to be analysed in a sportsman for an effective conditioning program. There are specific principles and guidelines for achieving optimal training adaptation. Training programme are designed to suit specific energy sources needed for an athletic event or contest. Moreover it is generally agreed that everybody does not respond to training in the same manner. Bench step training procedure requires the subject to lift his weight to a known height(height of the bench) at pre-determined rate set by a metronome. The main purpose of the study was to find out the effect of varies intensities of bench step training on physiological variables of heart rate , cardio respiratory endurance and respiratory rate.

Method

The subjects selected for the study were Ninety sportspersons of Osmania University from different discipline whose age ranged between 18 -24 years and divided into three equal groups. Group I was low intensity training group (LITG), Group II was high intensity training group (HITG) and the third was control group (CG). Bench step training was administered thrice per week, one hour per day for 12

weeks separately for respective training groups. The physiological variables tested were resting pulse rate (RPR), cardio respiratory endurance (CRE) and respiratory rate (RR).

The statistical tool used was Analysis of Variance (ANCOVA) to find out the significant difference between the LITG and HITG.

Results

Table 1 showing the Pre and Post test scores on Physiological variables of the Experimental groups and control group

Variables	Test	Mean of Control group	Mean of Experimental group-I	Mean of Experimental group-II	F
Respiratory Rate	Pre	19.2	19.07	19.17	0.03
	Post	19.5	15.6	15.6	15.0
Cardio Respiratory Endurance	Pre	2369.67	2364	2372.67	0.05
	Post	2354.33	2391	2414	2.36
Resting Pulse Rate	Pre	73.47	70.8	70.37	9.56
	Post	73.9	69.97	69.27	26.62

The results showed that the F ratio for Respiratory rate between the Experimental Group I (Low intensity group) and the Experimental Group II (High Intensity Group) was 0.03 and 15.0 , the F ratio for the Cardio Respiratory Endurance between the groups was 0.05 and 2.36 and for Resting Pulse Rate the F ratio was 0.03 and 15.05 respectively. The results showed that the high intensity group had shown significant improvements in the three selected physiological variables of respiratory rate, cardio respiratory endurance and the resting pulse rate when compared to the other two groups of low intensity and the control group. Further the low intensity group also showed improvements in the study variables when compared to control group. There was no change in the performance of the Control Group. This clearly points out that the Bench Step Training had a profound effect on the high intensity group and to some extent on the low intensity group.

Conclusion

It was concluded that Respiratory rate, Cardio Respiratory Endurance and Resting pulse Rate improved due to bench step training in both the experimental groups. Moreover, High Intensity Group resulted greater improvements than Low Intensity Group and there was no change in the performance of Control Group. Further it is concluded that Bench Step Training is an exercise modality effective for enhancing total fitness profile by improving muscular performances, muscle morphology, and cardiovascular fitness.

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A Comparative study of Explosive Power and Agility among Hand Ball Players and Basket Ball Players of Osmania University

Prof. Loka Bavoji Laxmikanth Rathod
Professor, Department of Physical Education, Osmania University, Hyderabad,India
Dr.K.Deepla
Associate Professor, Dept. of Physical Education, Osmania University, Hyderabad,India
D.Hari
Asst.Professor(Contract) Univ. College of Law, OU, Hyderabad

Abstract:
Background: 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 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.The objective of study is to determine the explosive power and agility among hand ball players and basket ball players of Osmania University. It is hypothesized there will be significant difference among both the players in explosive power and agility.
Materials and Methods: The purpose of the present study to find out the difference in explosive power and agility among Hand ball and Basket ball players. The sample for the present study consists of 50 Male Hand ball and Basket Ball Players out of which 25 are handball players and 25 are basket ball players. To assess the explosive power the standing broad jump test were used and for agility shuttle run is used.
Results: This study shows that basket ball players are having the good explosive strength and hand ball players are having the good agility.
Discussion & Conclusion: Power training for basketball players means training with a medicine ball and performing such exercises like ballistic jump squats, which have shown to increase explosive power in the basket ball. Hand ball exercises are designed to help improve your ability to strike the ball and return serves.. Hand ball exercises are often performed to improve the agility. It is concluded that basket ball players are having good explosive strength and hand ball players are having good agility.
Key words: explosive power, agility etc.

Introduction:

Explosive power drills are often used by athletes who need to generate a quick burst of maximal effort, such as movements required in football, track and field sports, court sports and even cycling. The types of exercises used to build this quick, explosive power are movements that 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.

Basketball speed and agility training focuses on short and quick drills that develop your reaction time and hand-eye coordination. Basketball speed and agility training ranges from footwork drills to full-court sprints.. Handball is a great sport for getting your body fit and healthy through fast-paced exercise.

Purpose of the study:

The purpose of the present study to compare the explosive strength and agiity among Hand ball and Basket Ball Players.

Methodology:

To find out the explosive strength and agility between Male Basket Ball and Male Hand Ball Players. The sample for present study consists of 25 Male Basket Ball Players and 25 Male Hand Ball Players

of Osmania University who has taken part in the O.U. Inter College sports and games during the year 2012-13.

Standing Broad Jump:
The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power. It is one of the fitness tests in the NFL Combine. The standing long jump was also once an event at the Olympic Games, and is also an event in Sports Hall competitions in the UK. **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.

Shuttle Run:
purpose: this is a test of speed and agility, which is important in many sports.
equipment required: wooden blocks, marker cones, measurement tape, stopwatch, non-slip surface .**procedure:** This test requires the person to run back and forth between two parallel lines as fast as possible. Set up two lines of cones 30 feet apart or use line markings, and place two blocks of wood or a similar object behind one of the lines. Starting at the line opposite the blocks, on the signal "Ready? Go!" the participant runs to the other line, picks up a block and returns to place it behind the starting line, then returns to pick up the second block, then runs with it back across the line.
scoring: Two or more trails may be performed, and the quickest time is recorded. Results are recorded to the nearest tenth of a second.

Results:
This study shows that basket ball players are having the good explosive strength and hand ball players are having the good agility.

Test Items	GROUP	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
SBJ	Basket BallPlayers	25	2.25	0.11	0.04	3.62	48.00	0.00
	Hand Ball Players	25	2.16	0.05	0.02			
Shuttle Run	Basket Ball Players	25	15.49	1.20	0.37	2.53	48.00	0.02
	Hand Ball Players	25	14.11	0.56	0.17			

The Basket Ball Players Standing Broad Jump Mean is 2.25 and Hand Ball Players Standing Broad Jump mean is 2.16 in there is adifference of 0.09 between Basket Ball Players and Hand Ball Players. The Basket Ball Players are having good explosive Strength compare to Hand Ball Players. The Basket Ball Players Shuttle Run Mean is 15.49 and Hand Ball Players Shuttle run mean is 14.1`1 in there is adifference of 1.38 between Basket Ball Players and Hand Ball Players. The Hand Ball Players are having good agility compare to Basket Ball Players.

Discussion:
Power training for basketball players means training with a medicine ball and performing such exercises like ballistic jump squats, which have shown to increase explosive power in the basket ball. Hand ball exercises are designed to help improve your ability to strike the ball and return serves. While many children and young kids play hand ball with a large rubber ball, traditional hand ball is played at high speeds. Hand ball exercises are often performed to improve the agility.

Conclusion:
It is concluded that basket ball players are having good explosive strength and hand ball players are having good agility.

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A Comparative Study of Speed in Crouch Start and Standing Start among Sprinters of Osmania University in India

Dr.Irgam Balaram Reddy
Head Department of Physical Education,Osmania University, Hyderabad
Dr.B.Sunil Kumar
Associate Professor, Department of Physical Education, OU, Hyd
Dr.V.Satyanaryana
I/c Director of Physical Education, OU, Hyd. India

Abstract:
Background: The crouching start is where when the gun shooter says "On your Mark" you stand in front of your line and you bend down and put your hands right under the line never above or you will get disqualified. Then when they say "Get set" You lean forward and put your butt in the air (not to much and not to little).. Then once the gun shoots you take off.There are three types of sprint starts:Bunch or Bullet start ,Medium start Elongated start.The Standing start in the races of longer distance 800m.
Materials and Methods: The purpose of the present study to find out the speed in crouch start and standing start among sprinters of Osmania University in India. The sample for the present study consists of 32 Male sprinters of Osmania University. The 50 M Run is used to assess the speed in Standing Start and Crouch Start. The Standing Start Run for 32 sprinters and on next day same 32 sprinters the Crouch Start with the starting blocks in medium start position is conducted by the Qualified Technical Officials in 50 M Run to assess the speed.
Results: The results of the study shows that in crouch start timing is faster than the standing start timing in 50 M Run.
Discussion & Conclusion: Sprint starts are very commonly used in athletics in sprints. The standing start is used by beginner athletes before they progress to the crouch start, while competitive athletes use the block start that allows them to apply force and thus aids in push off that can be transferred into horizontal velocity which can give the sprinters the speed compare to the standing start.

Introduction:
Sprints are short running events in athletics and track and field. Races over short distances are among the oldest running competitions. The first 13 editions of the Ancient Olympic Games featured only one event—the stadion race, which was a race from one end of the stadium to the other. There are three sprinting events which are currently held at the Summer Olympics and outdoor World Championships: the 100 metres, 200 metres, and 400 metres.
Starting Blocks are used for all competition sprint (up to and including 400 m) and relay events (first leg only, up to 4x400 m). The starting blocks consist of two adjustable footplates attached to a rigid frame. Races commence with the firing of the starter's gun. The starting commands are "On your marks" and "Set". Once all athletes are in the set position, the starter's gun is fired, officially starting the race. For the 100 m, all competitors are lined up side-by-side. For the 200 m, 300 m and 400 m, which involve curves, runners are staggered for the start.
In the rare event that there are technical issues with a start, a green card is shown to all the athletes. The green card carries no penalty. If an athlete is unhappy with track conditions after the "on your marks" command is given, the athlete must raise a hand before the "set" command and provide the Start referee with a reason. It is then up to the Start referee to decide if the reason is valid. In the event that the Start referee deems the reason invalid, a yellow card (warning) is issued to that particular athlete. In the event that the athlete is already on a warning the athlete is disqualified.
Crouch Start:
Sprint starts are very commonly used in athletics ranging from sprints to a number of middle and long distance events. The two main variations are the standing and the crouch start which are used for

middle or long distance events and sprints respectively. The crouching start is where when the gun shooter says "On your Mark" you stand in front of your line and you bend down and put your hands right under the line never above or you will get disqualified. Then when they say "Get set" You lean forward and put your butt in the air (not to much and not to little)..

There are three types of sprint starts:

Bunch or Bullet start - The toes of the rear foot are approximately level with the heel of the front foot and both feet are placed well back from the starting line.

Medium start - the knee of the rear leg is placed opposite a point in the front half of the front foot.

Elongated start - the knee of the rear leg is level with or slightly behind the heel of the front foot.

Standing Start:

The standing Start is used in the event more than 400 Meters.The standing start is used by beginner athletes before they progress to the crouch start, while competitive athletes use the block start that allows them to apply force and thus aids in push off that can be transferred into horizontal velocity. In the standing start the athlete strands rather upright with one foot behind the other.

Materials and Methods:

The purpose of the present study to find out the speed in crouch start and standing start among sprinters of Osmania University in India. The sample for the present study consists of 32 Male sprinters of Osmania University. The 50 M Run is used to assess the speed in Standing Start and Crouch Start.

50 Meters Run:

Sprint or speed tests can be performed over varying distances, depending on the factors being tested and the relevance to the sport. The 50 Meter Sprint is part of theInternational Physical Fitness Test, and their protocol is listed here.

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.

results: Two trials are allowed, and the best time is recorded to the nearest 2 decimal places.

Results and Discussion:

The results of the study shows that in crouch start timing is faster than the standing start timing in 50 M Run.

The Table No.1 showing the Mean, S.D, Standard Error, t-ratio of Sprinters in Standing Start and Sprinters in Crouch Start in 50 Meters Run.

Table No.1

Results of 50 M Run Test	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Standing Start	32	6.87	0.48	0.12			
Crouch Start	32	6.55	0.23	0.06	2.25	62.00	0.03

The Sprinters standing start mean performance in 30 M Run is 6.87 and Standard Deviation is 0.48 and Sprinters Crouch Start mean performance in 50 M Run is 6.55 and Standard Deviation is 0.23. The sprinters in crouch start are having the better speed i.e. 6.55 compare the sprinters in standing start is 6.87 there is a difference 0.32. The t-value is 2.25.

Conclusions:

It is concluded that Crouch Start is having better speed and advantage in Sprints compare to the Standing Start.

Recommendations:

It is recommended that similar studies can be conducted in hurdles and relays in athletics.

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A Comparative study of Agility among Sepaktakraw and Basket Ball Players of Hyderabad

A.Naresh, Physical Education Teacher, ZPHS,Wadiaram,Chegunta, Medak
K.Babaiah, Physical Education Teacher,ZPHS,Chinnagolkonda, Shamshabad, RR Dist.

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 takraw ball can travel at speeds of over 60mph! The game is played by two opposing Regus, a team of three players each, on a court separated by a net similar to badminton. It begins with the service, executed by a ball toss from one player to the Server. Then, the players try to beat their opponents using their legs and head, except their hands, inside three kicks. The highlight is the "spike" (see right picture above). This is the most dramatic and explosive move in the game for spectators to watch as players go mid-air, twisting and turning to power the ball down into the opponent's court. To play takraw, players can use either a net, a hoop, or simply stand around in a circle formation. Whatever the style, the object is to kick the ball to another player without the ball touching the ground. Sepak takraw combines ball skills (kicking and juggling) with the agility and acrobatic moves of gymnasts and the instinctive reflexes of competitive badminton players

Basketball is a sport played by two teams of five players on a rectangular court. The objective is to shoot a ball through a hoop 18 inches (46 cm) in diameter and 10 feet (3.0 m) high mounted to a backboard at each end. Basketball is one of the world's most popular and widely viewed sports.

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]).

Statement Of Problem:

To find out the agility among Sepaktakraw and Basket Ball Players of Hyderabad

Sample: For the present study 15 Male Sepak Takraw and 15 Male Basket Ball Players are taken for the study of Hyderabad

Tool:
To measure the agility the Shuttle Run is used.

Shuttle Run
Purpose
To measure the agility.
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. If the student starts first at one line and then at the other, it is not necessary to return the blocks after each race. Sneakers should be worn or the students may run bare footed.
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.

Results and Discussion:

Table – I

Test	GROUP	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Shuttle Run	Sepak Takraw	15	14.39	0.57	0.18	2.53	28.00	0.02
Shuttle Run	Basket Ball Players	15	15.63	1.21	0.38			

Table I found that Sepaktakraw players are having good agility compare Basket Ball Players because the sepaktakraw players are involved more movement of agility.

Conclusions:
It is concluded that Sepak takraw players are having good agility compare to Basket Ball Players.

Recommendations:

It is recommended that Sepak Takraw Players and Basket Ball Players must be given good training for agility. Similar studies can be conducted on other sports.

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Wikipaedia, Basket Ball and Sepaktakraw

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Exercise Precautions & Protocol For Type 2 Diabetics

***Dr.N.Srinivasa Rao, Lecturer in Physical Educatioion**
V.K.R.College,Buddhavaram,Krishna(Dt),AP

Introduction

Active life style is the essential requirement for an individual to preserve the well desired health and wellness. Unhealthy lifestyles, such as lack of physical activity and excessive eating, initiate and propagate the majority of type 2 diabetes. The regular physical exercise not only helping for glycaemic control but also it has several other valuable physiological and health benefits such as strengthening and health of cardio-respiratory and other systems. Chronic diseases are major killers in the modern era. Physical inactivity is a primary cause of most chronic diseases. Sedentary life style, Obesity causes insulin resistance which develops Diabetes. The prevalence of this form is increasing in both developed and developing countries, owing to the increasing prevalence of obesity and sedentary lifestyles.

Physical educationists all over the world are trying to find out various means and methods to protect the health of individuals though active life style elements.

Aerobic exercise can lower the risk for type 2 diabetes. Exercise has positive benefits for those who have diabetes. It can lower blood sugar levels, improve insulin sensitivity, and strengthen the heart. Strength training, which increases muscle and reduces fat, may be particularly helpful for people with diabetes.

American college of sports medicine endorses the idea of active life style, to protect one's health in good condition and to escape from various degenerative disease like Lower back pain, Obesity, Diabetes Mellitus, Hypertension, Atherosclerosis, Coronary Heart Disease, etc. Regular physical activity prevents CVD's in diabetics. Physical activity improves insulin sensitivity and glucose uptake capacity. Exercise decreases the adhesion nature of platelets, and regulates the Heparin secretion of endothelial cells to avoid *blood clots* CVDs such as *atherosclerosis*etcin vessels. Exercise increase good (HDL) cholesterol, and decrease bad (LDL) cholesterol. Exercise also improves glycated haemoglobin (A1C). During exercise vasodilators such as nitro-glycerine are released which are effective in treating angina pectoris by opening the blood vessels occluded by plaque.

Physical Activity: PRECAUTIONS FOR DIABETICS

Patients should be examined by an expert dialectologist before starting physical training.

Check blood sugar levels.

Get a partner when you may be going alone to the activity.

Bring a glucose monitor and some "emergency food" such as chocolates or chewy fruits bars, fruits, etc with you.

Start exercise at least 4 hours after the last insulin injection taken to avoid hypoglycemia

If random blood glucose levels dip below 100 mg/dl. before or during exercise, recommend a small snack that contains; *15 grams of low-glycaemic carbohydrates, 10 grams of lean protein, and05 grams of unsaturated fat.*

Care your foot!Wrong size and low quality shoes may cause stress injuries, structural deformities, skin irritations and also leads to disc problems.

Proper shoes and equipment meet the biomechanical requirements and adapt to the level of physical activity.

Consumption of Alcohol?

Drinking a moderate amount of alcohol up to one serving per day for women, up to two servings per day for men with food does not affect blood glucose levels significantly.

But heavy quantity of Alcohol consumption may cause a rise in blood glucose, followed for hours then experience a sudden decrease in the blood glucose level leads to hypoglycemia.

If a patient experiences *two hypoglycaemic episodes* during one week even though following the prescribed meal plan, an adjustment in medication may be necessary. Hence consult a 'Doctor'.

Exercise Guidelines:
Before you start exercise programme you must be 'hydrated'.
Begin the exercise with muscular and joint stretching then followed by Warm-up.

Begin from Low, moderate-to-vigorouscardio-respiratory exercise in a progressive manner.
To avoidcardiovascular risk, it is recommended that patients with T2DMshould accumulate a minimum of 150 min/wk (5days/wk) of moderate-intensityphysical activity, and/or at least 90 min/wk (3 days/wk) of vigorous-intensitycardio-respiratory training. Aerobic activity may be about 30-45 minutes with moderate intensity of their maximum heart rate.
Additionally, resistancetraining 2-3 times/wk should be encouraged.
There being *no more than 2 consecutive days without training*
End the programme with cool down activity and stretching.
Aerobic Exercise:
Start the activity with 60%-70% of intensity of MHR. Activity like gardening, use of staircase, walking briskly (3 to 4 miles an hour), cycling, playing games, jogging, and cross-country run, burn more calories than less active exercises.
Vigorous walking burns about 1.3 calories per hour/kg weight.
Moderate intensity running burns about 6 to 8 calories per kilogram of his/her body weight/hour.
In aerobic metabolism triglycerides from the adipose tissue will be degraded in to free fatty acids then converted in to acetyl-coA for energy by the process 'beta oxidation'.
Exercise Zones: According to Miller's simple formula of M.H.R.=220-age. Fatmaxzonewill fall between 69% & 79% of intensity of MHR. In this intensity of exercise, fat provide 50%
Calories during the first hour, about 70% during the second hour, and more than 80% during the third hour of continuous exercise

Anaerobic Activity:
Sprints or other resistance training with External weights or with own body weights should be aimed with 70%-80% intensity of their maximum ability. During the resistance exercises*, all musclegroups* should be used, and patients need to progress 8 to10 repetitions per set for a total of 3 sets. Rest between sets is essential. End the activity with *Pranayama* and other *meditation* techniques for mind and muscular relaxations.
Conclusion: Apart from medication, diet, physical exercise is beneficial for insulin sensitivity in diabetics. Through exercise we can improves not only insulin sensitivity but can also keep away the degenerative diseases like coronary heart diseases, cardiovascular diseases and other cancers. For the change of exercise protocols consult an expert physical educationalist or a trainer for the exercise prescription. Self protocol will leads to the adverse effect on the physiological function. Regular Physical Activity is a "*Life saving"* activity.

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Effects Of Vision Training With Skill Practice On Selected Skill Performance Variables Among Inter Collegiate Men Football Players

***Dr.N.Srinivasa Rao, Lecturer in Physical Educatioion**
V.K.R.College,Buddhavaram,Krishna(Dt),AP

Introduction

The difference between a good player and a great player is simply their effective of their visual skills on the playing field. Teaching a player with his vision, depth perception and peripheral vision is an important task for improving their visual awareness. In current scenario, the sports vision or sensory training as well as football specific brain-jogging is absolutely essential for achieving top performance levels in football. The physical conditioning, technical mastery and proper diet make all the difference, particularly when there is so little to choose between in competition**Peter Schreiner(2011).** As with anything else in the world of sport science, it is prudent to understand the physiology behind the system before you actually learn the training application. Vision is defined as a process through which data is received and integrated with other input into the brain with stored information, so that the meaning is abstracted and the organism institutes the appropriate output. Vision is the trigger that initiates many chain-motor systems within the human body.

. Psychological skills develop through basic skill learning, fine-tuning and repetitive practice, which take determination and discipline **Hodge *et al.,* (1999).**

STATEMENT OF THE PROBLEM

The purpose of the study was to find out the effects of vision training with skill practice on selected skills performance variables among inter collegiate men football players.

HYPOTHESIS

It was hypothesized in the following ways

1. Vision Training with skill practice would have significant improvements on dribbling performance among inter collegiate men football players.
2. Vision Training with skill practice would have significant improvements on passing performance among inter collegiate men football players.
3. Vision Training with skill practice would have significant improvements on shooting performance among inter collegiate men football players.
4. Vision Training with skill practice would have significant improvements on over all playing ability among inter collegiate men football players.
5. The Control Group would have no significant improvements on selected skill performance variables among inter collegiate men football players.

Methodology

The purpose of the study was to find out the effect of vision training with skill practice on selected skill performance variables among inter collegiate men football players. To achieve the purpose of the study, thirty six men intercollegiate football players were selected from Bharathiar University Arts and Science College, Gudalur and Nilgiris College of Arts and Science, ThaloorOoty, Niligiri District, Tamil Nadu. The selected subjects (N-36) were divided into two (n-18) equal groups. Group I named as Vision training with skill practice (VTSPG) and Group II acted as control group (CG). All the selected subjects were tested on selected skill performance of dribbling, passing, shooting and overall playing ability. The experimental group I was treated by vision training with skill practice for a period of 12 weeks, four days a week. No treatment was given to control group.

CRITERION MEASURES

S.No	Criterion Variables	Test Items	Unit of Measurement
1	Dribbling	Warner Soccer Test	In Seconds
2	Passing	Mor S and Cristian V (1979)	In Points
3	Shooting Accuracy	Mor S and Cristian V (1979)	In Points
4	Overall Playing Ability	Subjective Rating	In Points

ANALYSIS OF DATA AND RESULTS OF THE STUDY

For testing the hypotheses of homogeneity of group mean gains, as well as significance of differences of pairs of group means, the level of significance was set at 0.05 level of confidence, which was considered adequate for the purpose of this study.

TABLE -1

COMPUTATIONS OF PRE AND POST TEST OF VISION TRAINING WITH SKILL PRACTICE ON SELECTED SKILLS PERFORMMANCE VARIABLES AMONG INTER COLLEGIATE MEN FOOTBALL PLAYERS

Variables	Pre test mean ±SD	Post test mean ± SD	M. D	SEM	't'-ratio
Dribbling (Seconds)	16.39±0.79	15.96±0.77	0.43	0.28	15.11*
Passing (Points)	6.16±0.85	7.66±1.02	1.15	0.14	10.29*
Shooting (Points)	48.55±9.86	55.88±9.08	7.33	0.06	12.12*
Over all playing ability (Points)	70.27±2.19	75.00±1.74	4.73	0.31	15.18*

*Significance at 0.05 level

Table 1 indicates that the obtained 't' ratio were 15.11 (dribbling), 10.29 (passing), 12.12 (shooting) and 15.18 (overall playing ability). The obtained 't' ratios on selected skills performance variables were greater than the critical value of 2.10 for degrees of freedom 1, 18. It was observed that the mean gains and losses made from pre-test and post-test were statistically significant resulting that twelve weeks practice of vision training produced significant improvement in dribbling (15.11 $p<0.05$), passing (10.29<0.05), shooting (12.12 $p<0.05$) and overall playing ability (15.18 $p<0.05$ from the performance of baseline to post test.

TABLE – 2

COMPUTATIONS OF PRE AND POST TEST OF CONTROL GROUP ON SELECTED SKILLS PERFORMMANCE VARIABLES AMONG INTER COLLEGIATE MEN FOOTBALL PLAYERS

Variables	Pre test mean ±SD	Post test mean ± SD	M. D	SEM	't'-ratio
Dribbling (Seconds)	15.64±0.83	15.21±1.48	0.43	0.30	1.43
Passing (Points)	5.88±0.67	6.33±0.68	0.45	0.25	1.71
Shooting (Points)	48.77±6.44	46.00±5.98	2.77	1.51	1.83
Over all playing ability (Points)	69.72±2.73	96.94±2.71	0.02	0.56	0.39

Table 2 indicates that the obtained 't' ratio were 1.43 (dribbling), 1.71 (passing), 1.83 (shooting) and 0.39 (overall playing ability. The obtained 't' ratios on selected skills performance variables were lesser than the critical value of 2.10 for degrees of freedom 1, 18. It was observed that the mean gains and losses were made from pre and post-test statistically insignificant, resulting that they did not make any significant change from the baseline performance to post test.

FINDINGS

The findings of the study were as follows

Vision Training with skill practice group showed significant improvement on dribbling (16.13-15.96) from pre to post test.

Vision Training with skill practice group showed significant improvement on passing (6.16-7.66) from pre to post test.

Vision Training with skill practice group showed significant improvement on shooting (48.55-55.88) from pre to post test.

Vision Training with skill practice group showed significant improvement on overall playing ability (16.13-15.96) from pre to post test.

The Control Group would not show any significant improvement on selected skill performance such as dribbling (15.64-15.21), passing (5.88-6.33), shooting (48.77-46.00), and overall playing ability (69.72-96.94) from pre to post test.

DISCUSSION ON FINDINGS

Based on the result of the study it was found that the vision training was the superior training to develop dribbling, passing, shooting, overall playing ability of intercollegiate football players. The reason for specific improvement was systematic scientifically structured vision training programme. Training of visual skills for sports performance is becoming more and more important in training the individual in sports. The latest trend to improve performance level of the players in football through the vision training methods was the appropriate one. The role of vision training on skill performance such as dribbling, passing, shooting, overall playing ability. The impact of vision training and its influence were studied by various researchers. The real worth of vision training was discussed here.

Motor skill instruction has begun to benefit from a recent area of sport science research focusing on what is called sports vision. Sports vision is an area of study that combines vision science, motor learning, biomechanics, sport psychology, and neuro anatomy as they relate to visual and perceptual motor performance. There is a wealth of literature on how vision is used in many sports like baseball **Burroughs (1984),** basketball **Vickers (1996),** golf **SteinbergFrehlich and Tennant (1995), Vickers, (1992),** soccer **Williams, Davids, Burwitz and Williams (1994), and** tennis **Abernethy and Wollstein (1989), Buckolz, Prapavesis and Fairs (1988), Moen (1989).** Unfortunately, there is less research on the effectiveness of various vision training exercises that have been developed **Abernethy (1986), Kluka*et al.,* (1996).** Research has been conducted on some commercial programs for training DVA like Eye aerobics **Cohn and Chaplik (1991), Long (1994), MacLeod (1991)** and Dynavison**(Klavora, Gaskovski and Forsyth (1995).**

The eye movements of athletes have been measured to determine visual search strategies used in sport. The assumption is that when the performer "looks" or fixates the eyes, information is gathered. The location, order, and duration of these fixations are assumed to reflect the perceptual decision making strategy used to extract information from the environment **Williams, Davids, Burwitz and Williams (1994).** Anticipatory patterns of saccades, the visual search pattern used by athletes, closely matches the motion of the object that is being tracked **(Bahill and LaRitz (1984), Haywood (1984), Ripoll and Fleurance (1988).**

CONCLUSIONS

Based on the findings and within the limitations of the study the following conclusions were drawn.

The Vision Training with skill practice group (VTSPG) had significant improvement over the period of twelve weeks training on dribbling, passing, shooting and overall playing ability among inter collegiate men football players.

The Control Group (CG) did not show any significant improvement over the period of twelve weeks on dribbling, passing, shooting and overall playing ability among inter collegiate men football players.

In over all analysis of the results of this study, it was concluded that Vision Training was the suitable training to develop dribbling, passing, shooting and overall playing ability among inter collegiate men football players.

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