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Determining Factors Affecting Sport Venue Quality In Iran

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Abstract: Attendance of spectators at sporting events makes high economic income and the quality of sport venue is one of the most important factors influencing spectator's attendance at sporting events. So, the purpose of this study was to investigate different factors affecting sport venue service quality in Iran. The research method was descriptive – correlation and the statistical sample consisted of 265 spectators attended to Tehran's Azadi stadium for watching a football game between Esteghlal and Persepolis. The research instrument was Shonk's Ph.D. dissertation questionnaire. The face and content validity was approved by opinion of sport management instructors and the reliability was verified by the coefficient of Cronbach's alpha, (α=0/89). The SPSS16 was used for description of variables and LISREL software was used for doing Confirmatory Factor Analysis. The result showed "environment of stadium" (factor loading= 0/85), "interaction of staff" (factor loading= 0/73), "price of service and products" (factor loading= 0/71) and "access quality of sport venue" (factor loading= 0/57) had significant effect on sport venue quality. According to the results it can be concluded that from the view point of spectators the environment of stadium have the most effect on the service quality in Azadi stadium that should be noted more than the other variables.

Key words: quality, Sport venue, Factors

Introduction

Spectators Attendance is the most important part of a sporting event. In all over the world a lot of people spend their money, time and energy for watching sport events and also because of their enthusiasm they travel long distances to get the match places (Saatchian et al, 2013). Football is a popular sport in Iran and in comparison to the other sports has much more players and spectators (Elahi et al, 2012). In this context, maintaining amount of demand is one of the sport marketing challenges (Theodorakis et al, 2013). So, paying attention to service quality and development of its dimensions is one of the important strategies to satisfy spectators and make their retention (Yoshida & James, 2010).

Sport spectators service quality contains outcome quality and functional quality. Outcome quality includes player's performance, contest quality and the team values and characteristics. Functional quality consists of the environment of stadium, parking and the interaction between spectators and personnel (Yoshida & James, 2010). In this regard sport venue quality influences on behavior, attendance, wasting money and the intention to return of spectators. Factors affecting sport venue service quality includes parking, cleanness, fan control, food quality and other delivered services in stadiums (Hill & Green, 2012) and according to the Shonk's model (2006) three dimensions of sport venue service quality consist of environment, interaction and price.

Although sport events are an important resource of revenue and lots of money spent in football in Iran, the number of spectators has been reduced. Review of literature shows sport venue quality is an important factor to attract spectators to the sport events. So, based on the above content and because of the importance of the issue and according to the conceptual model (fig 1), the purpose of this paper is to measure the influence of different dimension of sport venue service quality.

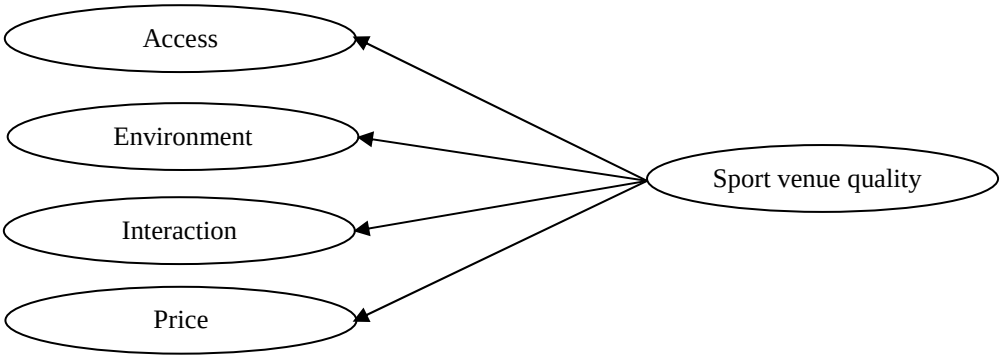

Fig1. Conceptual Model of factors affecting sport venue quality

Research Methodology

The research method was descriptive – correlation. Statistical sample consisted of 265 spectators attended to Tehran's Azadi stadium for watching a football game between Esteghlal and Persepolis. The research instrument was Shonk's questionaire. The content and construct validity were approved by investigating opinions of sport management faculty members and Exploratory Factor Analysis of pilot research data. The reliability was approved by Cronbach's alpha method (α=0/892). The SPSS 19 software was used for descriptive statistics and exploratory factor analysis. Also, Confirmatory Factor Analysis was done by LISREL 8.7 software.

Results

Descriptive statistics showed the average of respondents age was 23 years old. 72/8 percent of them were single and 27/2 percents were married. Other descriptive statistics is mentioned in table1.

Table1: Descriptive Statistics

Variables	Percentages				
Job status	Clerk: 9/06 %	Labor: 23/77%	Student: 38/86 %	Business: 34/72%	Unemployed: 10/57 %
Income (per month)	<100 $: 24/53 %	100-200 $: 27/17 %	200-300 $: 19/25 %	300-400$: 13/96 %	400 $<: 15/09 %
Education	<Diploma: 21/89 %	Diploma: 49/81 %	Technician: 15/47 %	Bachelor: 11/70 %	Master and more: 1/13 %

To investigate the relationship between questions with their components first order Confirmatory Factor Analysis (CFA) was used (Fig 2).

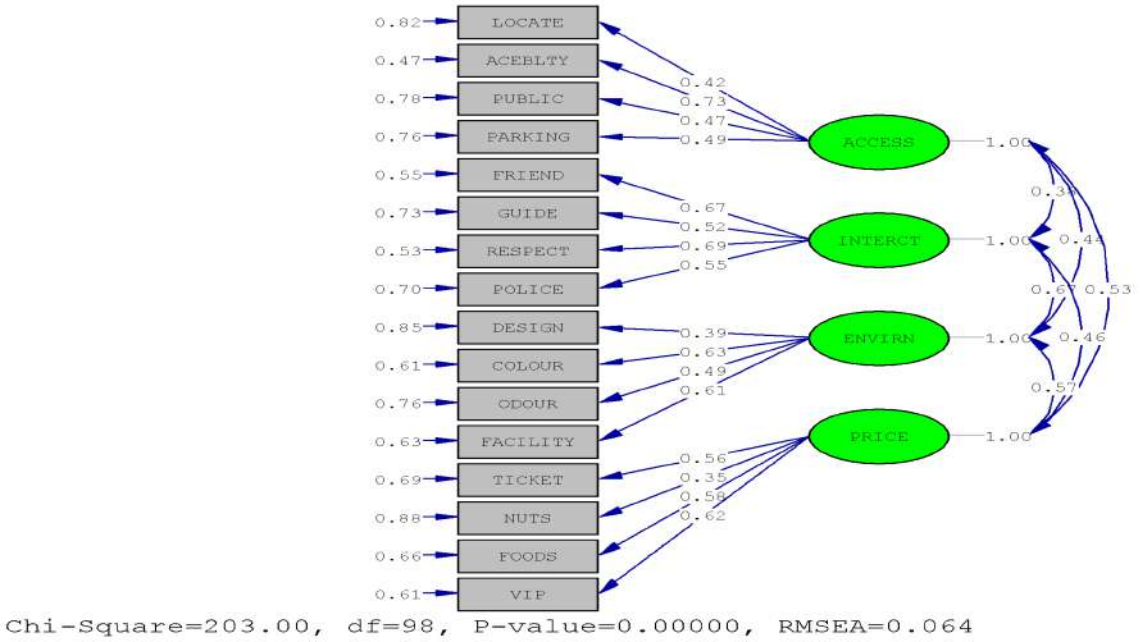

Fig2. First order Confirmatory Factor Analysis (CFA)

As it has been shown the “Convenient of accessibility” (Factor loading=0.73) has more influence on the access quality, the “respective behavior” (Factor loading=69) has more influence on the interaction quality, the “color of environment” (Factor loading=63) has more influence on the environment quality and the “the price of VIP ticket” (Factor loading=62) has more influence on the price.

Also, to investigate the influence of access, environment, interaction and price on the sport venue quality second order Confirmatory Factor Analysis was done (Fig3).

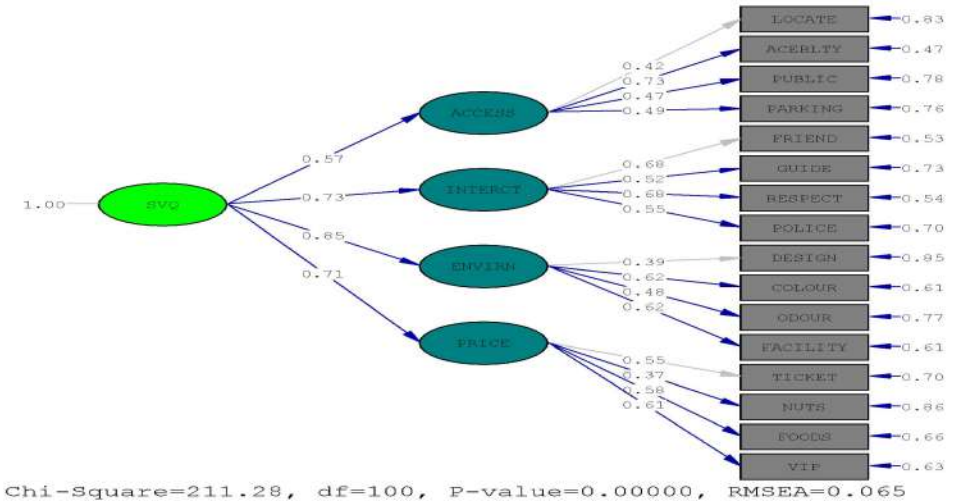

Fig3. Second order Confirmatory Factor Analysis

As it can be seen, “environment of sport venue” (Factor loading= 0.85) has more influence on the sport venue service quality. Moreover, all of the fit indices are acceptable (Table2) and all of T Values are significant.

Table2. Fit indices

Fit indices	χ^2	Df	RMSEA	GFI	CFI
Amount	211.28	100	0.65	0.91	0.91

Discussion

The results of Confirmatory Factor Analysis showed that the variable “environment” has the most amount of factor loading (0.85). It means the quality of bathrooms, seats, sound system, guidance signs, design and architecture of stadium and other factors relating to the tangible dimension of service quality have considerable effect on the sport venue quality. In this regard Greenwell et al (2002) mentioned consumers’ positive perception of physical environment of a sporting event has positive relationship to the attendance. Also, among factors affecting environment, “color” and “facilities” have more factor loading (0.62). So, having comfortable seats, high quality scoreboard, beautiful court, cleanness of stadium and the quality of sound system have significant effect on the spectators’ perception of service quality.

The second variable affecting sport venue service quality is “interaction” (Factor loading=0.73). It means the interaction and personnel behavior of staff in sport venue is so important. Different researchers mentioned that human interactions is one of the most important components of sport experience (Khatibzadeh, 2011). Also, among factors affecting interaction, “respective behavior” and “friendly interaction” has more factor loading (0.68). Yamaguchi (2002) reported impolite response of staff has negative effect on retention of spectators.

The “price” variable (Factor loading= 0.71) also has significant effect on sport venue service quality. It can be concluded the price of service and products is so important to the spectators. Different studies reported consumer satisfaction is influenced by the price of services (Khatibzadeh et al, 2012). Among factors affecting the price, “price of VIP ticket” (Factor loading=0.61) has more importance. It can be induced watching the game from VIP is so important for spectators.

Another variable affecting sport venue quality is “access” (Factor loading=0.57). In this context Hall et al (2010) said if spectators have satisfactory facilities such as accessibility and Parking will attend the event again. Also, convenient access to the sport venue can lead to reducing time and cost and makes favorable experience for spectators (Hinch & Higham, 2004). So, in designing and constructing sport venues some factors such as highways and roads, entrance and exit of spectators, parking and public transportation should be noticed. Generally, it can be concluded different variables influence sport venue service quality that should be considered.

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Stress and Mental Health College Students, styles of Athletes

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Introduction: Aspects of Health:

Physical Health:It is an important component of total health. The signs of physical health of an individual are, Clean skin, bright eyes, body with firm flesh, smooth breath, good appetite, sound sleep, coordinated movements, controlled blood pressure etc., the major tools to asses the physical health are Anthropometrical, and Clinical examinations.

Mental health:Mental health and physical health are inter related "Poor mental health effects physical health and vice versa physiological factors are considered to play a major role in disorders are Hypertension, Peptic ulcers, Asthma. Mental health enables the individuals to understand the mind, the emotions, the instincts and the tendencies.

Social health:Social health is expressed in the form of good conduct. A healthy is optimistic, confident and adventurous. He facts the life cheerfully with courage and confidence. He does not grumble against deficiency or weakness. He maintain positive attitude of life. Social health means interaction with the society in a sociable way.

Spiritual health :Spiritual health is something that transcends physiology and psychology i.e., "the spirit of the man" maintenance of an even, cheerful and hopeful spirit is one of the prime requisites to good health.

Factors influencing the health

Health is the matter of commonsense. Health consciousness is a boon. Care of health is rewarding. Maintain the sound health is an individual's own responsibility. Some important factors influencing the health are

Heredity,Mental attitudes,Environment (Internal and external)

Socio cultural influences,Personal habits.

Scope of health education

Health education is the very vast term. It has very wide scope. It is closely related to many other aspects. Besides health it related to housing, economic conditions, occupation etc.

It gives the knowledge about the balanced and nutritive diet and how it should be prepared.

The need for fresh air, water, ventilation, light, physical exercise, recreations, rest and sleep etc.

It gives the habit of cleanliness with regard to body, bodily organs, and dress.It gives knowledge of the various organs of the body.It gives knowledge of the various system of the body.

It gives the knowledge of various common diseases, their causes, symptoms, pre cautionary measures and the cure.Sanitation of the home, school, neighborhood community, slums, over crowded cities, factory areas, markets, villages etc.The garbage, sewage, fresh water supply, the sanitary arrangements in the city, health centers and their functioning.

The aims of health education

To provide information about health and its values as a community asset. It aims at acquainting the pupils and teachers with the rules of health and hygiene, functioning of the body, precautionary measures towards diseases and working for common good.To maintain the norms of good health i.e adequate ventilation, proper temperature, good sanitation and all round cleanliness etc.To take pre cautionary and preventive measures against communicable diseases. It aims to take adequate precautions against contamination and spread of disease, precautionary and preventive measures which helps the society in improving the standards.To assistance to school going children in understanding the nature and purpose of health services and facilities.To develop and promote mental and emotional health.To develop a sense of civic responsibility.

The objectives of health education

To enable the students to develop a scientific point of view of health.
Enable the students to identify the health problems and understanding their own role of health and medical agencies in meeting those problems.
To enables the students to take interest in current events related to health.
To enables the students to arrive at suitable conclusions based on the scientific knowledge of first aid.
To enable the students to set an example of desirable health behavior.
To enable the students to understands the cause of the pollution of air, water, soil and food as well as means of prevention of pollution.
To enable the students to gain scientific knowledge of first aid.
To provide the desirable about marriage, sex and family planning to the students.
To help the students to understanding the importance of physical training, sports games and yogic exercises and their relationship with health education programme.
To emphasize the students about the effects of bad habits like smoking and alcohol consumption.
To acquaint the student about various organizations working for the maintenance of health.

Principles of Health Education

The main principle of health education is to create interest among the people, so that they will listen to this education and changes their behaviours.To find out the real health needs of the people and the programme should be in accordance with that needs. It should not be a artificial situation and formal teaching. It should be naturalistic. This programme should proceeds from known to unknown.This programme should be in accordance to the culture of the society.This should be a theoretical but mostly practical.Application of behavioral sciences in necessary to the health education.

Characteristics of a Health Educated person

The individual who knows health education should posses the following characteristics.
He should be physically fit, means all the systems of his body should be in good condition.
He should have good knowledge about his body organs and systems.
He should maintain the personal environmental and social hygiene.
He should possess good habits, free from the addictions.
He should have good attitudes towards the society.
He should always possess positive thinking.
He should be a balanced person both psychological and emotional.
He should have good attributes towards the god.
He should enjoy the work what he is doing.
He should be well educated and idealistic to the society.
He should know the nutritive values of the foods, their preparation and preservation methods.
He should know the curative and prevention methods of the communicable diseases. Besides above all he should be more practical, and dynamic in nature.

College Health programme & Opportunities for students participation

The program of health education includes all aspects which may helps in health program of community as a whole. The college health program can be followed under three heads.

Health instruction Health services

Health supervision

Health instruction

The following are the fundamental principles of effective health instruction.

The basic principles of sciences like anatomy and physiology should given to the students in relation with the developing the hygiene. Here hygiene includes Food, Digestion process, Water and air, Rest and sleep, Exercise and work, Healthful surroundings etc.

The instructor should pay individual attention in forming the habits rather than giving the theoretical knowledge because the age of the college is easily prone to delinquency.

The instruction should be given in the positive way, emphasizing Do's than the Don'ts.

Instructor should keep in mind that health is an end to be achieved and not an academic subject.

A number of audio visual aids should be used while teaching health education.

Chances to the students should be given to discuss about the current health problems, social problems, diseases etc.

Health services

These services includes the periodical medical examinations, maintaining the records, treatment, emergency and first aid services, provision of the nutrious food, awareness of the communicable diseases and vaccination, awareness of the cardiovascular diseases and obesity, their preventive measures. By participating in these services the students may attain good levels of in their life.

Health supervision

In the college level the supervision should be self motivated. The instructor should motivate his students to participate in the all sort of health related programmes in and around so that they motivate themselves to be a healthy citizen.

The participation of college students in the health education programme.

Healthful environment of the institutions.Systematic instruction.Incidental teaching.

Lectures and talks by experts.Printed materialFilms and filmstrips.

Radio and television talks.Educational and field trips.Health weeks

Health clubs.Health books and journals.

Mental health as name suggests is the branch or aspects of health education, which deals with the psychological aspects of the individual. Ion the physical health we deals with the causes of the physical illness or diseases and their preventions, curative measures, also the principles and techniques for maintaining proper physical health. Like the same mental health deals with the prevention and treatment of mental illness, balance and efficiency and therefore helps us in the mental, intellectual growth and development of an individual. The terms mental health can be named after mental hygiene.

ccording to D.B. Klien "Mental hygiene as its name suggests, is concerned with the realization and maintenance of minds health and efficiency."

Factors influencing the mental health

We can divide the factors influencing the mental health in to three main categories:

Hereditary factors:

Sometimes the roots of the mental ailments and diseases are found in the defective genes inherdited from the parents. Moreover, the inhered potentialities in terms of intellectual abilities, physiological structure and appearance etc. these characteristics will influence the individuals mental health.

Constitutional and physiological factors:

Physiological constitution and appearance and physical health may influence his mental health. A sound body is said to possess a sound mind and is capable of making adjustment in his life. On the other side poor health, physical defects, ailments and diseases brings deterioration in one's strength and mental complexes that create serious adjustment problems. In this way the physiological conditions influence the mental health.

Environmental factors:

Many research works shows the influence of the environmental forces on the mental health. These forces are family, school and society has more influence on the mental health than the other factors. If the individual doesn't have good relation with his family, if one is not able to given with sufficient chances to prove him in the school, if an individual is not able to interact with his society then the maladjustment will takes place. Maladjustment is the root cause for the mental ill health.

These factors also include the environmental conditions at the home, in the school, neighborhood, community and the society. The behavior of the parents and elder people of the family, the family atmosphere, the peer group relationship, the school and its atmosphere, mental health of the teachers and classmates, the environmental prevails in the neighborhood, community and society these all aspects has their influence on the individual.

Characteristics of the mentally healthy personality

A mentally healthy individual can be distinguished from the other easily through his mode of living, behavior and personality characteristics can be summarized as follows:

He knows himself well and is in a position to evolve his strengths and weakness. Therefore he always chooses a task that is of limited to his abilities.

He has an adequate ability to make adjustment in the changed circumstances and situations.

He is emotionally mature and stable as he is asked to express his emotions in a desirable way and exercise proper control over them.

He is socially adjustable as he posses an adequate ability to get along well with himself and with others.

His intellectual powers are adequately developed. He is able to think independently and to take proper decision at a proper time.

He always lives in the world of reality, rather than that of imagination and fantasy.

He posses enough courage and power of tolerance for facing failures in his life. He never repents and worries over his failures and mistakes.

He feels quite safe and secure in his respective group and environment. He likes other and liked by them.

He posses and adequate sense of belongingness and loyalty towards the group he belongs.

Although he tries to accomplish his work as nicely as possible yet he does not prove himself an extremist by becoming a perfectionist.

He is free from undesirable mental disturbances, disorders, conflicts, anxieties, frustrations, ailments and diseases.

He posse's desirable social and health habits. He is regular and punctual in performing this duties and does not suffer from forgetfulness.

He is self confident and optimistic. He does not exhibit undue fear and anxiety for any new assigned accomplishment.

He has an adequate sex adjustment and does not suffer from sex abnormalities and dissatisfaction

He posses and adequate philosophy of life that governs his conduct and activities.

He possess socially desirable healthy interest and aptitudes.

He leads a well balanced life of work, rest and recreations.

He is satisfied with his profession or occupation.

The above listed characteristics should not be taken as an essential and necessary conditions for the maintenance of proper mental health and this absence of one or the other characteristics does not mean that there is a negation or no mental health in the individual. Acquisition of complete mental health as reflected by above characteristics. Also we can say above are the idealistic therefore, although we should aim to reach close to the ideal, we should not worried about to reach perfection.

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Occupational Stress Among The Male Teachers Of Government Senior Secondary Schools Of Haryana

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Abstract
The aim of the present study is to determine the Occupational stress among the male teachers of government senior secondary schools of Haryana. To assess the statement of the problem total ninety teachers (30 science teachers, 30 math teachers, and 30 physical education teachers) were selected for the study. Only male teachers who had working in government senior secondary schools of Haryana were selected. Occupational stress was measured by **" Teachers Occupational Stress Scale prepared by Dr. O. P. L. Srivastava and Dr. Bina Srivastava''**. To determine the level of significant difference descriptive study and to find out the group difference Analysis of Variance (ANOVA) was applied. The level of significance was fixed at .05 level.

Introduction

The word„ stress‟ is defined by the Oxford Dictionary as "a state of affairs involving demand on physical or mental energy". In medical parlance „stress‟ is defined as a perturbation of the body ‟s homeostasis. Extreme stress conditions are detrimental to human health. But in moderation stress is normal and in many cases, proves useful. An occupational stress can be caused by too much or too little work, time pressure and deadlines, fatigue from physical strains of work environment, excessive travelling, long hours, having to cope with changes in work (Arnold et al., 1991).

Methodology

Total ninety male teachers (30 science teachers, 30 math teachers and 30 physical education teachers) from different government senior secondary schools were selected. They were selected randomly from the whole population of school teachers working in senior secondary schools of five districts of Haryana state. Occupational stress was measured by " Teachers Occupational Stress Scale prepared by Dr. O. P. L. Srivastava and Dr. Bina Srivastava''. To determine the level of significant difference descriptive study was applied To determine the significance of difference among the science, math and Physical education male teachers Analysis of Variance (ANOVA) was applied. The level of significance was fixed at .05 level.

Table- 1:Descriptive statistics of school teachers of different subjects on occupational stress

Group	Mean	S.D
Science	95.86	24.52
Math	98.84	25.94
Physical Education	98.92	26.24

Significant at 0.05 level t =1.96

The above table shows that the mean and standard deviation on occupational stress variable for Science Teachers was 95.86 ± 24.52 ; for Math Teachers was 98.84 ± 25.94 ; and for Physical Education teacher was 98.92 ±26.24.The table 1 shows that the occupational stress level of Physical education teacher is slightly higher than the other subject‘s teachers. The mean of occupational stress of school teachers of Haryana has been graphically exhibited in Fig. – 1

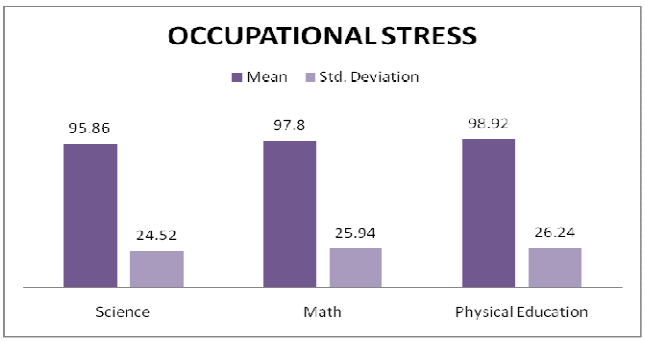

Fig. – 1 Graphical representation of Mean on occupational stress level of school teachers of Haryana.

Table-2Analysis of variance (Anova) of government senior secondary schools male teachers of different subjects on occupational stress

Source	Sum of Squares	Df	Mean	F	Sig
Between Group	25217.553	30	840.585	2.65	0.02
Within Group	25578.837	19	852.628		
Total	33687.013	49	1122.900		

Significant at 0.05 level t = 2.95

Table – 2 reveals that there was found not significant difference in stress of school teachers of different faculties of Haryana as the obtained F‘ ratio 2.65 was lesser than tabulated value of 2.95 required for the _F‘ ratio to be significant at .05 level with degree of freedom.

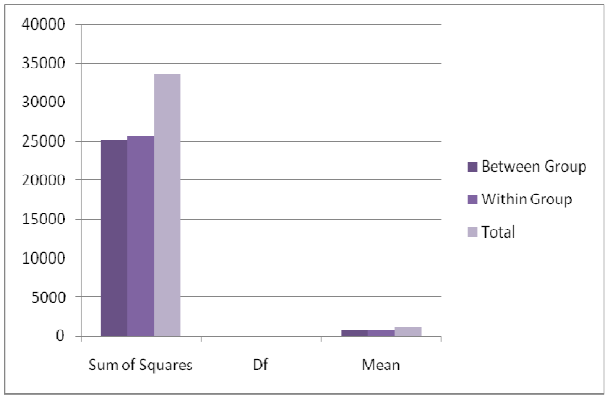

Fig. – 2 Graphical representation of Analysis of variance (Anova) of government senior secondary schools male teachers of different subjects on occupational stress

Conclusion

On the basis of the findings and within the limitations of the study, the following conclusions are drawn: The study revealed that there were significant differences in stress among school teachers of different subjects i.e. science, language, social science and physical education in Haryana. There were no significant difference among the male teachers of different subject of senior secondary schools of Haryana on occupational stress.

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Motor Ability Profiles Of Senior Male Volleyballers At Different Roles With The Game Performance

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Abstract:
The present study aims analyze the Motor ability profiles of male senior elite Volleyballers at different roles with the game performance. There were 100 senior male (20-35 years old) elite volleyball players selected for this study at state level volleyball championships in the Karnataka. Motor ability measurement was obtained through speed, strength, agility, flexibility, arm power, arm & Shoulder co-ordination, leg power, muscular endurance, cardiovascular endurance, positional balance, speed of movement and grip strength of senior male volleyball players at Karnataka. The correlation coefficients obtained between Motor ability profiles and game performance of male senior volleyball players. Out of twelve variables, nine variables were significant values are Flexibility (r=.700; p=.000) Arm power (r=.591; p=.000) Arm and shoulder coordination (r=.370; p=.000) Leg power (r=.764; p=.000) Muscle endurance (r=.505; p=000)cardiovascular endurance (r=.463; p=000) Positional balance (r=.821; p=000) Reaction ability (r=-.820; p=000) and Grip strength (r=.578; p=000) were all found to be highly significant at .000 level. The results of this study can potentially provide, Physical education teachers coaches & experts in the field of physical education with useful indications about the use of Motor ability profiles assessment for talent identification of elite male senior Volleyballers.
Key words: Motor ability profiles, Male Senior Elite Volleyball players.

Introduction

Modern volleyball is characterized by a very high out-reach of male and female volleyball players above the net and high ball velocity on jump service and spiking. A very high speed or reaction and agility are required to be able to control such balls on service reception, especially in field defense. In the higher level of volleyball game performance is dependent on the motor ability characteristics like, Speed, Strength, Leg power, Agility, flexibility and coordination abilities are very much important to executive the Skill, Tactics and Game strategies. [1-9]Volleyball matches depends on the importance of providing high level of the specific physical abilities of the Volleyballers such as muscular power, agility, motor speed and performance endurance and employing these abilities to serve tactical and sill performance as efficiently as possible. The muscular power has its importance in the Jumping vertically & Horizontally to Attacking and Blocking and defense skills, moreover, through developing speed and agility can improve the speed and accuracy of the game with all of its forms during the competitions. [10-11] Volleyball requires high performance of the specific physical abilities (Motor qualities) level represented in the high jump to the maximum distance, changing directions, reaction speed and endurance during smashing, blocking, serving, preparing and defending that indicates the occurrence of significant growth in the specific physical abilities level. [12]

Statement of the study:

The purpose of the present study is to analyze the relationship of selected Motor ability variable profiles characteristics with performance ability of the male senior elite Volleyball Players.

Delimitations:
The study shall be delimited to the senior male elite Volleyballers of Karnataka aged about 20-35 years from different districts.
The study shall be delimited to about 100 subjects (N=100) from Karnataka. The study shall be delimited to the certain selected Motor variable characteristics. The study shall be delimited to making a comparative analyses based on Senior male eliteVolleyballers.
Limitations:
As the numbers of subject's male Senior elite Volleyballers proposed to be selected players among the volleyball players of Karnataka state quite large numbers (N=100) No special motivational technique will be employed among test administration and collection of date.The subjects are expected to be contact touch with the sport. Variations in respect of counting in training may be a limitation of the study. The rating performance ability of the players may be subjective as the rating is made by expert coaches/ trainers connected with the subjects.

Hypothesis: For the purpose and objectives of the study the following Hypotheses were formulated:The selected Motor ability variables equally contributed to performance ability among the male Senior elite Volleyballers.The selected Motor ability variables equally contribute to the performance ability of Senior male elite Volleyballers taking up different roles in play.

Methodology:

The selection of subjects will be drawn from the different district and club teams of the Senior Volleyballers in the state of Karnataka, they represented the volleyball team in district and clubs respectively at the state level volleyball championships. About 100 (N=100) male Senior elite Volleyballers will be drawn for the purpose of the study from the different district teams of Karnataka. The Selected subjected will also categorized under five different categories and the specialized roles the perform during the competitive play. They are Middle Hitters, Left Hitters, Right Hitters, Setters and Liberos respectively. The following are the variables selected for the study. The Motor ability variable profiles, such as Speed, Leg and Back Strength, Leg Power, Aram Power, Arm & shoulder coordination, Muscular Endurance, Cardiovascular efficiency, Performance of senior male Volleyballers based on coaches/experts rating in the dependent variables. The rating of the senior male elite volleyball players is subjectively defined based on the outcome of all the skills, techniques, tactics and overall game performance.

Statistical Technique:

Statistical techniques used in this study were, Descriptive statics and Pearson product moment correlations was employed to determine the analysis and interpretation of date.

Analysis and Discussions:

Motor Ability Variable Profiles with the game performance of Male Senior Elite Volleyball Players

Table: 01

Pearson's product moment correlations between Motor variables profiles and Game performance of the Male Senior Volleyball players

Variable 1	Variable 2	Correlation coefficient	P VALUE
Flexibility	Game performance	.700	.000
Arm Power	Game performance	.591	.000
Arm & Shoulder coordination	Game performance	.370	.000
Leg power	Game performance	.764	.000
Muscle Endurance	Game performance	.505	.000
Cardiovascular endurance	Game performance	.463	.000
Positional Balance	Game performance	.821	.000
Reactional ability	Game performance	-.820	.000
Grip Strength	Game performance	.578	.000

The Game performance of Male Senior Volleyball players was correlated with selected Motor ability profile variables, following results were observed. Game performance was significantly related to all the Nine variables selected out of 12 motor variables profiles for the study. The correlation coefficients obtained between Motor ability variable profiles and game performance were found Flexibility (r=.700; p=.000) Arm power (r=.591; p=.000) Arm and shoulder coordination (r=.370; p=.000) Leg power (r=.764; p=.000) Muscle endurance (r=.505; p=000) cardiovascular endurance (r=.463; p=000) Positional balance (r=.821; p=000) Reaction ability (r=-.820; p=000) and Grip strength (r=.578; p=000) were all found to be highly significant at .000 level. In other words, as the measurements of remaining Motor variables like speed, Leg and back strength and agility are increased linearly and significantly with the game performance of male senior volleyball players. The game performance of senior male elite Volleyballers of Middle Blockers, Left Hitter and Right hitters are shown positively significant motor profiles in Height, speed, Leg power, agility and reaction ability than the Setters and liberos. The setters and liberos are also significant at agility, Leg and Back strength and grip strength.

Findings:

- The Senior Male Volleyball players had significantly Higher height, Leg power of Middle blocker, Right Hitters and Left Hitter than the setters and Liberos.
- There is a significant difference between Middle Blockers, Left Hitters, Right Hitters, Setters and Liberos in the motor variables and Game performance

In Arm power and Arm & shoulder coordination Liberos had least value and Middle Blockers, Left Hitters and Right Hitters had higher values.The Setters and Liberos are significantly prove that they are significantly good at speed agility and muscular endurance.

Conclusions:

The researchers concluded that there were no gross significant differences between players at different roles in the game. The results obtained in the present study illustrated the formation of ideal Motor variable profiles of senior male volleyball players. The Middle Blockers, Left Hitters and Right Hitters were taller and had high motor qualities than the Setter and liberos.

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Governance In Sport

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Introduction:

If any nation wants sustainability in every sectors of economy than they should have to practices good governance models and have to restructures their rules, procedure and syllabus of school, colleges and institutions. They should have to birth either good genes of generation with physically feet to grow the national outputs or they should have to take precaution of their children. We all know that day by day our environment going bad to worse condition, and we suffer from so many born ad unborn diesis which never been heard. It's just because of global warming and by inhaling bad air and taking contaminated food and water. Such things are not only spoils us but it is also effecting our generations. So it's better to make compulsory for better physical education and practices to strive out dieses and do better for future perspectives in growth of national income.

Applying Four Principles of Good Governance to physical education of games and sports having regard to international best practice, if India decided to apply four good governance principles to examining possible outcome indicators to be used to test the actual progress being made in the growth of its national income and also they can found best players without any bribery, comradeship, political interference like regional, voting and reservation debates etc.,

Accountability – the obligation placed on government institutions and officials and officials to give answers and explanations and to take responsibility for the impact of their actions on children and youth- this provides the opportunity for citizens to have a voice and to participate in the affairs of Government.

Transparency – this is entails is the free flow of selection procedures in games and sports information that is understandable, reliable and timely ;

Participation – this refers to the opportunities available to children and youth to participate in the affairs of government through mechanisms that give them a voice and influence in policy making and program delivery.

Predictability – refers to the rule of law and results primarily from laws and regulations and budgets that are clear, known in advance and uniformly and effectively enforced.

If these four principles are complied with, government is also likely to be efficient in the use of resources and also more effective in the sense of better achieving desired program outcomes. Thus, in applying these principles :

Accountability, can be promoted through mechanisms for requiring that responses be made in respect of institutional conduct, and through appropriate incentives, good supervision, and high levels of games and sports persons participation ;

Transparency, can be promoted by regular publication and dissemination of information, as well as through enhanced feedback loops among children and youth about the selection, competition by officials, and policy-markers;

Participation, can be promoted through mechanisms that enable to children and youth sports persons be more involved in the conduct of competition and in selection procedures, particularly through the implementation of appropriate decentralization policies ; and

Predictability, can be promoted through consistent application of rules and policies.

Applying these principles impinges very directly on the issue of what are the outcomes that are being achieved for the physical condition. They concern what is being achieved in organization of physical education in school children's college and institutions compulsory.

The outcomes cannot viewed as naked eyes it's just like a goodwill of company which cannot be asses with tangible eyes its indirectly growth all institutions to bring out from developing to developed nations, and from poop to developing nation. By adoption of these policies a good sports person can increasing their ability to contribute to government ; to increased its name fame as well as respect to their nations by making wealth of the nation with many ways like they can increase foreign currency, gold etc.

Government of any nation can adopt and restructure their concentration of health problem being leaved healthy so the nation grows wealthy. It is quite true even when we are healthy the fees of doctors decreases and our pockets weighted, means income increases. Both from the government sides framing for games and sports is quite necessary between Government Governance and Institutional Governance for organizing of games and sports.

The responsibility is divided in every parts can flow the working condition much better and authentic, transparency, and everyone accountable to create trust confidence towards government as well as children and youth who had participated in games and sports.

People fit for the game are not only passionate about the sport they engage in, they also have educational and professional expertise, experience, skills and a network, as well as qualities of integrity. They value doing things well as much as doing them right, and they view good governance standards as the foundation for teaching, motivating and reinforcing be-haviours of sportsmanship and fair play. Also, they appreciate that only sports benefiting from good governance can sustainably generate the future revenue base needed to attract and retain the most fit people, by offering competitive compensation and the most supportive environment for growing and performing to their full ability.

Sports leaders face a strategic decision regarding which one of four potential future games they want to play : a beautiful game, a game with blocked potential, a game with wasted opportunity or foul play (see figure 1.3). the combination of the level of peoples fitness for the game and the level of governance standards in the sport forms the foundation for the type of future game. While the combination of people fit for the game and good governance standards creates a beautiful game, the opposite puts a sport on the track to foul play. For the two game scenarios in between, the beauty of the game is hampered. On one hand, the combination of people fit for the game and weak governance standards creates a game with blocked potential. On the other hand, the combination of people un-fit for the game and good governance standards creates a game with wasted opportunity.

Sportsmanship and fair play are at the heart of what makes professional athletes and amateurs take pride in practicing a particular sport. The reputation of the game influences their interest in the sport, and affects the fierce and ever – growing competition for peoples attention and participation vis-à-vis other sports and other recreational activities. Accordingly, modernizing internal, athletic and event governance standards contributes to maintaining and increasing the participation base of a particular sport. The same applies to the general public's interest in attending sporting events and following them on TV and in other media.At the same time, the bigger the participation and fan base of the game, the easier it is to attract beneficial sponsorships and media and broad casting right. Furthermore, as sponsors, media and broadcasters expect a positive association with a sport through their investments and by no means want to be associated with a problem, good governance standards provide assurance that adequate measures are in place to safeguard their brands and reputation. Finally, good governance standards are increasingly a requirement for sport leaders wishing to continue receiving substantial public funding for their sports, especially if they want public funding to further develop the game. Along the same lines, good governance standards comprise the best defense for pre-empting strict and inflexible regulatory oversight and for keeping privileges such as tax exemptions.

The best professional athletes never stop innovating in their unremitting endeavors to improve. They see opportunities more than risks when taking the game to the next level. Some sport leaders, however, have for gotten the winning attitude of the best professional athletes, and resist modernizing internal, athletic and event governance standards. Eventually, sport leaders have only two options. Either they disrupt the status quo and benefit from being offensive game changers or they stay put and eventually get disrupted in a damaging way. Sport leaders with a winning attitude opt for the former and lead their sports through tough and courageous change. Beyond ensuring a lasting legacy by being recognized and remembered as the ones bringing a beautiful game into the future, they also personally benefit from reduced risks as a result of properly managing legal liability for potential wrongdoing in their sports.

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A Survey On Physical Education Programme And Facilities In Rural Government Schools Of Telangana State.

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Abstract:
There is a huge demand for physical education in the 21st century as people are putting their best efforts to be healthy, physically fit and emotionally balanced. An individual has to grow mentally and physically sound right from the schooling. So there should be effective physical educational programmes in the schools. Effective physical education programme includes trained teachers, sports environment and proper facilities .Among these proper facilities play a key role. Although there are well trained teachers are available in the rural government schools of Telangana but they are unsuccessful due to lack of good equipment and other facilities. This research focuses on the availability of basic facilities and equipments to run physical education programmes. And concludes that students are very eager to build their career in sports/games but their dreams are not materialized because of meager amenities in the schools .Finally, this survey gives recommendations about improving facilities in rural government schools of Telangana.

Introduction:
Our Modern society is dynamic, demanding materialistic and self centered. Modern technology which men built up has become part and parcel to our life and in this process man himself has become an auto motion. Education is one of the most important facts of modern life. There is emphasis on providing education for everyone that is why; today's education is no merely a vast sea of mental aerobatics but also a source of physical activity that leads to perfection of an individual. The best individual is one who is physically fit, mentally sound, emotionally balanced and socially well adjusted. Physical education through its various forms of activities given balanced growth and development to the students. Students need to develop basic motor skills such as Running, Skipping, Jumping, Dodging, Climbing, Hopping, Throwing, Catching, Leaping and Kicking etc., to be used in performing rhythmic activities.
Facilities:Means to provide anything ready to possible such as playfields, well equipment, finance, faculty and sports infrastructure etc.

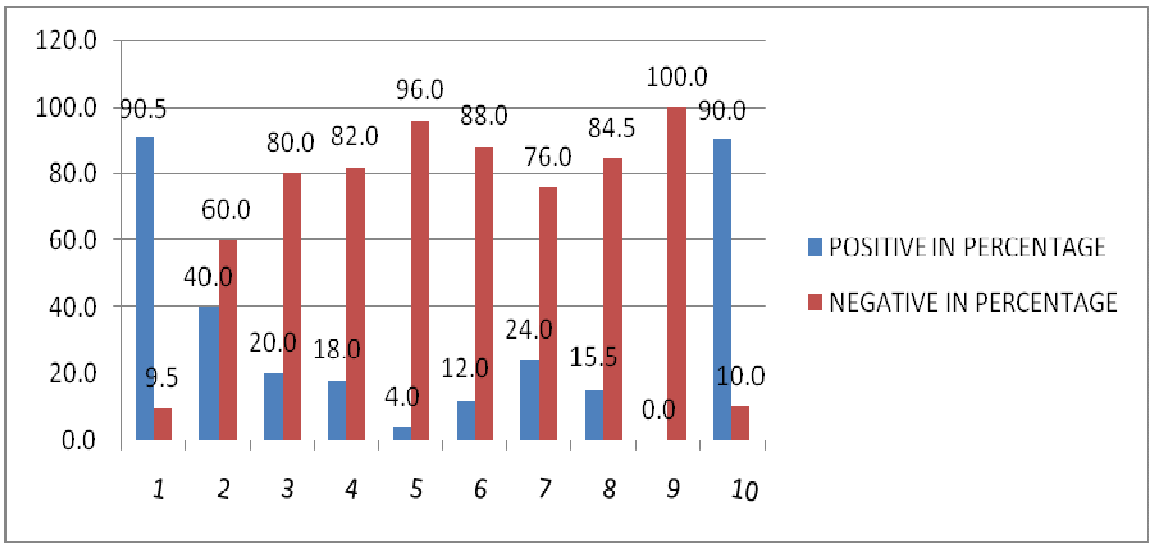
Methodology:
The purpose of the study was to survey the physical education programmers and facilities in Rural Government School in Telangana State.
The Members of the faculty prepared a detailed questionnaire to ascertain the information offered by the physical education teachers and physical directors and also Head Masters of the rural government schools regarding physical educational programme and facilities.
The Rural Government Schools in Telangana and collected the data through the questionnaires duly filled in by the physical education teachers whose co-operation in this regard was encouraging to facilities the smooth conduct of the study.The relevant information regarding the problems faced by physical education teachers working in Rural Government Schools in Telangana State was gathered by questionnaire method and the data was collected for this study.

Analysis of the data and Results of the study:

The problems faced by physical education teachers of Rural Government Schools of Telangana State was brought under facilities and problems and tabulated to five major problems area namely.
Physical education as an examination and compulsory subject.Importance of physical education, motivation, scholarships for sportsmen, special camps for sports men.
Mass participation, promotion or improvement of qualification, preparation of syllabus for physical education.Work load, students teacher ratioParticipation in interschool, state, national and international competitions. Self determination, facilities of indoor and outdoor activities for sports person.

Table-I, Importance of the Physical Education:

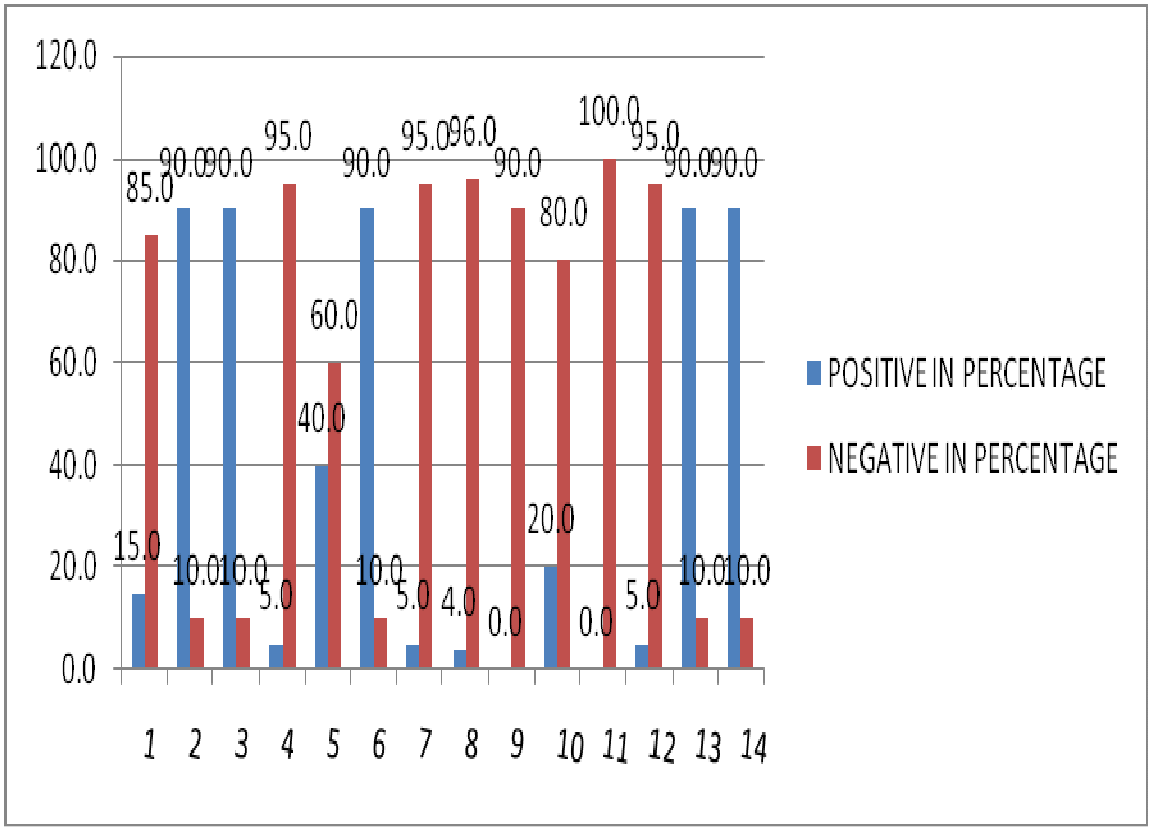
S l No.	STATEMENT	POSITIVE IN PERCENTAGE	NEGATIVE IN PERCENTAGE
1.	School teams are selected on the basis of tournament	90.5	9.5
2.	Institution provide scholarship to the outstanding sportsmen	40.0	60.0
3.	Institution will admit the sports persons under the sports quota	20.0	80.0
4.	Special camps are conducted for selected teams	18.0	82.0
5.	Sport magazines are provide in the school library	4.0	96.0
6.	Audio Visual programmers are conducted regularly to sports persons to show the importance of sports	12.0	88.0
7.	Outstanding performances and achievements of sportsmen counted for promotion of his studies	24.0	76.0
8.	Does the physical education teachers teach the other subjects besides physical education	15.5	84.5
9.	Do authorities provide the prescribed syllabus for physical education teachers	0	100.0
10.	Does the physical education teacher get the guidance from the head of the institution	90.0	10.0



The table shows that 80 percentage and above Rural Government schools have positive statement as importance of the physical education in 1 and 10. And the negative statement showing in 3,4,5,6,8,9.

Facilities available for Physical Education:

Sl. No.	STATEMENT	POSITIVE IN PERCENTAGE	NEGATIVE IN PERCENTAGA
1.	The School has separate room for physical education department	15.0	85.0
2.	Kabaddi Court	90.0	10.0
3.	Kho-Kho court	90.0	10.0
4.	Basket Ball court	5.0	95.0
5.	Ball Badminton count	40.0	60.0
6.	Volley Ball court	90.0	10.0
7.	Hand Ball court	5.0	95.0
8.	Foot Ball court	4.0	96.0
9.	Hockey field	0.0	90.0
10	Cricket ground	20.0	80.0
11	Lawn tennis court	0	100.0
12.	Table Tennis court	5.0	95.0
13.	Carr am Boards	90.0	10.0
14.	Chess	90.0	10.0



The table shows that 80 percentage and above Rural Government Schools have positive statement of facilities available for physical education activities in 2,3,6,13,14, and negative statement showing in 1,4,7,8,9,10,11

Conclusion:

There is a need to improve the basic amenities in the physical education department to keep in view of the future generation students. Several recommendations were made to do so.

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Fitness And Exercise For Healthy Modern Lifestyle – A Study

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Introduction

Living a healthier life can not only extend the life, it can also improve the quality. Feeling physically better and having control over the own life can greatly increase the mental health as well. Although there are some aspects of physical and mental health that are beyond an individual's (and science's) control, there are many things that people can do to improve their quality of life. Physical fitness is to the human body what fine 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. It is the "ability of the human body to function with vigor and alertness, without undue fatigue, and with ample energy to engage in leisure activities." Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And, since what we do with our bodies also affects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability. Physical fitness is most easily understood by examining the four basic parts: Cardio respiratory Endurance, muscular strength, muscular endurance and flexibility. Cardio respiratory Endurance is the ability to deliver oxygen and nutrients to tissues and to remove wastes over sustained periods of time.

Significance of the Study

The purpose of the study is to have a healthy diet and exercise regularly for preventing very serious diseases like heart disease, diabetes, high blood pressure, and strokes. "Prevention is the best cure" is a popular saying. This means that the easiest way to get healthy is to avoid getting sick in the first place. While this is not always possible, there are many ways to prevent possible future health problems and illnesses. Physical activity is essential to prevent and reduce risks of many diseases and improve physical and mental health. It can even help to live longer life.

Fitness and Exercise

Exercising and staying physically fit are an important part of maintaining the health. Proper exercise and fitness can improve the health in many ways. It can:

- Improve the health of the heart and lungs it lowers the chances of heart disease.
- Lower the cholesterol and blood pressure it lowers the chances of heart disease, stroke, and other chronic diseases.
- Maintain the weight it lowers the chances of heart disease, stroke, and other chronic diseases.
- Improve the strength and flexibility it makes daily activities easier and lowers the chance of osteoporosis, broken bones, pulled muscles, and other injuries.
- Improve the mental health by lowering anxiety and depression and increasing feelings of control and well-being.

There are many different kinds of exercise walking, running, swimming, dancing, and weight lifting, but three basic types of exercise. A good exercise program will include some combination of all three of these types of exercise.

Cardiovascular

Cardiovascular exercise improves and strengthens the heart, lungs, and circulation and helps people lose weight. Cardiovascular exercise is any type of exercise that raises heart rate to a 'target zone' (determined by age, weight, and health). Some of the most commonly types of cardiovascular exercise include running, aerobics, bicycling, walking, and stair climbing, but could also include dancing, skating, martial arts, tennis, or any type of exercise that raises your heart rate.

Strength Training

Strength training helps by making stronger and giving better endurance. This makes day-to-day activities easier and reduces chances of injury. Some common strength training exercises include sit-ups, push-ups, and using nautilus machines, strength bands, and free weights.

Flexibility

Exercises that increase flexibility give greater range of motion in joints and make body more supple, again, making day-to-day activities easier and reducing chances of injury. Many people do specific stretching exercises to increase their flexibility but other types of exercise such as dancing, yoga, and martial arts can also improve flexibility.

Procedure for Exercise

The guidelines for how often, how long and what type of exercise should be doing can vary greatly depending upon health and age. However, in general, it is suggested that:

- Exercise at least 3-5 times a week for 30-60 minutes at a time.
- Exercise includes some type of activity that involves large muscle groups and increases heart rate, for example walking, running, cycling, or swimming and also includes some strength training and flexibility exercises.
- Consult a doctor before starting exercises program.
- If possible, have an exercise test to determine a current level of fitness and work with a trained exercise professional to create an individual exercise program.

Maintaining a Healthy Weight

One of the many reasons people exercise is to maintain a healthy body weight. Weighing too much or too little can be very harmful to health. But what is a healthy body weight? That depends on many factors, including age, gender, height, body type and shape, health, and overall fitness.

Nutrition

Our bodies, like cars, need fuel to run. And like cars, the quality of the fuel that we use can affect our performance. Making sure that you are giving your body all the fuel it needs and the best quality fuel you can will improve how your body runs and feels. Our "fuel" comes from food and the nutrients that food provides. Eat a variety of foods to get the energy, protein, vitamins, minerals, and fiber you need for good health. This can lower your chances of having high blood pressure, heart disease, a stroke, certain cancers, and the most common kind of diabetes. A diet low in fat and cholesterol, this can lower your risk of heart disease and certain types of cancer. A diet low in fat can also help you maintain a healthy weight. A diet with plenty of vegetables, fruits, and grain products, these types of food provide needed vitamins, minerals, fiber, and carbohydrates, and are generally lower in fat to help you maintain a healthy weight. Sugar in Moderation, Sugar has many calories and few nutrients and can contribute to tooth decay. Salt in moderation, this helps lower your risk of high blood pressure.

Finding of the Study

A fashionable proverb “Health is Wealth" gives a large meaning to our life as health is considered the most valuable and precious for every individual. Good health means not only a state of absence of disease in the body but a complete physical, mental, social as well as spiritual well being of an individual.

A healthy environment facilities good health but it is the unhealthy environment due to over population, excessive industrialization, air and water pollution etc. that is threatening the life with many dreadful diseases. In the contemporary India many people have been gripped by the clutch of disease like cancer, diabetes, hypertension, AIDS etc. although people of ancient India were said to be relatively healthy. At present people are suffering from various mental disorders also because they are racing blindly towards fame and having only one aim in life that is to achieve the big status in society.

Today competition in each field is so intense that nobody can escape from the hectic schedule of life. Earlier, a few decades ago, people used to work differently, enjoying the different color of life. But it is noticed now that people are working under stressful condition and without satisfaction, which is detrimental to their physical fitness. As a result they are suffering from many diseases. Physical fitness is very necessary for a healthy and tension free life. Physical fitness includes diet, exercise and sleep. These three basic things have their own importance in each individual's life and everyone should be sensible with regard to these for a healthy life.

Diet is the kind of food that we take. As our life depends upon it we must know, how much to eat and when to eat. Therefore, one should "eat to live and not live to eat". Diet should be simple and light rather than heavy, but it should be always rich and pretentious. Fruit must be supplemented with the meals. Those who take fruit and fresh vegetables in diet enjoy the longevity of life, good health, agility in activity, spirituality of mind and humanity of outlook. a diet rich in fruits and fresh vegetables lowers the incidence of disease such as cancer, diabetes, cataract, heart attack etc. Fast food and soft drinks should be strictly avoided.

Leading a Healthy Lifestyle

A healthy lifestyle means maintaining a balanced and nutritious diet as well as engaging in sports or other fitness related activities. A healthy diet alone however is inadequate to ensure a healthy body as physical activity helps to keep one in shape and free of sickness and disease.

According to the World Health Organization, only one in ten people exercise regularly and a majority does not follow a healthy diet. The main culprit is our penchant for junk food as can be seen from the popularity of fast food chains and other western eateries. Even local foods such as fried noodles, friend rice and snacks and savories are laden with fat and calories. Thus, consuming this type of food on a daily basis can contribute to weight gain. Overweight and obese people suffer from many health complications such as diabetes, high blood pressure, high cholesterol and even cancer.

Hence, the emphasis on healthy lifestyle should start at a young age. Parents must urge their children to eat more vegetables, fruits, juices, whole meal and wholegrain foods. Many parents, due to time constraint, usually find the easy way out by cooking two-minute noodles or heading towards the nearest fast food joint for quick meal. They do not realize however that sets the stage for an unhealthy lifestyle for their children who quickly become addicted to such foods. Thus, parents can counter this problem by cooking or preparing meals that do not take up time such as cheese sandwiches, soup, stir friend vegetables. School canteens must be urged to sell only highly nutritious food and drinks. Vending machines that sell soft drinks and drinks that are spiked with sugar should be banned. Hence, school going children would be exposed to healthy eating form young.

Physical Education and Sports

Daily exercise is vital. In fact, schools should implement Physical education on a daily basis rather than twice weekly. Only the minority are actively involved in sports. Most students are sedentary and prefer to concentrate on their studies as they consider indulging in physical activities a waste of time. By enforcing regular exercise daily, these students would be exposed to the importance and benefits of exercise.

Many parents and adults do not allocate time for physical activity. A large number of them work long hours and return home late thereby depriving themselves of the benefits of exercise. Parents must lead an exemplary life which can benefit their children by increasing awareness on the health benefits of exercising regularly. Bringing their children for walks in the morning or evening is a good start to achieve this goal. They should become members of clubs which have swimming pools and gym facilities. During the weekend, the family can strengthen their bond by adjourning to play fields for exercise and a healthy meal after that.

Discussion of the Study

Physical well-being wholly depends upon a sound brain as all activities of our body are controlled by the mind. Any disturbance in the mind will disturb the body giving rise to various abnormalities. So a sound sleep is must for a healthy person.

- Before going to bed get rid of stress by meditation,
- Don't' sleep during the day,
- Perform physical and mental work to get some sleep,
- Do exercise regularly,
- Drink warm milk and avoid spice food before going to bed.

The quality and not the quantity of sleep are important, although 8 hours sleep is necessity for sound health. Thus, balanced diet, regular exercise and sound sleep are the prerequisites for sound physical fitness and physical fitness is the key to a productive and successful life. Dietary habits of childhood are difficult to change afterwards. So mothers should refrain from over feeding their children.

- Make breakfast the largest and dinner the lightest meal of the day,
- Be a nibbler not a gourmet,
- Eat salads before eating the meal,
- Don't starve yourself and overeat subsequently,
- Fast food and canned food are costly both for your pocket and your heart,
- Yellow orange and green vegetables and fruits add life to heart and
- As age advances eat less and exercise more.

Conclusion

Healthy living is a combination of many things, including good nutrition, regular exercise and a positive attitude. Taking care of your body and feeling pride in your accomplishments can improve both your physical and mental health. There are many things you can do to improve your quality of life - improving your diet and exercising regularly is two of the easiest steps. No matter how small you start adding an apple a day to your diet or walking 5 more minutes a day, you can make a change and an improvement in your life.In conclusion, leading a healthy lifestyle is a conscious decision. One can ignore that and lead a life that exposes one to many health hazards. It is important to recognize that a healthy living ensures a longer life span as well as a life free of disease and complications.

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"Effect of Yogic Practices and Aerobic Exercises on Selected Physiological Variables of Inter Collegiate Women Volley Ball Players"

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Introduction

Yoga is an ancient art based on a harmonizing system of development for the body, mind and spirit. It is a practical aid, not a religion. The continued practice of yoga will lead one to a sense of peace and well being and also a feeling of being in harmony with one's environment.

Yoga:Yoga, an ancient but perfect science, deals with the evolution of humanity. This evolution includes all aspects of one's being, from bodily health to self-realization. Yoga means union, the union of body with consciousness and consciousness with the soul. Yoga cultivates the ways of maintaining a balanced attitude in day-to-day life and endows skill in the performance of one's actions."

Aerobics:The purpose of aerobics training is to improve, at all levels, the efficiency of the Oxygen delivery system and the efficiency with the muscles produce energy. In healthy terms, the benefits to the gained from aerobic exercise are enormous and include weight loss, increased life expectancy and enhanced feeling of well being. In contrast, an improvement in your ability to exercise. An aerobically offers much loss benefit, since it tends to faster mere muscle development.

Statement Of The Problem

The purpose of the study was to the effect of yogic practices and aerobic exercises on selected physiological variables of inter collegiate women volley ball players.

Hypothesis

It is a well known fact that systematic training for a certain period is bound to cause changes in physiological parameters. Based on this assumption the following hypotheses were formulated.

The researcher had formulated the following hypothesis as earlier.

It was hypothesized that, there would be significant effect due to Yogasanas on Physiological variables of Inter Collegiate Women Volley Ball Players.

It was hypothesized that, there would be significant effect due to Aerobic Exercises on Physiological variables of Inter Collegiate Women Volley Ball Players

Delimitations

The study was delimited in the following factors.

This study was confined to inter collegiate women volley ball players only.The study was restricted to 60 women subjects in which each group consisted of 30 subjects.The age group of the students ranged between 18 to 22 years.The yogic practices and aerobic exercises training of twelve weeks was given to experimental groups only.

The study was concentrated on

Physiological Variables

I Pulse rateII Breath holding time

LIMITATIONS

The following uncontrollable factors associated with the study were accountant as limitations of this study.

The weather conditions such as air, temperature, relative humidity etc could not be controlled during the listing period and their influence on the result of this study was recognized as a limitation.
Certain factors like daily routine life style food habits may have affected the results of the study were not countries.Hereditary factors which might influence the results of the study could not be controlled.
Participation of subjects in other controlled and social activities as part of their habitation would have affected the result to the study of well considered limitation.
SELECTION OF SUBJECTS
The purpose of the study was to find out the effect of Yogasanas and Aerobic exercises on selected Physiological component. To achieve this purpose, sixty intercollegiate volley ball players were randomly selected and were divided into two groups of thirty subjects each namely Yogasana group and Aerobics group. Group I underwent yogasana and Group II underwent aerobics training. Both these groups underwent their respective training programmes for six days per week for twelve weeks.
SELECTION OF VARIABLES
For this study the physiological variables such as pulse rate, breathing holding time were chosen as variables. The experimental group underwent training for 6 days per week for twelve weeks. The data collected before and after the training period for analysis.

Conclusions
From the results of the study, the following conclusions were drawn:
Increase in Breath holding times were improved through Yogic practices among Inter Collegiate Women Volley Ball Players. The Aerobic Exercises were produced better improvement on Breath Holding time among Inter Collegiate Women Volley Ball Players. Similarly, the study revealed that there will be a significant reduction on pulse rate due to Yogic practices among Inter Collegiate Women Volley Ball Players. The Aerobic Exercises were significant reduction on pulse rate among Inter Collegiate Women Volley Ball Players.
TABLE I
Analysis Of Covariance For The Pre Test, Post Test And Adjusted Post Test Data On Breath Holding Time Of Yogic Practices And Aerobic Exercises

(Beats per minutes)

Test	Yogic Practices Group	Aerobic Exercises Group	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Pre- Test							
Mean	24.53	25.20	B.M	26.84	2	13.42	0. 25
S.D	8.40	7.83	W.G	2285.47	42	54.42	
Post- Test							
Mean	32.00	31.87	B.M	694.58	2	347.29	9.86*
S.D	5.06	7.34	W.G	1479.33	42	35.22	
Adjusted Post- Test							
Mean	31.89	31.33	B.S	538.15	2	269.07	20.06*
S.D			W.S	549.81	41	13.41	

B.M -- Between Means *Significance at 0.05 level
W.G -- Within Groups , B.S – Between Sets W.S – Within Sets
Table value required for significant at 0.05 level with 2 and 42 and 2 and 41 are 3.22 and 3.23 respectivel

TABLE –II

Analysis Of Covariance For The Pre Test, Post Test And Adjusted Post Test Data On Pulse Rate Ofyogic Practices And Aerobic Exercises
(Beats / minute)

Test	Yogic	Aerobic	Source of	Sum of Squares	df	Mean Squares	'F' Ratio
	Practices Exercises Group	Variance Group					
Pre- Test							
Mean	74.20	74.73	B.M	6.58	2	3.29	0. 62
S.D	2.79	1.69	W.G	223.73	42	5.33	
Post- Test							
Mean	71.00	71.80	B.M	59.24	2	29.62	8. 93*
S.D	1.83	1.72	W.G	139.33	42	3.32	
Adjusted Post- Test							
Mean	69.16	68.92	B.S	474.6	2	269.07	13.55*
S.D			W.S	814.2	41	19.86	

B.M -- Between Means *Significance at 0.05 level
W.G -- Within Groups ,B.S – Between Sets ,W.S – Within Sets
Table value required for significant at 0.05 level with 2 and 42 and 2 and 41 are 3.22 and 3.23 respectively

Interpretation On Breath Holding Time :

The statistical analysis comparing the pre test values , post test values and adjusted post test values of breath holding time is measured through nose clip method due to Yogasanas and Aerobics is presented in Table I.Pre test : The AM $\pm$ SD pre test scores of Yogasanas and Aerobics were 24.53 $\pm$ 8.40 , 25.20 $\pm$ 7.83 respectively . The obtained pre test F value of 0.25 was less than the required table F value of 3.22. Hence the pre test means value of Yogasanas and Aerobics on breath holding time before start of the respective treatments were found to be insignificant at 0.05 level of confidence for the degrees of freedom 2 and 42. Thus this analysis confirms that the random assignment of subjects into two groups were successful.

Post test : The AM$\pm$SD post test scores of Yogasanas and Aerobics were 32.00 $\pm$ 5.06 , 31.87 $\pm$ 7.34 respectively . The obtained post test F value of 9.86 was greater than the required table F value of 3.22. Hence the post test means value of Yogasanas and Aerobics on breath holding time were found to be significant at 0.05 level of confidence for the degrees of freedom 2 and 42. Thus the results obtained proved that, the interventions namely Yogasanas and Aerobics on breath holding time produced significantly different improvements among the training groups .

Adjusted post test : The AM$\pm$SD adjusted post test breath holding time scores of Yogasanas and Aerobics were 31.89 , 31.33 respectively . The obtained adjusted post test F value of 20.06 was greater than the required table F value of 3.22. Hence the adjusted post test means value of breath holding time show significant at 0.05 level of confidence for the degrees of freedom 2 and 41. Since the observed F value on adjusted post test mean among the results groups such as Yogasanas and Aerobics , on breath holding time produced significantly different improvements among the training groups .

INTERPRETATION ON PULSE RATE :

The statistical analysis comparing the pre test values , post test values and adjusted post test values of pulse rate is measured through beats per minute test due to Yogasanas and Aerobics is presented in

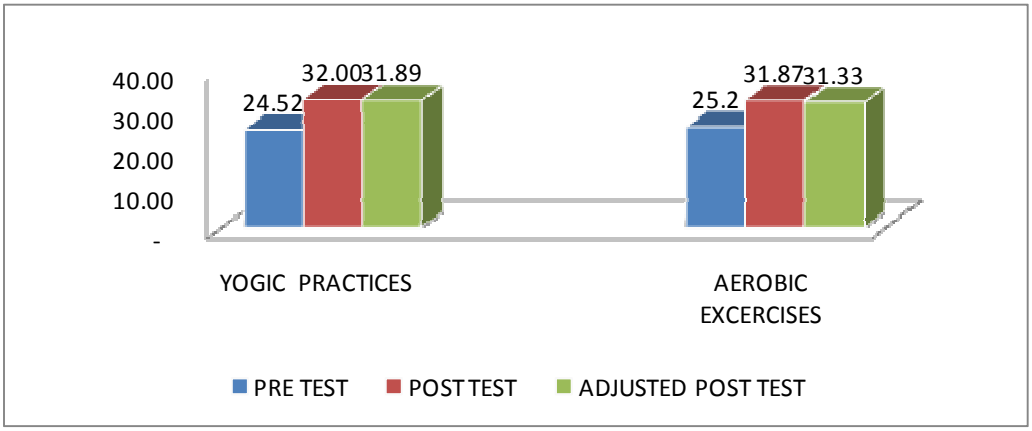
Table II.

Pre test : The AM ± SD pre test scores of Yogasanas and Aerobics were 74.20 ± 2.79 , 74.73 ± 1.69 respectively . The obtained pre test F value of 0.62 was less than the required table F value of 3.22. Hence the pre test means value of Yogasanas and Aerobics on resting pulse rate before the start of the respective treatments were found to be insignificant at 0.05 level of confidence for the degrees of freedom 2 and 42. Thus this analysis confirms that the random assignment of subjects into two groups were successful.

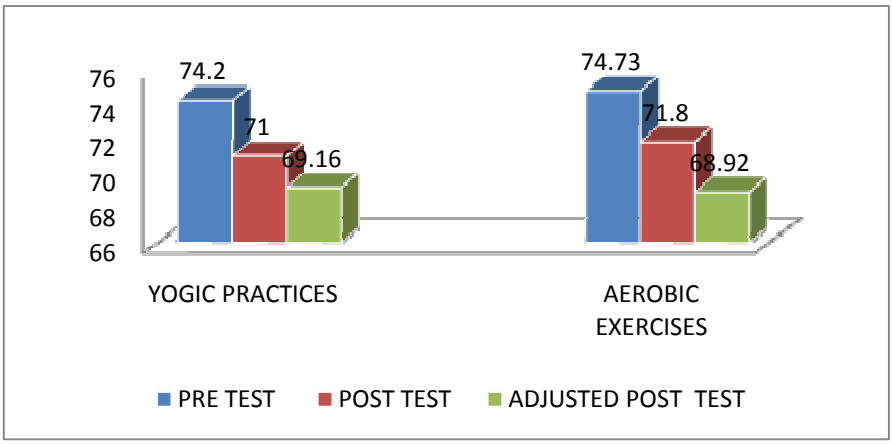
Post test : The AM±SD post test scores of Yogasanas and Aerobics were 71.00 ± 1.83 , 71.80 ± 1.72 respectively . The obtained post test F value of 8.93 was greater than the required table F value of 3.22. Hence the post test means value of Yogasanas and Aerobics on resting pulse rate were found to be significant at 0.05 level of confidence for the degrees of freedom 2 and 42. Thus the results obtained proved that, the interventions namely Yogasanas and Aerobics on resting pulse rate produced different improvements among the training groups .

Adjusted post test : The AM±SD adjusted post test resting pulse rate scores of Yogasanas and Aerobics were 69.16 , 68.92 respectively . The obtained adjusted post test F value of 13.55 was greater than the required table F value of 3.22. Hence the adjusted post test means value of pulse rate shows significant at 0.05 level of confidence for the degrees of freedom 2 and 41. Since the observed F value on adjusted post test mean among the results groups such as Yogasanas and Aerobics , on pulse rate produced better improvement among the training groups .

BREATH HOLDING TIME



PULSE RATE



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Applying Exercises Of Improving The Effect Of Legs Strikes Number (2) And (3) In Combat On Male Students Of The Vovinam Club Of Chinh Gian Ward, Hai Chau District, Danang City, Vietnam

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Abstract
In Vovinam leg attack take-downs number (2), (3) (to grab the opponent by the feet or legs and take them down using twisting motions, which is usable as a surprise attack in a fight) has highly pragmatic in fighting. The study results has selected exercises that improve the leg attack take-down techniques number (2), (3) for male students of VovinamClub in Chinh Gian Ward, Hai Chau District, Da Nang City. Through experiments have confirmed the effectiveness in practicing these attacks techniques.
Keywords:Vovinam, leg attacks, exercises, Danang City

Introduction

Vovinam is a form of martial arts that is known for unique and beautiful leg strikes. Vovinam has its own set of leg strikes from high to low with the total number of 25 strikes. However, most of them are only for performance purpose and are hard to be applied in practical situations, especially in matches.
Among these leg strikes, low strikes for take-down purpose number 2 and 3 have realy high usability in matches. To utilize these techniques, users must have not only movement combination capabilities but also a certain level of stamina and physical strength. It is necessary to put in some stamina excercises while training for these techniques.
Through practical observation and investigation of the methods of teaching these leg strikes at the Vovinam club of Chinh Gian ward, Danang city, it seems that the training only uses simple, repeated and boring technical exercises, which leads to insignificant results. Therefore, it is important to improve and diversify the training methods as well as contents to make the best use of the beauty and practical usability of leg strikes number 2 and 3.

Methods

During the research, the researches mainly use these research method: Analysis and summary of documents, interviews, observation and mathematical statistics.

Results and discussion

The reality of using advanced excercises for leg strikes number 2 and 3 of male students of the Vovinam club of Chinh Gian ward.
In Vovinam matches, the fighters must use leg strikes in rounds or their point will be minused.
Leg strikes 2 and 3 are two of the techniques that are deemed as highly important in Vovinam matches by experts.

Vovinam's leg strike number 2 requires user to put his left leg around the opponent's right leg and hit it with his right knee at the same time (the position is about the knee's height). Surprise, speed and timing are extremely important factors to take down an opponent in a match. As a result, using leg strike number 2 is a wise choice sin this strike is used at a short distance on low positions. It is also simple and effective in matches.

Image 1.1- Leg strike number 2

Leg strike number 3 of Vovinam is used when the opponent's legs are parallel. The user takes a long step forward with his right leg, lowers his body, puts his two arms on the ground; directing to the left. After that, user swings his left leg to cover both of the opponent's legs and then uses his right leg to hit both of the opponent's knees and then twist his two legs to take the opponent down. The leg strike number 3 is a technique used to take down an opponent at low position. This strike can be used in combination with lilt movement for a surprise attack when the time comes. This take-down technique with both legs has really high chance of success due to its surprisingly high speed.

Image 1.2- Leg strike number 3

Practical evaluation of the usage of advanced excercises for leg strikes number 2 and 3 shows that:

- Students at the Vovinam club of Chinh Gian ward, Hai Chau district, Danang city are still not able to use these techniques effectively even though they are well utilized by a lot of athletes and other students.
- After the intervews, the researchers are able to determine 4 main causes that lead to ineffective use of these leg strikes: unsuitable attack timing, bad stamina, low jumping power, low attack speed.

All the excercises used are mainly based on the coaches' experience, which are not united, professional or systematic. As a result, they are ineffective.

Choosing suitable excercises to improve the effects of leg strikes number 2 and 3 for the male students of the Vovinam club of Chinh Gian Ward, Hai Chau district, Da Nang city.

The process of choosing excercises to improve the effects of leg strikes number 2 and 3 for the male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city consists of the following steps:

Determining the requirements of the excercises

Researching documents, observing and interviewing coaches to summarize the groups of excercises to improve the effect of leg strikes number 2 and 3

Surveys with questionaires with the participation 20 experienced coaches to determine the priority of the excercises.

The results show that there are 9 effective excercises to help improve leg strikes number 2 and 3 of the male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city

Techincal excercises:
1. Spinning kick after a dash on a target.2. Practicing leg strikes number 2 and 3 in one place with supporters.
3. Moving and attacking target with leg strikes number 2 and 34. leg strikes after dashing
Stamina excercises
5. Plank 6. Crunch7. High jump when holding knees8. Burpee with push-ups9. Elasticity excercises
Confirmed results
Applying chosen excercises to increase the effects of leg strikes number 2 and 3 for male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city
To evaluate the effects of the determined exercises, the research is conducted in real training.
2.3.1 Research procedureThe objects of the research are 20 male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city. Thet are divided in to experiment group and comparison group,
The comparison croup includes 10 male students who train with old excercises
The experiment group includes 10 males students who train with determined excercises
The experiment lasts for 3 months (05/2015-08/2015) and takes place 3 times per week at the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city.
The experiment was carried out 3 times to evaluate the effect of leg strikes number 2 and 3 with the below tests:
Practicing the strike in one place 10 times with supports. Counting the number of passed attempts. (number)
Abs folding in 30s (number)High jump while holding knees in 30s (number)
Striking after dashing 10 times. Counting the passed attempts (number)
2.3.2. Evaluating the results after applying excercises to improve the effects of leg strikes number 2 and 3 for male students of Vovinam Club of Chinh Gian ward, Hai Chau District, Da Nang city
To evaluate the effects of the chosen excercises, the researchers check and evaluate the experiment groups and the comparison group before applying the excercises, 1 month after applying and 3 months after applying.
**** Before applying the excercises*Table 2.1 Results before applying excercises**

No	**TEST**	**Experiment (n = 10)**	**Comparison (n = 10)**	**Results**		
				$t_{tính}$	$t_{bảng}$	**P**
1	Practicing the strike in one place 10 times with supports. Counting the number of passed attempts. (number)	4,90,74	4,80,79	1,73	2,101	0,05
2	Abs folding in 30s (number)	15,81,32	15,52,12	0,53	2,101	0,05
3	High jump while holding knees in 30s (number)	19,31,95	20,51,13	0,495	2,101	0,05
4	Striking after dashing 10 times. Counting the passed attempts (number)	40,79	3,50,79	1,15	2,101	0,05

From table 2.1, it can be seen that both group has $t_{tính} < t_{bảng}$ = 2.101 at the rate of P = 0,05. There is no meaning in comparing the results of the two groups before the experiment. In short, both groups are on equal level before the experiment.

**** Results after 1 month of experiment.*** **Table 2.2. Results of the two groups after 1 month of experiment**

No	TEST	Experiment (n = 10)	Comparison (n = 10)	Results		
				$t_{tính}$	$t_{bảng}$	P
1	Practicing the strike in one place 10 times with supports. Counting the number of passed attempts. (number)	5,80,63	5,10,74	2,29	2,101	0,05
2	Abs folding in 30s (number)	170,67	16,70,34	0,94	2,101	0,05
3	High jump while holding knees in 30s (number)	22,21,32	21,21,37	1,698	2,101	0,05
4	Striking after dashing 10 times. Counting the passed attempts (number)	4,70,74	4,20,63	1,34	2,101	0,05

From table 2.2, we can see the results of the experiment and the comparison groups: There is a significant change in the excercise of striking in one place 10 times with support, which is shown through $t_{tính} > t_{bảng}$ at the rate of P<0.05. The other tests do not change much, $t_{tính} < t_{bảng}$ at the rate of P = 0.05. This means the excercises are effective in the first stage.

To prove the effects of the excercises chosen to improve the effects of leg strikes number 2 and 3 for male students, the researchers continue the planned experiment in 2 more months.

**** Results after 3 months of experiments***

The results affter 3 months of experiments are presented in ttable 2.3 below.

Table 2.3 Results after 3 months of experiments

No	TEST	Experiment (n = 10)	Comparison (n = 10)	Results		
				$t_{tính}$	$t_{bảng}$	P
1	Practicing the strike in one place 10 times with supports. Counting the number of passed attempts. (number)	7,90,74	6,10,55	4,99	2,101	0,05
2	Abs folding in 30s (number)	19,80,77	17,71,34	5,5	2,101	0,05
3	High jump while holding knees in 30s (number)	23,41,07	22,22,15	2,5	2,101	0,05
4	Striking after dashing 10 times. Counting the passed attempts (number)	6,71,12	5,40,94	2,86	2,101	0,05

Through table 2.3, it is clear that both groups have improved a lot in all 4 tests after 3 months of experiments. However, the experiment group's results are far better than the comparison group. This is shown through $t_{tính} > t_{bảng}$ at the rate of p = 0,05, which means that this difference is reliable.

To clear the effects of the excercises on the experiment and the comparison group, the researchers compare the advance rate of both groups before and after the experiments. The results are shown in table 2.4

Table 2.4 Advance rate after 3 months of experiments

No	TEST	Experiment (n = 10)	Comparison (n = 10)
		W%	W%
1	Practicing the strike in one place 10 times with supports. Counting the number of passed attempts. (number)	46,88	23,85
2	Abs folding in 30s (number)	22,47	13,25
3	High jump while holding knees in 30s (number)	19,20	7,96
4	Striking after dashing 10 times. Counting the passed attempts (number)	50,47	42,70

Through table 2.4, we can see that after 3 months of experiments, both the experiment and comparison groups are able to advance. However, the experiment group's improvement is clearly better than the comparison group. In other words, the excercises chosen to be applied in the experiment group's training prove to be effective in improving the effects of leg strikes number (2) and (3) for the research subjects.

Conclusion

- Leg strikes number (2) and (3) are considered two of the most important techniques in Vovinam by the experts. However, the students of Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city were not able to put the to good use due to unsuitable excercises

- Through their research, the researchers are able to find 9 excercises to improve the leg strikes number (2) and (3) and 4 tests to evaluate the effects of these techniques of the male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city.
- The excercises chosen to improve the effects of these strikes for male students of the Vovinam club of Chinh Gian ward, Hai Chau district, Da Nang city prove to be more useful than the old ones with the necessary statistics of p<5%.

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Effect of Different Packages of Yogic Practices on HDL Anxiety and Cortisol Variables Among Overweight Middle Aged Women

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Introduction: Yoga is the "Union of the individual self with the universal self" (Iyengar, 2001). Yoga means the union or communication or unity with our inner being. "Asana" means a state of being in which we can remain steady, calm, quiet and comfortable with our physical body and mind.

Effect Of Yogic Training On Psychological Benefits; Yoga improves concentration, attention, mood, depth perception, mind/body neuro connection, memory, learning efficiency, balance, steadiness and cognitive function. Besides, it decreases anxiety and depression. It also increases self acceptance, social skills, well-being, somatic and kinesthetic awareness and self-actualization.

Effect Of Yogic Training On High Density Lipoprotein: The high density lipoprotein contains the least amount of cholesterol high density lipoprotein's may operate to protect against heart diseases in two ways:

To carry cholesterol away from the arterial wall for degradation to bile in the lives and subsequently excreted by the intestines.

To compete with the low density lipoprotein fragment for entrance into the cells of the arterial wall.

Effect Of Yogic Training On Cortisol

Cortisol, known more formally as hydrocortisone (INN, USAN, BAN), is a steroid hormone, more specifically a glucocorticoid, produced by the zona fasciculata of the adrenal cortex **(Scott, 2011).**

Effect Of Yogic Training On Anxiety: Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components. It is the displeasing feeling of fear and concern. The root meaning of the word anxiety is 'to vex or trouble'; in either presence or absence of psychological stress and anxiety can create feelings of fear, worry, uneasiness and dread.

STATEMENT OF THE PROBLEM: The purpose of the study was to find out the effect of different packages of yogic practices on selected lipid profile status, physiological and psychological variables among overweight middle aged women.

HYPOTHESES: It was hypothesised that there would be a significant improvement on on hdl anxiety and cortisol variables among overweight middle aged women due to the influence of different packages of yogic practices than the control group.

DEPENDENT VARIABLES: High Density Lipoproteins and Cortisol

INDEPENDENT VARIABLES: Experimental group I – Yogic package, Expérimental group II - Yogic package, Group III – Control group

EXPERIMENTAL DESIGN: The study was formulated as a true random group design consisting of a pre test and post test. The middle aged overweight women (N=45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as experimental group - I (Yogic practices), experimental group - II (Yogic practices) and control group respectively. Pre and post tests were conducted for all the 45 subjects on selected lipid profile status, physiological and psychological variables before and after the experimental period of twelve weeks. The two experimental groups were treated with their respective yogic programme for one hour per day for five days a week for a period of twelve weeks.

STATISTICAL PROCEDURE: Analysis of co-variance statistical technique was used to test the adjusted post test mean differences among the experimental groups and control group. If the adjusted

post test result was significant, then the Scheffe's post hoc test was used to determine the significance of the paired mean differences **(Thirumalaisamy, 1998).**

Computation Of Analysis Of Covariance On High Density Lipoproteins(Scores In Mg/Dl)

Means	Exp Group I	Exp Group II	Control Group	SV	SS	df	MS	Obtained 'F'
Pre test	45.40	45.87	47.33	B	30.53	2	15.27	0.49
				W	1306.67	42	31.11	
Post test	49	51.60	46.47	B	197.64	2	98.82	3.46*
				W	1199.33	42	28.56	
Adjusted post test	49.69	51.89	45.49	B	312.472	2	156.24	29.04*
				W	220.61	41	5.38	

*Significant. F ratio for 2 and 42 = 3.22 and 2 and 41 = 3.23 (0.05 level)

Tablecomputation Of Scheffe's Post Hoc Test Ordered Adjusted Final Mean Difference Of High Density Lipoproteins

Experimental Group II	Experimental Group I	Control Group	MD	CI
51.89	49.69	-	2.20*	2.15
51.89	-	45.49	6.40*	2.15
-	49.69	45.49	4.20*	2.15

* Significant

In this work, the analysis of covariance of high density lipoproteins was carried out in two different Experimental Groups with the inclusion of different packages of yogic practices. The same analysis was carried out in another group called the Control Group without inclusion of training. From these analyses, it was found that the results obtained from the Experimental Groups had significant increases in the high density lipoproteins when compared with one from the Control Group. This was due to the influence of different packages of yogic practices in the analysis of Experimental Groups. It was interesting to note that the results obtained from Experimental Group II had more significant effect than Experimental Group I and control group on the increased high density lipoproteins.

COMPUTATION OF ANALYSIS OF COVARIANCE ON CORTISOL

Means	Exp Group I	Exp Group II	Control Group	SV	SS	df	MS	Obtained 'F'
Pre test	12.12	12.30	11.98	B	0.77	2	0.39	1.01
				W	16.13	42	0.38	
Post test	11.59	11.23	11.82	B	2.63	2	1.31	4.65*
				W	11.85	42	0.28	
Adjusted post test	11.60	11.12	11.93	B	4.76	2	2.38	24.36*
				W	4	41	0.10	

*Significant. F ratio for 2 and 42 = 3.22 and 2 and 41 = 3.23 (0.05 level)

COMPUTATION OF SCHEFFE'S POST HOC TEST ORDERED ADJUSTED FINAL MEAN DIFFERENCE OF CORTISOL (Scores in µg/dl)

Control Group	Experimental Group I	Experimental Group II	MD	CI
11.93	11.60	-	0.33*	0.29
11.93	-	11.12	0.81*	0.29
-	11.60	11.12	0.48*	0.29

Discussion On The Findings Of Cortisol

In this work, the analysis of covariance of cortisol was carried out in two different Experimental Groups with the inclusion of different packages of yogic practices. The same analysis was carried out in another group called the Control Group without inclusion of training. From these analyses, it was found that the results obtained from the Experimental Groups had significant decreases in the cortisol from it higher level to moderate when compared with one from the Control Group. This was due to the influence of different packages of yogic practices in the analysis of Experimental Groups. It was interesting to note that the results obtained from Experimental Group II had more significant effect than Experimental Group I and control group on the decreased cortisol.

Conclusions:

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

It was concluded that the lipid profile status such as high density lipoproteins and anxiety has significantly change due to the influence of twelve weeks practice of different packages of yogic practices among overweight women compared to the control group. But particularly in the experimental group II was significant increase in the high density lipoprotein level when compared to the experimental group I.

It was concluded that the physiological variable such as cortisol has not significantly altered due to the influence of twelve weeks practice of different packages of yogic practices among overweight women.

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Sports Competition Anxiety among Male and Female Indian Sub Junior Wrestlers

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Abstract: Anxiety is one the many psychology aspects that influence players during competition. It is proved in previous researches that anxiety clearly affects the performance and the individual reaction to its outcome. The aim of this study was to assess the sports competition anxiety among national level wrestlers and to examine differences in sports competition anxiety among male and female Sub-junior wrestlers. The sample for this research were 24 (12 male and 12 female) National level wrestlers from the State of Haryana, Delhi, Punjab, Maharashtra, Jharkhand, Manipur, West Bengal, U.P and Madhya Pradesh. Martens' Sports Competition Anxiety Test ((1977) was used to measures the sports competition anxiety all subject of this study. The data collected from the subjects were statistically analyzed for difference if any, by applying' test.. The result reveals that the wrestlers of both categories showed normal range of sports competition anxiety. This study also indicated that male wrestlers have low Sports Competition Anxiety than female wrestlers the't' value of sports competition anxiety 3.45 is found significant at 0.01 level. Key Words - Competitive anxiety, hand-eye coordination, male wrestlers etc

Introduction

Wrestling as a classical two-person sport is probably the oldest sport in the world. It can be traced back to the early history of mankind. In ancient times, humans were dependent on the strength of their own bodies, in confronting both natural forces and other humans. There were only primitive weapons, as far as any existed. Wrestling was thus of primary importance in survival.

This is an individual sport and at the same time, a part of the larger "team" concept. Some sports are tougher than others; some require physical strength and the ability to run fast. Others require the ability to jump long and highwhilepossessing acute hand-eye coordination. The athleticism derived from wrestling will be beneficial in almost any sport. Participation in wrestling provides: Greater coordination, more endurance, increased strength, Better flexibility, improved balance, increased speed & quickness and better reaction time. As far as the ultimate physical, mental and emotional challenge goes, no sport on earth rivals amateur wrestling. Sport competition creates some anxiety in nearly all participants, and for some individuals the anxiety is so intense that successful performance and enjoyment of the activity is impossible (Gill, 1986). To an extent, all human behavior is influenced by anxiety. Anxiety is a fundamental human emotion that evolved over countless generations as an adaptive mechanism for coping with change (Spielberger, 1989). Due to the uncertain nature of sports, each player must learn to cope with anxiety associated with competition. An individual's performance is directly affected by the perception of his/her capabilities to meet the situational demands (Spielberger, 1976).In case of wrestling; there are many sources of anxiety in wrestlers: parents, coaches, fans, peers, opponents and oneself. Anxiety clearly affects performance and the individual's reaction to its outcome.

The sports scientist viz. Bell, K F (1979), Arno F. Witting (1984) and Martin, J.P et,.al (2002) compare the anxiety level among male and female players but the research in the field of wrestling is very few. Keeping this in mind the present study was carried out to find out the gender differences in sports competition among wrestlers.

Methodology:
Total Twenty four wrestlers (n =24) took part in the study. All participants were National level wrestlers from the State of Haryana, Delhi, Punjab, Maharashtra, Jharkhand, Manipur, West Bengal, U.P and Madhya Pradesh. The sample included twelve male (n=12 male) and (n=12 female) female wrestlers. The sample was selected by random sampling technique. Sample was taken from the venue of The National Sub junior championship at Una Himachal Pradesh. The data was collected one day prior to the championship with the help of Sports competitive anxiety Scale.

Tools: Martens' Sports Competition Anxiety Test ((1977) was used to measures the sports competition anxiety of all the subject of this study. Martens' Sports Competition Anxiety Test scale was originally developed to measure how anxious individuals generally feel before competitive situations. It includes 15 items that are usually scored using a three -point response ranging from hardly ever, sometimes and often. The items are face valid, and the scale is short and easy and fast to administer.

Statistical Procedure
The data obtained were analyzed with the help of statistical software (SPSS 11.5 version). The mean, standard deviation along with't' test has been applied to check the significance differences of anxiety between sample mean of two groups viz. male and female wrestlers. The criterion for statistical significance was set at 0.01 level of confidence.

Result & Discussion

Table I: Mean and S.D. of Sports Competition Anxiety of Male Wrestlers

Male Wrestlers(N=12)	
Mean	**SD**
20.25	**1.24**

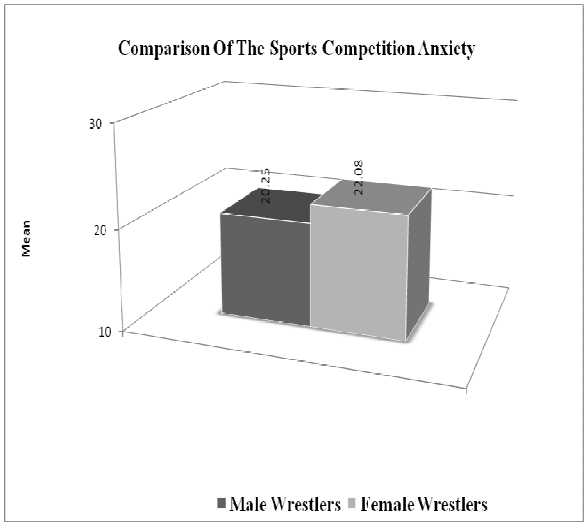
Female Wrestlers(N=12)	
Mean	**SD**
22.08	**1.35**

Table II: Mean and S.D. of Sports Competition Anxiety of Female Wrestlers

Male Wrestlers		Female Wrestlers		Mean Diff.	SEM	't' Value	Level of Sign.
Mean	SD	Mean	SD				
20.25	1.35	22.08	1.24	1.83	.39	3.45	0.01

Table III: Comparisons of Sports Competition Anxiety between Male and Female Wrestler

Fig.-I Comparisons of Self- Esteem between Male and Female Wrestler



To summarize, the results of descriptive statistics Table. I indicated the mean score of Male Wrestlers score in Sports Competition Anxiety were 20.25 (±1.35).
In case of Female wrestlers the mean score of Sports Competition Anxiety were 22.08(±1.25) see Table. II
Table III reveals that male wrestlers have low Sports Competition Anxiety than female wrestlers and the't' value of self esteem 3.45 is found significant at 0.01 level.

Conclusion

The aim of this study was to assess the sports competition anxiety among national level wrestlers and to examine differences in sports competition anxiety among male and female Sub-junior wrestlers. The result reveals that the wrestlers of both categories showed normal range of sports competition anxiety. This study also indicated that male wrestlers have less anxious than female wrestlers. The finding of this study is supported by Martins, J. P. et., al who also Concluded that female athletes have different anxiety level compared to that of male. The present study has great significance in the field of sports and physical education (especially in the field of wrestling). Understanding the pre competition anxiety level of the wrestlers may help the coaches that work with them to enhance the sports performance of their trainee.

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Interrelationship Among Motor Fitness, Academic Achievement And Sports Participation Of High School Boys

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Abstract
Sports and Motor fitness activities are basic to all learning. No learning is purely based on mental or physical. The aim of this study is to investigate sports participation in relation to Motor Fitness, and academic achievement of sports participating high school boys of urban and rural area in Mysore district. So this investigation is an attempt to reveal these issues to shed more light on this area and to help further the knowledge base. The subjects for the study were medically fit 500 sport participating high school boys, Ranging in age between 14 to 16 Years, For the study purpose to assess Motor Fitness Indiana Motor fitness test was selected and to assess Academic Achievement percentage of marks was considered. Sports participation considered on the basis of students who took part in the selection trials for inter-school competition in various sport and games in schools. The data collected were later subjected to statistical analysis using descriptive statistics like frequency and percentages, mean and standard deviations. Inferential statistics included in the present study are Cramer's V, ANOVA-one way and two-way, and Scheffe's post hoc test. The analysis reveals that Academic achievement of both rural and urban sports participating high school boys was strongly associated with Motor fitness level. Hence the investigator concludes that proper intervention in sports participation and education may improve motor fitness and academic achievement of the children.
Key words: Motor fitness, Academic achievement, Urban, Rural, Sports participation.

Introduction

Sports and Motor fitness activities are basic to all learning. No learning is purely based on mental or physical. The difference between mental learning and physical learning is one of a degree. Research studies have also demonstrated that low physical fitness adversely influences academic performance (Chomitz, et al., 2009). Students who are physically fit perform better academically than inactive students. The relationship between physical activity and academic performance may be explained by both physiological and psychological mechanisms. A better understanding of sports participation and academic achievement may facilitate the development of more targeted sports activity interventions. Few studies have analyzed the rates and correlates of physical activity and academic achievement in economically and geographically diverse populations. Therefore, the aim of this study was to investigate sports participation in relation to Motor Fitness, and academic achievement of sports participating high school boys of urban and rural area in Mysore district. So this investigation is an attempt to reveal these issues to shed more light on this area and to help further the knowledge base.

Hence in this study was designed and titled "Interrelationship Among Motor Fitness, Academic Achievement and Sports Participation of High School Boys".

Objectives of the Study

To study the relationship of Motor Fitness and Academic Achievement of Sports Participating High School Boys of urban and rural area in Mysore District.To find out the difference among their Motor Fitness and Academic Achievement of Sports Participating High School Boys of urban and rural area in Mysore District.

Hypotheses

Considering the review of literature following hypotheses were formulated

H1: Urban and rural high school sports participants with different level of Motor fitness do not differ significantly in their Academic achievement.

H2: There is no significant interaction between Motor fitness and the Academic achievement of urban and rural high school sports participants.

Methodology

Selection of Subjects

The subjects for the study were medically fit 500 sport participating high school boys, Ranging in age between 14 to 16 Years, Randomly selected from urban and rural high schools of Mysore district.

Selection of Variable for the Study

For the study purpose to assess Motor Fitness Indiana Motor fitness test was selected and to assess Academic Achievement percentage of marks was considered. Sports participation as an independent variable considered on the basis of students who took part in the selection trials arranged to choose the players for inter-school competition in various sport and games.

Statistical Analysis

The data collected were later subjected to statistical analysis using descriptive statistics like frequency and percentages, mean and standard deviations. Inferential statistics included in the present study are Cramer's V, ANOVA-one way and two-way, and Scheffe's post hoc test.

Table 1

Mean academic scores of selected sample by various categories of Motor fitness

MFI_rating	N	Mean	Std. Deviation	Std. Error	Mini	Max
Superior	31	58.27 [a]	35.10	6.30	.64	95
Good	201	69.25 [b]	26.43	1.86	.58	99
Normal	197	64.41 [b]	19.08	1.36	.66	95
Fair	218	58.57 [a]	23.60	1.60	.59	91
Inferior	64	57.75 [a]	23.23	2.90	.60	82
Total	711	63.12	24.26	0.91	.58	99

Note: mean values with different superscripts are significantly different from each other as indicated by Scheffe's post hoc test (alpha=.05).

Table 2: Results of One-way ANOVA for Mean academic scores of selected sample by various categories of Motor fitness

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14960.149	4	3740.037	6.554	.000
Within Groups	402875.363	706	570.645		
Total	417835.512	710			

The above table reveals that there is a significant difference in Academic achievement of urban and rural sports participants with different level of Motor fitness. Further, it is revealed that those with Good and Normal Motor fitness had higher Academic achievement compared to those participants with Superior, Fair and Inferior Motor fitness.

Table 3: Mean academic scores of the selected sample hailing from urban and rural areas having varied Motor fitness ratings

MFI_rating	area	Mean	Std. Deviation	N
Superior	Urban	41.84	42.80	16
	Rural	75.80	6.27	15
	Total	58.27	35.10	31
Good	Urban	60.76	33.89	105
	Rural	78.53	6.81	96
	Total	69.25	26.43	201
Normal	Urban	59.64	27.02	83
	Rural	67.89	8.53	114
	Total	64.41	19.08	197
Fair	Urban	45.39	31.86	86
	Rural	67.16	8.72	132
	Total	58.57	23.60	218
Inferior	Urban	46.37	31.70	27
	Rural	66.05	7.13	37
	Total	57.75	23.23	64
Total	Urban	54.11	32.65	317
	Rural	70.37	9.38	394
	Total	63.12	24.26	711

Table 4:Results of two-way ANOVA for Mean academic scores of the selected sample hailing from urban and rural areas having varied Motor fitness ratings

Source	Sum of Squares	df	Mean Square	F	Sig.
MFI_rating	21486.825	4	5371.706	10.943	.000
Area	40644.453	1	40644.453	82.801	.000
MFI_rating * area	7227.085	4	1806.771	3.681	.006
Error	344097.503	701	490.867		
Total	3250504.575	711			
Corrected Total	417835.512	710			

The above table reveals that there is a significant difference between Urban and Rural sports participants in Academic achievement, it revealed that rural participants had higher Academic achievement. It is also found that participants with Good Motor fitness level in rural area had maximum Academic achievement and participants with superior Motor fitness level in urban area had least Academic achievement.

Discussion

The hypothesis one concerning Motor fitness of urban and rural high school sports participants and Academic achievement is rejected as the obtained correlation coefficient was found to be statistically significant.Pankaj Chaudhary (2014) in his study found that there is a relation between the different grades of academic achievement and physical fitness for the rural girls. He also found coefficient of correlation urban girls that there is a relation between academic achievement and physical fitness but it is very little. In the comparison of physical fitness of rural and urban girls he found that there is no significant difference between the rural and urban girls.The reason for present result may be the quality of the teachers work in different schools from where the subjects were selected. As we know there is a scarcity of quality teachers and permanent teachers in schools, colleges and universities. Some schools recruit good teachers with handsome salary and some schools not. So the academic results depend upon the quality of the teacher. The subjects for this study were selected from 10 different schools from urban and rural area of Mysore district. The academic performance of each school differs. This may be the reason for the present study result.The hypothesis two comparing Motor fitness of urban and rural high school sports participants and Academic achievement is rejected as the obtained correlation coefficient was found to be statistically significant.

Dwyer et al.(1983**)** showed that participation in physical fitness programs emphasizing endurance in 10-yearold school children improved physical work capacity and decreased body fat without loss of their academic performance. The reason for this present result may be the natural and inherent qualities of rural students as they were not diverted by modern life and electronic environment as in urban area such as mobile, cable TV, face book watsapp etc. The concentration and other cognitive quality of rural students may have influence over their academic achievements.

Conclusion

Academic achievement of both rural and urban sports participating high school boys was strongly associated with Motor fitness level. Hence the investigator concludes that proper intervention in sports participation and education may improve motor fitness and academic achievement of the children.

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Relationship Of Physiological Variables And Skill Performance Of Junior National Basketball Players

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Abstract
Physiological characteristics are essential as well. This is due to the fact that physiological demands are very high in basketball. Basketball players have to perform many different types of movements during a game, e.g. Dribbling, Passing, Shooting, which involves a change of movement every few seconds. The purpose of the study was to find out the Relationship of Selected physiological variables to Skills Performance of Male Junior National Basketball Players. A Total of one hundred forty four Basketball players (N=144) were selected. The subjects for the present study was male junior national Basketball players of southern India, Aged below 18 Years. In Physiological variables only Anaerobic Power, Aerobic Power, Vital Capacity and % Body Fat were selected. AAPHER basketball test was used assess Basketball skill performance, which consist Control dribble, Defensive movement, Passing and Speed spot shooting tests. The data collected were later subjected to statistical analysis. Analysis reveals that Anaerobic power and body fat percent as physiological variables found to be significantly related to dribbling and shooting performance. Aerobic power was significantly related only to passing performance. Vital capacity was found to be significantly related to shooting and passing Physiological variables contributed to 23.0% of the shooting performance, 22.4% of the passing performance, 15.9% of the dribbling performance and 13.9% of defensive movement.
Key words: Physiological variables, Skills Performance, Jr National players.

Introduction

Basketball is an aerobic and anaerobic sport which requires high strength activities such as jumping, turns, dribbles, sprints, screens and low strength activities such as walking, stopping and jogging. Physiological characteristics are essential as well. This is due to the fact that physiological demands are very high in basketball. Basketball players have to perform many different types of movements during a game, e.g. Dribbling, Passing, Shooting, which involves a change of movement every few seconds. This indicates that speed and change-of-direction are some very important skills that are necessary for young basketball players. Research has found that due to increased physical action which intern burns energy results in an increased secretion of serotonin. It has also been found to be more sociable because when they play with more and more people, they end up making more friends and fosters the spirit of team work. The purpose of the study was to find out the Relationship of Selected Physiological variables to Skills Performance of Male Junior National Basketball Players. Hence the researcher is motivated to take up the study.

Objective of the study

To estimate the skill performance of Basketball players from the Physiological variables.

Hypotheses: There is no significant relationship between the selected Physiological variables with skill performance of junior national Basketball players.

Methodology Selection of Subjects: A Total of one hundred forty four Basketball players (N=144) were selected. The subjects for the present study was male junior national Basketball players of southern India, Aged below 18 Years.

Selection of Variables for the Study

In Physiological variables only Anaerobic Power, Aerobic Power, Vital Capacity and % Body Fat were selected. AAPHER basketball test was used assess Basketball skill performance, which consist Control dribble, Defensive movement, Passing and Speed spot shooting tests.

Statistical Analysis

The data collected were later subjected to statistical analysis using Descriptive statistics, Cross table procedure, Pearson's product moment correlation, stepwise multiple regression and Analysis of variance -2way. The following tables reveal the analysis of data.

Table 1:Results of Pearson's product moment correlations between selected physiological variables and components of skill performance

Anthropometric variables		Skill performance			
		Dribbling	Shooting	Passing	Defensive movement
Anaerobic power	Cor	-.273	-.116	-.380	-.025
	Sig	.001	.166	.001	.770
Aerobic power	Cor	-.078	-.007	.407	-.064
	Sig	.350	.934	.001	.445
Vital capacity	Cor	.006	.258	.472	.009
	Sig	.946	.002	.001	.914
Body fat %	Cor	-.304	-.043	-.293	-.098
	Sig	.001	.607	.001	.241

When mutual relationship between various selected physiological variables and components of skill performance were verified following results were obtained. Anaerobic power was negatively and significantly related to shooting (r= .273; p=.001), and passing (r= -.380; p=.001) and not significantly related to shooting and defensive movement. The second selected physiological variable –aerobic power was significantly and positively related to only to passing (r=.407; p=.001). However, aerobic power was not significantly related to dribbling, shooting and defensive movement. Vital capacity was found to be positively significantly related to shooting (r= .258; p=.002) and passing (r= .472; p=.001) and not related to dribbling and defensive movement. Lastly, it was observed that body fat percent was negatively and significantly related to dribbling (r=-.304; p=.001), and passing (r=-.293; p=.000) and not related significantly to shooting and defensive movement of basket ball players.

Table 2:Results of stepwise multiple regression analysis of anthropometric predictors for skill performance of junior national basketball players

Skill performance	Predictor 1	Predictor 2	Total
Dribbling	Vital capacity (13.4%)	Anaerobic power (2.5%)	15.9%
Shooting	Vital capacity (17.6%)	Aerobic (5.4%	23.0%
Passing	Vital capacity (224.4%)	-	22.4%
Defensive movement	Vital capacity (8.4%)	Anaerobic power (5.5%)	13.9%

Regression analysis revealed that for dribbling performance, out of 4 physiological variables 2 variables were found to be significant predictor and the contribution made vital capacity and anaerobic power were 13.4% and 2.5% respectively. This makes a total of 15.9% contribution for dribbling. For shooting performance of basketball players, 2 variables majorly predicted performance –vital capacity to the extent of 17.6%, aerobic power to the extent of 5.4%. Totally physiological variables contributed 23.0% to the shooting performance. When predictors for passing performance was analyzed, only vital capacity was found to the lone predictor, to the extent of 22.4%. For defensive movement, regression analysis predicted 2 physiological variables-vital capacity to the extent of 8.4%, and Anaerobic power to the extent of 5.5%, cumulating a total of 13.9% of the contribution.

Major findings:

Anaerobic power and body fat percent as physiological variables found to be significantly related to dribbling and shooting performance. .Aerobic power was significantly related to only to passing performance. Vital capacity was found to be significantly related to shooting and passing Physiological variables contributed to 23.0% of the shooting performance, 22.4% of the passing performance, 15.9% of the dribbling performance and 13.9% of defensive movement.

Conclusion

Hence the researcher concludes that the present study indicates a definite role/contribution of physiological variables on, skill performance of junior national Basketball players in turn having influence on sports performance. We cannot ignore totally the contribution of physiological variables on ultimate performance of Basketball players.

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Emotional Intelligence Of Basketball And Volleyball Players A Comparative Study

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Abstract
Emotional Intelligence Is An Essential Element Of Human Behaviour Which Acts Independently And Differently From Cognitive Intelligence. Present Study Is An Attempt To establish specific relationship of emotional intelligence to performance among players of volleyball and basketball. It is assumed that emotional intelligence highly contributes to performance among players of volleyball and basketball. For the purpose of the study Two Hundred (N=200) volleyball 100 and basketball 100 Inter -collegiate players of University of Mysore were selected as subjects. The age of the players was in the range of 18 to 25 years. Emotional Intelligence was assessed by EI scale. EI scale has ten (10) factors. The performance of Basketball and Volleyball players was assessed by Coaches Rating Scale prepared by experts in the said games. The data was analysed by using Descriptive statistics, Product moment co-relation, t- test Independent samples and ANOVA- one way statistical technique. Volleyball players were found to have higher total of emotional intelligence than basketball players. The analysis found that in specific factors- self awareness, empathy, integrity, self development, commitment and altruistic behaviour volleyball players had higher emotional intelligence scores than basketball players. Basketball players had higher mean scores in components like emotional stability, managing relations and in value orientation.
Key words: Emotional intelligence, Performance, Basketball, Volleyball.

Introduction

Emotional intelligence is an essential element of human behavior which acts independently and differently from cognitive intelligence (Bar-on R., 2000). Emotional intelligence has its roots in Gardner's interpersonal and intrapersonal intelligence (Jokar B., 2007). During recent decades, emotion has been regarded as one of the basic, pivotal concepts in different contexts such as social relations, self-regulation, and mental health and has been the subject of numerous research studies, in particular developmental studies. Promoters of emotional intelligence (EI) have long attempted to incorporate interpersonal skills within the conceptual envelope of EI, on the premise that one's interior experience forms the basis for one's interactions. Present study is an attempt to establish specific relationship of emotional intelligence to performance among players of volleyball and basketball. It is assumed that emotional intelligence highly contributes to performance among players of volleyball and basketball.

Objectives of the study

To assess the Relationship between Emotional Intelligence and performance among Volleyball and Basketball players

To assess the levels of Emotional Intelligence among Volleyball and Basketball players

Hypotheses

Emotional Intelligence and performance of Volleyball and Basketball players are significantly and positively related. Volleyball and Basketball players differ significantly in their Emotional Intelligence.

Methodology

For the purpose of the study Two Hundred (N=200) volleyball 100 and basketball 100 Inter -collegiate players of University of Mysore were selected as subjects. The age of the players was in the range of 18 to 25 years.

Selection of Variable for the Study

Emotional Intelligence was assessed by EI scale. EI scale has ten (10) factors. These factors are Self Awareness, Empathy, Self Motivation, Emotional Stability, Managing Relations, Integrity, Self Development, Value Orientation, Commitment and Altruistic Behaviour.

The performance of Basketball and Volleyball players was assessed by Coaches Rating Scale prepared by experts in the said games.

Statistical Analysis

After obtaining the data the below mentioned statistical technique Descriptive statistics, Product moment co-relation, t- test Independent samples and ANOVA- one way were used to analyze and to interpret the data.

Table 1:Mean emotional intelligence scores (factors and total) of Basketball and Volley ball players

Factors	Game	N	Mean	S.D	Std. Error of Mean
Self-awareness	BB	99	8.38	5.176	.520
	VB	93	11.23	5.692	.590
Empathy	BB	99	11.27	5.534	.556
	VB	93	17.20	3.034	.315
Self motivation	BB	99	14.38	7.329	.737
	VB	93	15.00	6.318	.655
Emotional stability	BB	99	15.12	2.366	.238
	VB	93	13.63	3.092	.321
Managing relations	BB	99	15.53	2.012	.202
	VB	93	14.55	2.306	.239
Integrity	BB	99	6.69	3.773	.379
	VB	93	8.02	3.794	.393
Self development	BB	99	4.24	3.107	.312
	VB	93	7.39	1.581	.164
Value orientation	BB	99	7.54	1.438	.145
	VB	93	5.25	2.527	.262
Commitment	BB	99	4.15	3.102	.312
	VB	93	5.08	2.924	.303
Altruistic behaviour	BB	99	4.11	3.090	.311
	VB	93	7.31	1.757	.182
Total emotional intelligence	BB	99	90.90	30.213	3.037
	VB	93	104.66	21.679	2.248

Note: BB-Basket ball; VB-Volleyball.

Table 2:Results of Independent samples t tests for Mean emotional intelligence scores (factors and total) of basketball and volley ball players

Factors	't' value	df	Sig.	Mean Difference
Self-awareness	3.623	190	.001	-2.84
Empathy	9.126	190	.001	-5.93
Self motivation	.622	190	.535	-.62
Emotional stability	3.755	190	.001	1.49
Managing relations	3.133	190	.002	.98
Integrity	2.443	190	.015	-1.33
Self development	8.752	190	.001	-3.14
Value orientation	7.771	190	.001	2.29
Commitment	2.120	190	.035	-.92
Altruistic behaviour	8.748	190	.001	-3.20
Total emotional intelligence	3.605	190	.001	-13.76

Out of 10 factors of emotional intelligence, except for one factor of emotional intelligence, in rest of the factors significant differences were observed between basketball and volleyball players. In self awareness (t=3.623; p=.001), empathy (t=9.126; p=.001), integrity (t=2.443; p=.015), self development (t=8.752; p=.001), commitment 9t=2.120; p=035) and in altruistic behaviour (t=8.748; p=.001), volleyball palyers had significantly higher scores than basketball players.

In few of the factors, basket ball players had higher scores than volleyball players. In factors emotional stability (t=3.755; p=.001), managing relations (t=3.133; p=.002) and in value orientation (t=7.771; p=.001) we find a higher mean score for basketball players. However, in self motivation no significant difference was observed between basketball and volleyball players as the obtained t value failed to reach the significance level criterion of .05 level. In total emotional intelligence we find a significant difference between basketball and volleyball players as we find a significant t value (t=3.605; p=.001). The mean total emotional intelligence of volley ball players was found to be 104.66 and the mean emotional intelligence of basketball players was 90.90. In other words volleyball players had higher emotional intelligence than basketball players.

Major findings of the study

Volleyball players were found to have higher total of emotional intelligence than basketball players

In specific factors-self awareness, empathy, integrity, self development, commitment and altruistic behaviour volleyball players had higher emotional intelligence scores than basketball players. Basketball players had higher mean scores in components like emotional stability, managing relations and in value orientation.

Conclusion

Hence the researcher concludes that the present study indicates a definite role/contribution of emotional intelligence on performance of both Volleyball and Basketball players in turn having influence on sports performance. Though Volleyball players show higher emotional intelligence than basketball players, but it is a requirement for both the game players to achieve excellence in the game.

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A Comparative Study On Skill, Performance And Fitness Betweentribal And Nontribal Football Players

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Abstract
India Is The Home To Large Number Of Indigenous People, Who Are Still Untouched By The Lifestyle Of The Modern World. With More Than 84.4 Million, India Has The Largest Population Of The Tribal People In The World. Present Study Has Been Aimed To Find Out The Difference Of Skill, Fitness And Performance Between Tribal And Nontribal Male Soccer Players Of Kalyani Regular Coaching Camp, West Bengal. The Study Was Conducted 30 Male Players In Which 15 Tribal And 15 Nontribal Football Players. All The Samples Selected From Random Basis. Selected Skill, Performance And Fitness Components (Speed And Explosive Strength) Were Assessed Using Juggling, Dribbling, Shooting, 50mts Dash And Standing Broad Jump Test. Mean And Standard Deviation Of Different Variable Were Calculated. All Statistical Calculation Was Done By Standard Procedure. The Mean Of Different Variables Were Compared By Using'T' Test. Statistical Significance Was Tested At 0.05 Levels. It Is Concluded From The Result That Significant Difference Was Observed Between Tribal And Nontribal Male Soccer Players.Key Words: Soccer Players, Tribal, Fitness

Introduction

India is the home to large number of indigenous people, who are still untouched by the lifestyle of the modern world. With more than 84.4 million, India has the largest population of the tribal people in the world. These tribal people also known as the Adivasi's are the poorest in the country, who are still dependent on hunting, agriculture and fishing. All these tribal people have their own culture, tradition, language and lifestyle. Bow arrows are their traditional weapons. Santals are the third largest tribe in India. They are mostly found in the state of West Bengal, Bihar, Orissa, Jharkhand and Assam. The Santals are very conscious about their identity and heritage. They belong to the pre- Aryan period and have been the great fighters from the time of Britishers.

Other than tribal people all are belong to the non tribal category in the presence study. Any research method function effectively only to the extent that the instruction recognizes equalize only the factors of one's height, weight, body build or physique. Human physical performance whether it is in variety in sports or in a number of daily life activities, influence physical fitness level of an individual tribal football players. Physical fitness defines as the capacity of an individual to overcome daily routine task without undue fatigue and also reserve of ample energy for emergency situation. Fitness is divided by health related fitness and performance related fitness. Components of performance related fitness are – speed, agility, balance, reaction time, power and co-ordination. For sports performance the performance related fitness is responsible. There are so many skills are involved in football performance such as skill dribbling, shooting, juggling, tracking and heading etc.

Methodology

To achieve the purpose of the study, 30 football players (15- tribal and 15 non tribal) from regular coaching camp Kalyani, Nadia, (West Bengal) were selected as a subject's at random and their age ranged between 15 to 20 years. Criterion measure in the present study was skill, performance, speed and leg explosive strength. To subjects ball control, agility, shooting , speed and leg explosive strength ability were measured by juggling of the football, dribbling of the football, shooting of the football, 50 yards dash and standing broad jump test. The collecting data were analyzed using standard statistical technique. The scores in the two performances were compared with the help of paired samples mean difference (t).

Results And Discussion

In this part of the report collected data and analysis of data using statistical techniques and the results obtain have been presented in tabular form and related discussion have been started.

Table No. 1 Mean and SD of age, height and weight of the subjects

Parameter		Age(yrs)	Height(cm)	Weight(Kg)
Tribal Group	Mean	17.87	161.74	53.27
	SD	1.45	12.11	7.44
Nontribal Group	Mean	17.87	166.21	55.67
	SD	1.26	5.20	3.66

According to table No. 1 Tribal group the Mean and SD of age, height and weight were 17.87, 161.74, 53.27 and 1.45, 12.11, 7.44 respectively nontribal group Mean and SD were 17.87, 166.21, 55.67 and 1.26, 5.20, 3.66.

Table No. 2 Mean, SD, and't' value between the tribal and nontribal group in dribbling ability of footballers

Variable	Group	No.	Mean	Sd	SED	t
Dribbling	Tribal	15	52.33	±3.91	1.41	**2.74
	Non Tribal	15	48.47	±3.44		

D f= 28, level of significant at 0.05 level 2.05.

Table no. 2 clearly indicates that the mean value in respect to dribbling of tribal footballer was 52.33 with a variation of 3.91. In case of nontribal footballers the Mean value 48.47 with a variation of 3.44. The Mean difference of tribal and nontribal group showed a statistical significance when t was 2.74 which was greater than table value.

Table No. 3 Mean, SD, and't' value between the tribal and nontribal group in juggling ability of footballers

Variable	Group	No.	Mean	Sd	SED	t
Juggling	Tribal	15	91.73	±9.04	3.81	1.75
	Nontribal	15	85.07	±10.76		

D f=28, level of significant at 0.05 level 2.05

From table no. 3 observed that the Mean value in respect to juggling of tribal footballers were 91.73, with a variation of 9.04 respectively nontribal footballers the Mean value 85.07, with a variation of 10.76. The Mean difference of tribal and nontribal is not showed statistical significance when t was 1.75 which was smaller than table value.

Table No. 4 Mean, SD, and't' value between the tribal and nontribal group in shooting accuracy of footballers

Variable	Group	No.	Mean	SD	SED	t
Shooting accuracy	Tribal	15	3.73	±1.39	0.38	0.53
	Nontribal	15	3.93	±0.99		

Df=28, level of significant at 0.05 level 2.05

From table no. 4 clearly indicate that the Mean value in respect to shooting accuracy of tribal footballers were 3.73 with a variation of 1.39. Respectively nontribal footballers the Mean value 3.93, with a variation of 0.99. The Mean difference of tribal and nontribal is not showed statistical significance when t was 0.53 which was smaller than table value.

Table No. 5 Mean, SD, and't' value between the tribal and nontribal group in 50m dash of footballers

Variable	Group	No.	Mean	SD	SED	t
50m. dash	Tribal	15	7.28	±0.40	0.12	0.17
	Non Tribal	15	7.26	±0.16		

Df=28, level of significant at 0.05 level 2.05

From table no. 5 clearly indicate that the Mean value in respect to 50mts dash of tribal footballers were 7.28 with a variation of 0.40. Respectively nontribal footballers the Mean value 7.26 with a variation of 0.16. The Mean difference of tribal and nontribal is not showed statistical significance when t was 0.17 which was smaller than table value.

Table No. 6 Mean, SD, and't' value between the tribal and nontribal group in standing BJ of footballers

Variable	Group	No.	Mean	SD	SED	t
Standing broad jump	Tribal	15	2.17	±0.16	0.06	1.33
	Nontribal	15	2.25	±0.14		

Df=28, level of significant at 0.05 level 2.05

From table no 6 clearly indicate that the Mean value in respect to standing broad jump of tribal footballers were 2.17 with a variation of 0.16. Respectively nontribal footballers the Mean value 2.25 with a variation of 0.14. The Mean difference of tribal and nontribal is not showed statistical significance when t was 1.33 which was smaller than table value.

Table No. 7 Mean, SD, and't' value between the tribal and non tribal group in performance of footballers

Variable	Group	No.	Mean	SD	SED	t
Performance	Tribal	15	5.27	±1.39	0.47	0.15
	Nontribal	15	5.20	±1.05		

Df=28, level of significant at 0.05 level 2.05

From table no 7 clearly indicate that the Mean value in respect to Performance of tribal footballers were 5.27 with a variation of 1.39. Respectively nontribal footballers the Mean value 5.2 with a variation of 1.05. The Mean difference of tribal and nontribal is not showed statistical significance when t was 0.15 which was smaller than table value.

Conclusion

From the statistics shown the table No. 2 it is clear that significance relationship of dribbling ability of tribal and nontribal football players. The tribal group football players are better in football dribbling ability than the non tribal football players. In speed and leg explosive strength there is no significant difference between tribal and non tribal footballers. Sports performances of tribal and nontribal football players are more or less equal.

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Effect Of Interval And Continuous Training On Cardio-Respiratory Endurance At Moderate Altitude Among Sportsmen

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Abstract
The purpose of the study was to analyze and compare the effects of interval and continuous training on cardio respiratory endurance among sportsmen at moderate altitude, age between 14 to 17(Mean ± SD, Age 15.72 ± 1.21 years, BMI 18.26± 0.8). The subordinate purpose of the study was to explore which training brings maximum improvement in cardio respiratory endurance when partial pressure of oxygen is reduced (however the air still contains approximately 20.9% oxygen). The subjects for the study were 60 players from Gopeshwar sports stadium, Uttarakhand at altitude of 1550 meter above from the sea level. Subjects were divided into two experimental groups and one control groups. Each group consisted of 20 players, were randomly selected. To assess the cardio respiratory endurance, VO2 Max was tested by Cooper 12 minute run and walk test. ANCOVA was employed as statistical technique and found significant at 0.05 levels. Result indicated that vo2 max increased significantly after interval and continuous training and interval training produces higher increase in vo2 max compare to continuous training at moderate altitude. The result also revealed that after a certain level of acclimatization at moderate altitude followed by eight weeks of continuous and interval training at same altitude, help to increase Vo2 Max by approx 5% and 8% respectively.
Keywords- Interval training, continuous training, Vo2 Max.

Introduction

Cardio-respiratory endurance is the ability of the heart and lungs to work continuously and it has long been recognized as one of the fundamentals components of physical fitness. Vo2 max is considered to be most valid measure of cardio respiratory fitness. It measure the capacity of the heart, lungs, and blood to transport oxygen to the working muscles, and also considered the body's upper limit for consuming, distributing and using oxygen for energy production commonly called maximal aerobic capacity, Vo2 max is a good predictor of exercise performance and is probably single most important factor determining success in an aerobic endurance sport. Improving cardiovascular function increases the body's Vo2 max. Some recent research shows that the cardiovascular adaptations that occur with high intensity interval training (HIIT) are similar, and in some cases superior to those that occur with continuous endurance training. Daussin et al. (2008) measured Vo2 max responses among men and women who participated in an 8-week high intensity interval training (HIIT) program and a continuous cardiovascular training program, Vo2 max increase were high in the HIIT program than they were in the continuous training program.Helgerud et al. showed that 4 repetition of 4-minute runs at 90%- 95% of heart rate maximum (HRmax) followed by 3 minutes of active recovery at 70% HRmax performed 3 day per week for 8 weeks resulted in a 10% greater improvement in stroke volume than did long, slow distance training 3 days per week for 8 weeks (total oxygen consumption was similar in both protocols). A number of studies to detect the higher improvement on vo2 max after interval hypothesized that both the training programme improves cardio-respiratory endurance after 8 weeks of training.

Methods

Participants- 60 participants from sports stadium Gopeshwar, Uttarakhand , age ranging between 14 to 17 year (Mean ± SD, Age 15.72 ± 1.21 years, BMI 18.26± 0.8) were randomly selected for the study. Participants provided written, voluntary, informed consent prior to participation and they were volunteered to participate in the training. All were state and district level achievers in football and hockey.

Materials - Cardio- respiratory endurance was measured by using the cooper's 12- minute run/walk and the score was recorded to the nearest 50 meters, further, by applying the cooper's 12 minute run/walk formula, the score in distance were converted to ml.kg.min.

Vo2 Max Formula= (Distance covered in meters - 504.9) ÷ 44.73

Procedure- All the participants vo2 max was tested by the selected cooper 12 minute run and walk test. After the administration of pre test, participants were randomly divided into two experimental groups and one control groups. Group –I underwent interval training, group- II underwent continuous training and group-III acted as control that did not participants any special training apart from the regular curricular activity. The training programme for the experimental groups was a period of 1 hour, thrice a week for eight weeks. After the administration of training, participants were again tested on the same variables for the post test at moderate altitude.

Design and analysis: Pretest–posttest randomized-groups design was adopted for the study and Descriptive statistics such as mean and standard deviation was used. To compare the effects of training among and between groups on Vo2 max the one way analysis of co-variance (ANCOVA) was employed and the level of significance was set at 0.05. SPSS 16 statistical software package was used to analysis the data.

Results

TABLE-1Descriptive statistics of different VO2 max groups measured in post testing

DEPENDENT VARIABLE:POST

Groups	Mean	Std. Deviation	N
Interval	47.7785	2.23917	20
Continuous	45.9075	2.79278	20
Control	44.1530	2.43498	20

The post test means of interval training group, continuous training group and control groups are 47.7785, 45.9075 and 44.1530 respectively. It shows that there is statistical difference between the each groups and mean of Interval training group seems better than the other two groups.

TABLE-2

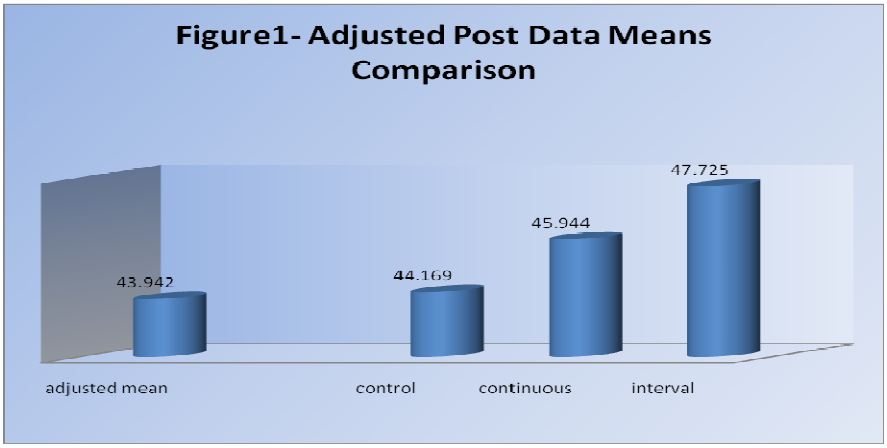
Adjusted mean and standard error of different VO2 max groups in post testing

DEPENDENT VARIABLE:POST

groups	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
interval	47.725[a]	.179	47.366	48.085
continuous	45.944[a]	.179	45.585	46.303
control	44.169[a]	.179	43.810	44.528

Covariates appearing in the model are evaluated at the following values: pre = 43.9425.

From these adjusted means, it is clear that in interval training group vo2 max increases more after adjusting for covariate (pre data).



One way Analysis for covariance (ANCOVA) for the means of interval training group, continuous training group and control group in vo2 max has been shown in Table 3.

TABLE-3ANCOVA to find the Training effects on Vo2 Max

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Groups (SS between)	126.45	2	63.225	98.323	.000
Error (SS within)	36.01	56	.643		

There is a significant difference in mean post data between the groups, and found significant (P<0.05). Hence it is concluded that there is significant improvement on vo2 max in experimental group

Conclusion

The purpose of this study was to compare the effect of an interval and continuous training on cardio-respiratory endurance at moderate altitude. It was hypothesized that both the training groups bring changes on cardio-respiratory endurance. Results of this study confirm this hypothesis. Findings of the present study showed that there was a significant difference between two experimental groups and one control group. Result indicated that vo2 max increased significantly after interval and continuous training, and interval training produces higher increase in vo2 max compare to continuous training at moderate altitude. Total 8.60% and 4.55% improves in vo2 max respectively after interval and continuous training. Some previous study shown that there is a drop in vo2 max of 2% for every 300m elevation above 1500m even after allowing full acclimatization but the present study showed that after a certain level of acclimatization at moderate altitude, vo2 max can be increases after an eight weeks of interval and continuous training programmed.

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Effect Of Mental Training On The Performance Of Collegiate Distance Runners

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Abstract
The Purpose Of The Instant Study Was To Determine If Event Rehearsal Imagery (Eri) And Internal Guided Imagery With Distractions (Igid) Resulted In Improvements In The Running Performance Of College Students. The Participants (N = 74) Were Students At Aurangabad, Maharashtra. Cooper's 12 Min Run Test Was Used To Assess Running Performance. Following 8-Weeks Of Training, Findings Indicated That There Was A Statistically Significant Difference (0.05 Level) In Running Performance Between The Event Rehearsal Imagery (N = 29), Event Rehearsal Imagery With Distractions (N = 16) And The Control Group (N = 29). Overall, There Was A Significant Mean Difference In Running Among Male (N = 47) And Female (N = 27 Participants).

Introduction

Though India is not known for achievements in the field of running on the global platform, little attention has been given to the mental training of college age students. For the most part, the focus of mental training in India and abroad has been on elite and professional players. The truth of the matter is that mental training, which includes relaxation, concentration, imagery, goal setting, and team Building and cognitive restructuring, should be for everyone. The health value of mental training has been clearly establishedNapersack. Her relaxation and visualization techniques have been used by persons who suffer from a wide variety of illnesses, including cancer, hypertension, anxiety, post-traumatic stress, depression and other illnesses. This investigation will add to the growing body of knowledge about the effects of distractions on running performance of college age students.There is growing research and popular interest in the role of distractions in the enhancement of cognitive and psychomotor tasks. Russell, et al. compared a post-exercise mood enhancement program across common exercise distraction activities. In a classic investigation, Pennebaker and Lightner explained the beneficial effects of attentional distraction as contributing to a higher perception threshold for bodily information that normally inform participants to stop. With the results of the above investigation in mind, the investigators decided to add to the growing body of knowledge about the effects of distractions on the running performance of Indian University students. It was hypothesized that students who experienced distractions while imaging running would perform significantly better than students who did not have distractions while imaging their running performance. In addition because, of super muscular strength, it is hypothesized that male students will out-perform female students in running performance

Method

A convenient sample of participants (N = 74), ranging in age from 18 – 26 years, were selected from university students who were studying at Aurangabad, Maharashtra. Based on availability, male (n = 47) and female (n = 27) students were chosen from various populations within college. Cooper's 12 min walk run test was used to measure running performance. A pre-test/post-test design was used to assess the effects of mental training on the middle distance running performance of University students. Experimental treatments (n = 3) were randomly assigned to groups (n = 3). Because of class scheduling conflicts, the participants (N = 74) were assigned to groups based on availability. Therefore, ANCOVA was used to adjust final posttest mean scores for between group differences in running performance that existed prior to the start of this experiment.

Results

The major null hypothesis H00 stated that there would be no significant between group mean differences in sport running performance, as measured by Cooper's Walk/Run test. In other words, this hypothesis stated that there would be no significant difference in mean running performance among Experimental Group #1 (n = 29) (ERGI), Experimental Group #2 (n = 16) (DI) and Control Group participants (n = 29) who did Event Rehearsal Guided Imagery (ERGI), Distractive Imagery (DI) and the Control Group (CG) activities.

Table – 1 ANCOVA OF POST-TEST RUNNING SCORES FOR GROUPS, GENDER AND GROUPS BY GENDER INTERACTION

Source	SS	DF	MS	F	P	η^2
Groups	527124.10	2	263562.05	*3.02	0.056	0.83
Gender	913457.08	1	913457.08	*10.45	0.002	0.14
Group xGender	239073.43	2	119536.72	1.37	0.262	0.04
Error	5854664.81	67	87383.06			
Total	526430000.0	74				

Bonferroni's pair-wise comparisons indicated that there was no statistically significant mean difference between Experimental Group #1 participants who did (ERGI) and Experimental Group #2 participants who did DI. Although there was a 202 meter means difference between the two groups of guided imagery participants, this difference was not significant at the 0.05 level.Bonferroni's post-hoc test indicated that the 132.99 meter difference between these groups was not statistically significant at the 0.05 level.Bonferroni's post-hoc test produced a statistically significant difference between these two groups of participants. The mean posttest running performance of participants (n = 19) in the Distraction visualization group showed the greatest improvement form the meanpost-test running scores of Control Group participants (n = 22). The direction of the improvement for participants (n = 19) in the distractive group was over 400 mtr, i.e., a lap further on a 400 mtr track.

Overall it is conclude that the experimental treatments were effective in enhancing running performance, i.e. from pre-test to post-test, the mean running performance of the three groups of participants improved. However, despite the fact that Experimental Group #2 (Event Rehearsal Distractive Imagery) participants had the highest post-test mean score, Bonferroni's post-hoc comparison did not produce a statistically significant difference from Control Group participants.

Discussion

The findings of the present investigation are in agreement with the meta-analytic investigations of Feltz and Landers, Richardson, Wrisberg and Comar, and Driskell, et al. All of these investigators found that mental training when coupled with physical practice enhanced sport performance.These findings are also in agreement with the work of Hall and Erffmeyer. They found that visuomotor behavior rehearsal when used with videotape modeling enhance the performance of intercollegiate female basketball players. In a classic study, Mahoney and Avener demonstrated that those gymnasts who did mental training made the US Olympic team more often than those athletes who did not do mental training. In summary, it is very clear that mental training when done well has the potential to enhance the performance of athletes in a wide variety of sports.

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Effect of different Packages of Yogic Practices on HDL Anxiety and Cortisol Variables among Over weight Middle Aged Men

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Introduction:

Yoga is the "Union of the individual self with the universal self" (Iyengar, 2001).Yoga means the union or communication or unity with our inner being. "Asana" means a state of being in which we can remain steady, calm, quiet and comfortable with our physical body and mind.Yogic exercises and techniques have significant, direct effects on the physical, psychological, theoretical preparation and on the regeneration of the strength process. Yogasanas can be used for warm-up, cool-down, regeneration, synthesis of mind and body, activation or deactivation of the body and as supplemental exercises (Aladar Kogler, 2003).Effect Of Yogic Training On Psychological Benefits; Yoga improves concentration, attention, mood, depth perception, mind/body neuro connection, memory, learning efficiency, balance, steadiness and cognitive function. Besides, it decreases anxiety and depression. It also increases self acceptance, social skills, well-being, somatic and kinesthetic awareness and self-actualization.

Effect Of Yogic Training On High Density Lipoprotein: The high density lipoprotein contains the least amount of cholesterol high density lipoprotein's may operate to protect against heart diseases in two ways:To carry cholesterol away from the arterial wall for degradation to bile in the lives and subsequently excreted by the intestines. To compete with the low density lipoprotein fragment for entrance into the cells of the arterial wall.A high level of high density lipoprotein is associated with a lower heart disease risk, even among individuals with total cholesterol below 200mg/dl. It is encouraging from an exercise perspective that high density lipoprotein levels are elevated in endurance athletes and may be favourably altered in sedentary people who engage in either vigorous aerobic training or more moderate levels of regular exercise.

Effect Of Yogic Training On Cortisol

Cortisol, known more formally as hydrocortisone (INN, USAN, BAN), is a steroid hormone, more specifically a glucocorticoid, produced by the zona fasciculata of the adrenal cortex (Scott, 2011).

Cortisol is released in response to stress and a low level of blood glucocorticoids. Its primary functions are to increase blood sugar through gluconeogenesis; suppress the immune system; and aid in fat, protein and carbohydrate metabolism. It also decreases bone formation. Various synthetic forms of cortisol are used to treat a variety of diseases (Hoehn and Marieb, 2010).

Effect Of Yogic Training On Anxiety: Anxiety is a psychological and physiological state characterized by somatic, emotional, cognitive, and behavioral components. It is the displeasing feeling of fear and concern. The root meaning of the word anxiety is 'to vex or trouble'; in either presence or absence of psychological stress and anxiety can create feelings of fear, worry, uneasiness and dread. Anxiety is considered to be a normal reaction to a stressor. It may help an individual to deal with a demanding situation by prompting them to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder. Anxiety is a generalized mood condition that can occur without an identifiable triggering stimulus. As such, it is distinguished from fear, which is an appropriate cognitive and emotional response to a perceived threat. Additionally, fear is related to the specific behaviors of escape and avoidance, whereas anxiety is related to situations perceived as uncontrollable or unavoidable. Another view defines anxiety as a future-oriented mood state in which one is ready or prepared to attempt to cope with upcoming negative events (Linta David, 1976).

Statement Of The Problem:

The purpose of the study was to find out the effect of different packages of yogic practices on selected lipid profile status, physiological and psychological variables among overweight middle aged women.

HYPOTHESES: It was hypothesised that there would be a significant improvement on on hdl anxiety and cortisol variables among overweight middle aged women due to the influence of different packages of yogic practices than the control group.

DEPENDENT VARIABLES: High Density Lipoproteins, Cortisol, Anxiety

INDEPENDENT VARIABLES: Experimental group I – Yogic package, Expérimental group II - Yogic package, Group III – Control group

EXPERIMENTAL DESIGN: The study was formulated as a true random group design consisting of a pre test and post test. The middle aged overweight women (N=45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as experimental group - I (Yogic practices), experimental group - II (Yogic practices) and control group respectively. Pre and post tests were conducted for all the 45 subjects on selected lipid profile status, physiological and psychological variables before and after the experimental period of twelve weeks. The two experimental groups were treated with their respective yogic programme for one hour per day for five days a week for a period of twelve weeks.

STATISTICAL PROCEDURE: Analysis of co-variance statistical technique was used to test the adjusted post test mean differences among the experimental groups and control group. If the adjusted post test result was significant, then the Scheffe's post hoc test was used to determine the significance of the paired mean differences **(Thirumalaisamy, 1998).**

COMPUTATION OF ANALYSIS OF COVARIANCE ON HIGH DENSITY LIPOPROTEINS(Scores in mg/dl)

Means	Exp Group I	Exp Group II	Control Group	SV	SS	df	MS	Obtained 'F'
Pre test	45.40	45.87	47.33	B	30.53	2	15.27	0.49
				W	1306.67	42	31.11	
Post test	49	51.60	46.47	B	197.64	2	98.82	3.46*
				W	1199.33	42	28.56	
Adjusted post test	49.69	51.89	45.49	B	312.472	2	156.24	29.04*
				W	220.61	41	5.38	

*Significant. F ratio for 2 and 42 = 3.22 and 2 and 41 = 3.23 (0.05 level)

TABLE COMPUTATION OF SCHEFFE'S POST HOC TEST ORDERED ADJUSTED FINAL MEAN DIFFERENCE OF HIGH DENSITY LIPOPROTEINS

Experimental Group II	Experimental Group I	Control Group	MD	CI
51.89	49.69	-	2.20*	2.15
51.89	-	45.49	6.40*	2.15
-	49.69	45.49	4.20*	2.15

* Significant

In this work, the analysis of covariance of high density lipoproteins was carried out in two different Experimental Groups with the inclusion of different packages of yogic practices. The same analysis was carried out in another group called the Control Group without inclusion of training. From these analyses, it was found that the results obtained from the Experimental Groups had significant increases in the high density lipoproteins when compared with one from the Control Group. This was due to the influence of different packages of yogic practices in the analysis of Experimental Groups.

It was interesting to note that the results obtained from Experimental Group II had more significant effect than Experimental Group I and control group on the increased high density lipoproteins.

COMPUTATION OF ANALYSIS OF COVARIANCE ON CORTISOL(Scores in µg/dl)

Means	Exp Group I	Exp Group II	Control Group	SV	SS	df	MS	Obtained 'F'
Pre test	12.12	12.30	11.98	B	0.77	2	0.39	1.01
				W	16.13	42	0.38	
Post test	11.59	11.23	11.82	B	2.63	2	1.31	4.65*
				W	11.85	42	0.28	
Adjusted post test	11.60	11.12	11.93	B	4.76	2	2.38	24.36*
				W	4	41	0.10	

*Significant. F ratio for 2 and 42 = 3.22 and 2 and 41 = 3.23 (0.05 level)

COMPUTATION OF SCHEFFE'S POST HOC TEST ORDERED ADJUSTED FINAL MEAN DIFFERENCE OF CORTISOL (Scores in µg/dl)

Control Group	Experimental Group I	Experimental Group II	MD	CI
11.93	11.60	-	0.33*	0.29
11.93	-	11.12	0.81*	0.29
-	11.60	11.12	0.48*	0.29

Discussion On The Findings Of Cortisol

In this work, the analysis of covariance of cortisol was carried out in two different Experimental Groups with the inclusion of different packages of yogic practices. The same analysis was carried out in another group called the Control Group without inclusion of training. From these analyses, it was found that the results obtained from the Experimental Groups had significant decreases in the cortisol from it higher level to moderate when compared with one from the Control Group. This was due to the influence of different packages of yogic practices in the analysis of Experimental Groups. It was interesting to note that the results obtained from Experimental Group II had more significant effect than Experimental Group I and control group on the decreased cortisol.

TABLE XIICOMPUTATION OF ANALYSIS OF COVARIANCE ON ANXIETY

(Scores in scores)

Means	Exp Group I	Exp Group II	Control Group	SV	SS	df	MS	Obtained 'F'
Pre test	21.87	21.20	22.33	B	9.73	2	4.87	0.96
				W	213.47	42	5.08	
Post test	19.80	17.47	21.67	B	132.84	2	66.42	12.83*
				W	217.47	42	5.18	
Adjusted post test	19.75	17.94	21.25	B	79.02	2	39.51	18.61*
				W	87.03	41	2.12	

*Significant. F ratio for 2 and 42 = 3.22 and 2 and 41 = 3.23 (0.05 level)

TABLE XII (a)COMPUTATION OF SCHEFFE'S POST HOC TEST ORDERED ADJUSTED FINAL MEAN DIFFERENCE OF ANXIETY (Scores in scores)

Control Group	Experimental Group I	Experimental Group II	MD	CI
21.25	19.75	-	1.50*	1.35
21.25	-	17.94	3.31*	1.35
-	19.75	17.94	1.81*	1.35

In this work, the analysis of covariance of anxiety was carried out in two different Experimental Groups with the inclusion of different packages of yogic practices. The same analysis was carried out in another group called the Control Group without inclusion of training. From these analyses, it was found that the results obtained from the Experimental Groups had significant decreases in the anxiety from it higher level to moderate when compared with one from the Control Group. This was due to the influence of different packages of yogic practices in the analysis of Experimental Groups. It was interesting to note that the results obtained from Experimental Group II had more significant effect than Experimental Group I and control group on the decreased anxiety.

CONCLUSIONS:

Within the limitations and delimitations set for the present study and considering the results obtained, the following conclusions were drawn:It was concluded that the lipid profile status such as high density lipoproteins and anxiety has significantly change due to the influence of twelve weeks practice of different packages of yogic practices among overweight women compared to the control group. But particularly in the experimental group II was significant increase in the high density lipoprotein level when compared to the experimental group I.It was concluded that the physiological variable such as cortisol has not significantly altered due to the influence of twelve weeks practice of different packages of yogic practices among overweight women.

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Effect Of Treadmill Training And Physical Training On Selected Physical Physiological And Bio Chemical Variables Among College Students

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Introduction

Physical activity is any bodily movement produced by skeletal muscles; such movement results in an expenditure of energy. Physical activity is a critical component of energy balance, a term used to describe how weight, diet, and physical activity influence health, including cancer risk. Slattery, ML,(2004).Physical fitness in the very basis of our daily life. It in the development of a body to a state or conditions which permits the performance of a given amount of physical effort. The efficiency of physical effort defends upon the mutual development of the muscular, respiratory and circulatory system and is co-ordinates with the activity of central nervous system which lead to top class performance in games and sports. Exercise has a number of effects that benefit the heart and circulation. These benefits include improving cholesterol and fat levels, reducing inflammation in the arteries, helping weight loss programs, and helping to keep blood vessels flexible and open. Studies continue to show that physical activity and avoiding high-fat foods are the two most successful means of reaching and maintaining heart-healthy levels of fitness and weight Brown WJ et al, 2007.Physical activity is an important component of your treatment plan. It's also important to have a healthy meal plan and maintain your blood glucose level through medications or insulin, if necessary. If you stay fit and active throughout your life, you'll be able to better control your diabetes and keep your blood glucose level in the correct range. Controlling your blood glucose level is essential to preventing long-term complications, such as nerve pain and kidney disease. Exercise has so many benefits, but the biggest one is that it makes it easier to control your blood glucose (blood sugar) level. In either case, exercise can reduce the glucose in your blood. Muscles can use glucose without insulin when you're exercising. In other words, it doesn't matter if you're insulin resistant or if you don't have enough insulin: when you exercise, your muscles get the glucose they need, and in turn, your blood glucose level goes down. If you're insulin resistant, exercise actually makes your insulin more effective. That is your insulin resistance goes down when you exercise, and your cells can use the glucose more effectively. Exercise can also help people with blood sugar avoid long-term complications, especially heart problems. People with diabetes are susceptible to developing blocked arteries, which can lead to a heart attack. Exercise helps keep your heart healthy and strong. Plus, exercise helps you maintain good cholesterol and that helps you avoid arteriosclerosis.

Methodology

To achieve the purpose of this study was effect of Treadmill training and Physical training on selected physical physiological and bio-chemical variables among college men students. The forty five subjects were randomly selected from Thanthai Hans Roever Arts and Sciences College, Perambalur. Tamil Nadu, during the academic year 2016 - 2017. The subject's age ranged between 18-25 years only. They were randomly divided into three equal groups. Treadmill training group and Physical Training group were considered as two experimental groups and the other group was control group. All the subjects were healthy and physically fit. The nature and importance of the study was explained to the subjects and subjects expressed their willingness to serve as subjects in this study.

The study was formulated as pre and post test random group design. The Pretest was conducted for all the subjects on selected variables such as speed, Resting heart Rate, Blood Sugar. The experimental groups participated in their respective Treadmill training and Physical Training for a period of 12 weeks. The post test was conducted on the above said dependent variables after a period of 12 weeks in the respective treatments. The training Program was scheduled 6.30 am to 8.00 am from alternative three days in progression. During this period the subject were not allowed to participate in any training.

Dependent Variables

i. Speed ii. Resting Pulse Rate iii. Blood Sugar

Independent Variables

(i) Experimental group I-Treadmill Training group

(ii) Experimental group II - Physical Training group

(iii) Control group - No any training

Tools Used For The Study

Sl. No	Criterion Variables	Test Items	Unit of measurements
	Speed	50 mts run	Seconds
	Resting pulse rate	Stethoscope	Beats per minutes
	Blood sugar	Blood Test	Mg/dl

Training Programme

The Treadmill and Physical training Programmes was developed after consulting various experienced coaches and sports training experts. The Training was given three days in a week and the duration of the period was twelve weeks. The training program began with low volume and progressively increased in volume and intensity until the completion of the study. The physical training workout for 3 days per week. Warm up, stretching, at least ten minutes. Cool down, stretching, at least ten minutes

Statistical Analysis

Analysis of co-variance statistical Technique was used to test adjusted post-test means difference among the experimental groups. If the adjusted post rest result was significant the scheffe's post hoc was used to determine the significance of the period mean difference Clarke. H Harrison and david. H.Clarke.

Analysis Of The Data

The analysis of covariance on speed of the pre and post test scored of control group, treadmill Training group and physical Training Group have been analyzed and presented in Table I.

Table- I Analysis Of Covariance On Speed Of Control Group, Treadmill Training Group And Physical Training Groups

	Treadmill group	Physical group	Control group	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Pre test	7.00	7.00	7.01	B	0.44	2	0.022	0.318
				W	2.933	42	0.070	
Post test	6.33	6.67	7.07	B	4.04	2	2.02	11.17*
				W	7.600	42	0.181	
Adjusted Post test	6.34	6.67	7.05	B	3.76	2	1.882	10.56*
				W	7.303	41	0.178	

* Significant at 0.05.

(The table values required for significance at 0.05 level of confidence for 2 and 42, 2 and 41 are 3.22 and 3.23)

The Table -1 shows the analyzed data on speed performance of accessed through 50 meters run test. Pre test means of speed for control group, physical training group and treadmill training group were 7.01, 7.00 and 7.00 respectively. The obtained F ratio 0.318 was less than the required table value of 3.22. Hence the pre test was not significant. The post test means for control group, physical training group and treadmill training groups were, 7.07, 6.67 and 6.33 respectively. The obtained F ratio was 11.17 was greater than the required table value of 3.22.

Hence the post test was significant at 0.05 level of confidence for the degrees of freedom 2 and 42.The adjusted post test means for control group, physical training group and treadmill training group were 7.05, 6.67, and 6.34 respectively. The obtained F ratio was 10.56, which were greater than the required table value of 3.23. Hence it was significant at 0.05 level of confidence for the degrees of freedom 2 and 41.

Table- II- Analysis Of Covariance On Resting Heart Rate Of Control Group, Treadmill Training Group And Physical Training Groups

	Treadmill group	Physical group	Control group	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Pre test	71.67	71.53	72.33	B	5.511	2	2.756	0.621
				W	186.400	42	4.438	
Post test	63.13	67.20	72.67	B	686.533	2	343.267	45.99*
				W	313.467	42	7.463	
Adjusted Post test	63.28	67.47	72.24	B	591.197	2	295.599	70.00*
				W	173.136	41	4.223	

* Significant at .05 level of confidence. (The table values required for significance at 0.05 level of confidence for 2 and 42, 2 and 41 are 3.22 and 3.23)

The Table -II shows the analyzed data on resting heart rate. The Pre test means of control group, physical training group and treadmill training group were 72.33, 71.53 and 71.67 respectively. The obtained F ratio 0.621 was less than the required table value of 3.22. Hence the pre test was not significant. The post test means for control group, physical training group and treadmill training groups were, 72.67, 67.20 and 63.13 respectively. The obtained F ratio was 45.99 was greater than the required table value of 3.22.Hence the post test was significant at 0.05 level of confidence for the degrees of freedom 2 and 42.The adjusted post test means for control group, physical training group and treadmill training group were 72.24, 67.47, and 63.28 respectively. The obtained F ratio was 70.00, which were greater than the required table value of 3.23. Hence it was significant at 0.05 level of confidence for the degrees of freedom 2 and 41.

Table- III- analysis Of Covariance On Blood Sugar Of Control Group, Treadmill Training Group And Physical Training Groups

	Treadmill group	Physical group	Control group	Source of Variance	Sum of Squares	Df	Mean Squares	'F' Ratio
Pre test	111.67	117.33	111.47	B	332.844	2	166.422	0.770
				W	9082.400	42	216.248	
Post test	95.87	101.53	112.40	B	2117.733	2	1058.867	4.98*
				W	8919.067	42	212.359	
Adjusted Post test	97.61	97.83	114.34	B	2735.785	2	1367.892	108.58*
				W	516.512	41	12.598	

* **Significant at .05 level of confidence.** (The table values required for significance at 0.05 level of confidence for 2 and 42, 2 and 41 are 3.22 and 3.23)

The Table -II shows the analyzed data on resting heart rate. The Pre test means for control group, physical training group and treadmill training group were 111.47, 117.33 and 111.67 respectively. The obtained F ratio 0.770 was less than the required table value of 3.22. Hence the pre test was not significant. The post test means for control group, physical training group and treadmill training groups were, 112.40, 101.53 and 95.87 respectively. The obtained F ratio was 4.98 was greater than the required table value of 3.22.Hence the post test was significant at 0.05 level of confidence for the degrees of freedom 2 and 42.The adjusted post test means for control group, physical training group and treadmill training group were 114.34, 97.83 and 97.61 respectively. The obtained F ratio was 108.58, which were greater than the required table value of 3.23. Hence it was significant at 0.05 level of confidence for the degrees of freedom 2 and 41.

TABLE-IV:Scheffe's Post - hoc Test for Mean Differences between Groups of speed, resting heart rate and blood sugar

	Treadmill group	Physical group	Control group	Mean Differences	C.I value
Speed	6.34	-	7.05	0.71*	0.35
	6.34	6.67	-	0.33	
	-	6.67	7.05	0.38*	
Resting heart rate	63.28	-	72.24	8.96*	1.77
	63.28	67.47	-	4.19*	
	-	67.47	72.24	4.77*	
Blood sugar	97.61	-	114.34	16.73*	3.09
	97.61	97.83	-	0.22	
	-	97.83	114.34	16.51*	

* Significant

Table IV shows that the speed mean difference values of control and treadmill training control and physical training 0.71 and 0.38 it is greater than confidence interval value 0.35.hence significance difference between groups. Physical training and treadmill training groups were 0.33 less than confidence interval value of 0.35. There is no significance difference between groups. The resting heart rate mean difference values of control and treadmill training, physical training and treadmill training, Physical training and control groups were 8.96, 4.19 and 4.77 it is greater than confidence interval value 1.77.Its significance difference between groups. The Blood sugar mean difference values of control and treadmill training, control and physical training 16.73 and 16.51 it is greater than confidence interval value 3.09.hence significance difference between groups. Physical training and treadmill training groups were 0.22 less than confidence interval value of 3.09. There is no significance difference between groups.

Discussion And Finding

Rajan Balakrishnan and others (2016) indicated that compare the heart rate responses during stair climbing versus treadmill walking and to determine whether the responses were of sufficient magnitude to elicit cardio respiratory training effects. The treadmill walking had equivalent effect on the heart rate with significant difference. Deuk-Ja Oh et al (2016) reported this study is to investigate the effects of strenuous exercises on resting heart rate, blood pressure, and maximal oxygen uptake. As a result, there were significant differences in resting heart rate and maximal oxygen uptake. George Abraham and Sankaranarayanan P. S (2012) the revealed that analyze the impact of yoga and physical exercise on resting heart rate among diabetes patients. From the results of the study, it was found that there was a significant reduction in resting heart rate of training groups when compared to control group. Manna I and others (2012) the suggested training on anthropometric, physiological and biochemical variables of U-19 volleyball players The training programme is effective for improving VO2max and total cholesterol for volleyball. According to Chinnasamy (1992), a study on effect of asanas and physical exercise on six week training showed that it had significantly reduced the pulse rate.VO_2max means the individual's uppermost level of aerobic metabolism, i.e. the ability to utilize oxygen for energy during maximal physical

effort. Aerobic fitness level has been strongly and positively associated with reduced disease and humanity risk, good quality of life, performance level, and functional ability Ortega FB et al (2008), Fogelholm M (2010).Ferley DD and others (2014) the reason of this investigation integrated documenting the effects of incline and level-grade interval treadmill training on indices of running economy. This study proved to treadmill training effective for improving vo_2 max. Koepp KK, Janot JM. (2008) conducted a study on determine differences in Vo_2 max and metabolic variables between treadmill running and treadmill skating. Its Vo_2 max is significant improvement of treadmill running. Shivananda nayak et al (2005) the role of treadmill exercise on blood glucose homeostasis in non insulin dependent diabetes mellitus were studied using males between age of 45 and 60 years. The mean decrease in blood sugar for the control group.

Conclusions

Physical training and treadmill training group significantly improved speed, resting heart rate and blood sugar of the college men students compared to control group. Treadmill training is better improvement of compared physical training group on speed, resting heart rate and blood sugar. There was no significant difference between Physical training and treadmill training groups of speed and blood sugar.

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Effect Of Bicycle Ergo Meter Training And Plyometric Training On Selected Physical And Physiological variables Among School Boys

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Abstract
The purpose of this study was find out the Effect of Bicycle Ergo Meter Training and Plyometric Training on Selected Physical and Physiological Variables among School Boys. Thirty subjects were randomly selected from Alagappa model school, Karaikudi, Tamil Nadu. The subject's age ranged between 13-17 years only. They were randomly divided into three equal groups. Bicycle ergo meter training group, plyometric training group were considered as two experimental groups and the other group was control group. The study was formulated as pre and post test pre experimental design. The analysis of covariance **(ANCOVA)** was applied to find out the variance in each criterion variable. The level of significance to test and '**F'** ratio, obtained by the analysis of co-variance was fixed at 0.05 level of confidence. The significant improvement in leg explosive power and vo_2 max for plyometric training followed by Bicycle Ergo meter training and control group.There would be a no significant difference between plyometric training and Bicycle Ergo meter training on leg explosive power and vo_2 max.
Key words: Bicycle ergo meter, plyometric, Vo_2 max, Breath holding time and Calf girth.

INTRODUCTION

Sport training is a systematic process extending over a long period. For best result the system of training has to be based and conducted on scientific factors and lines where it is not possible to do that, the training has to be based on the results successful practice which has withstood the test of time sport. Physical training aims at improving the performance of sports persons. The sports performance depends on several factors. The performance of sports primarily depends on his performance capacity, such as speed, strength and endurance.It is competitive physical activity using bicycles. There are several categories of bicycle racing including road bicycle racing, time trialing, cycle-cross, mountain bike racing, track cycling and cycle speedway. Non-racing cycling sports include artistic cycling, cycle polo and mountain bike trials. The Union Cyclist International is the world governing body for cycling and international competitive cycling events. Bicycle is a very efficient method of locomotion. 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. In recent years, this distinct method of training for power or explosiveness has been termed plyometrics **Chelly et al. (2001)** suggested that the power that an individual can develop depends on both force and velocity, as determined by friction-loaded ergo meters. Plyometrics is a type of training involving jumping; bounding and other high impact exercises that focus on maximizing the stretch reflex of the muscles. To teach the muscles to produce maximum force faster this enhances performance for.

Methods And Procedures

SELECTION OF THE SUBJECTS

To achieve the purpose of this study was thirty subjects were randomly selected from Alagappa model school boys Karaikudi, Tamil Nadu. The subject's age ranged between 13-17 years only. They were randomly selected in thirty students divided into three equal groups. Bicycle ergo meter training group, plyometric training group were considered as two experimental groups and the other group was control group. All the subjects were healthy and physically fit. The nature and importance of the study was explained to the subjects and subjects expressed their willingness to serve as subjects in this study. The study was formulated as pre and post test pre experimental design.

SELECTION OF VARIABLES

Keeping in mind the role of various physical and physiological variables. Availability of equipments and the feasibility aspects their measurement the following variables were selected for their study.

DEPENDENT VARIABLES

PHYSICAL VARIABLE

Leg explosive power

PHYSIOLOGICAL VARIABLE

Vo_2 max

INDEPENDENT VARIABLES

Experimental group I **-** Bicycle Ergo meter training
Experimental group II **-** Plyometric training
Control group **-** No training

The list of selected physical variables and respective tests used for the study

Sl. No.	Variables	Test	Unit of measurement
1	Leg explosive power	Standing broad jump	In meters
2	Vo_2 max	Step Test	$Ml/kg^{-1}/min^{-1}$

TRAINING PROGRAMME

Ten participants underwent a supervised bicycle ergo meter training program lasting for twelve weeks, three days per week, with a 30-minute structured exercise session. Each session consisted of a warm-up, an aerobic phase, and cool down. The exercise intensity was individually prescribed using a bicycle ergo meter but within 50%–75% of the maximal heart rate range for participants. The bicycle Ergo meter exercise started with the participants sitting on the bicycle with initial resistance of 10–20 watts (warm-up phase) that was gradually increased by 5–10 watts after 3 minutes .The resistance was gradually reduced 5 minutes before the end of the session (cool down phase). A 12-week plyometric-training program was developed that included weekly three days training sessions. 1. Single leg and double leg jump; 2.Alternative leg jump; 3. Side hop jump; 4.Lateral cone hops these exercises were performed for the duration of the training periods 60 minutes.

Statistical Techniques

Analysis of co-variance statistical Technique was used to test adjusted post-test means difference among the experimental group. If the adjusted post rest result was significant the scheffe's post hoc was used to determine the significance of the period mean difference **Clarke. H. Harrison and divid.**

Analysis And Discussions

TABLE- IAnalysis of Covariance for the pre and post-test data on Leg Explosive Power (Scores in meters)

Test	Ergo cycle training	Plyo metric training	Control group	Source of variance	Sum of soquare	Df	Mean squares	F ratio
Pre test mean	1.20	1.22	1.21	B	0.003	2	0.001	0.026
				W	1.39	27	0.052	
Post test mean	1.94	1.93	1.22	B	3.36	2	1.68	27.36*
				W	1.65	27	0.061	
Adjusted post test mean	1.94	1.92	1.21	B	3.43	2	1.71	54.43*
				W	0.820	26	0.032	

***Significant at 0.05** (Table F-value at 0.05 level of confidence for 2 and 27 (df) =3.35, 2 and 26 (df) =3.37)

Table I shows that the pre test F value 0.026 was less than the required table value of 3.35 to be no significant at 0.05 level.The post test scores analysis proved that there was significant difference between the groups, as they obtained F value 27.36 was greater than the required table value of 3.35. This proved that the differences between the post test means of the subjects were significant. The Adjusted post F value of 54.43 was greater than the required table value of 3.37. This proved that there were significant differences among the means due to twelve weeks Bicycle Ergo meter training and plyometric training on leg explosive power.

TABLE –II: Analysis of Covariance for the Pre and Post-Test Data on Vo_2 Max

(Beats per minute)

Test	Ergo cycle training	Plyo metric training	Control group	Source of variance	Sum of square	df	Mean squares	F ratio
Pre test mean	46.60	48.90	45.60	B	57.26	2	28.63	2.23
				W	345.70	27	12.80	
Post test mean	49.85	51.80	45.20	B	229.93	2	114.96	8.96*
				W	346.23	27	12.82	
Adjusted post test mean	50.23	50.11	46.49	B	84.14	2	42.07	16.67*
				W	65.61	26	2.52	

***Significant at 0.05** (Table F-value at 0.05 level of confidence for 2 and 27 (df) =3.35, 2 and 26 (df) =3.37)

Table II shows that the pre test F value 2.23 was less than the required table value of 3.35 to be no significant at 0.05 level.The post test scores analysis proved that there was significant difference between the groups, as they obtained F value 8.96 was greater than the required table value of 3.35. This proved that the differences between the post test means of the subjects were significant. The Adjusted post F value of 16.67 was greater than the required table value of 3.37. This proved that there were significant differences among the means due to twelve weeks Bicycle Ergo meter training and plyometric training on vo2 max.

TABLE-III

Scheffee's Post - hoc Test for Mean Differences between Groups

	Ergo cycle Training	Plyometric Training	Control Group	Mean Differences	C.I
Leg Explosive Power	1.94	1.92	-	0.02	0.09
	1.94	-	1.21	0.73*	
	-	1.92	1.21	0.71*	
Vo_2 Max	50.23	50.11	-	0.12	0.83
	50.23	-	46.49	3.74*	
	-	50.11	46.49	3.62*	

* Significant at .05 level

Table - III shows that mean difference in leg explosive power between Bicycle Ergo meter Training and Plyometric Training 0.02 the less than CI value of 0.09. There was no significant. Bicycle Ergo meter Training and control group 0.73 and Plyometric Training and control group 0.71 greater than CI value of 0.09. There was a significant difference between groups. The mean difference in vo_2 max between Bicycle Ergo meter Training and Plyometric Training 0.12 the less than CI value of 0.83. There was no significant. Bicycle Ergo meter Training and control group 3.74 and Plyometric Training and control group 3.62 greater than CI value of 0.83. There was a significant difference between groups.

Conclusion

There would be a significant improvement for both the training group after their respective training programme.Plyometric training group significant improvement in leg explosive power and vo_2 max compared to control group.Bicycle ergo meter training group significant improvement in leg explosive power and vo_2 max compared to control group.There would be a no significant difference between plyometric training and Bicycle Ergo meter training on leg explosive power and vo_2 max.

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Predominance Of Selected Anthropometric Measurements On Kabaddi Playing Ability Among College Male Students

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Abstract
The study was proposed to analyze the predominant anthropometric characteristics determining kabaddi playing ability among college male students. To achieve this purpose of the study, one hundred and sixty five kabaddi players selected from Acharya Nagrjuna University area, Andhra Pradesh, India, in the age group of eighteen to twenty three years from degree college players were selected as subjects. The kabaddi playing ability was selected as criterion variable, and the anthropometric measurements (neck girth, axillary arm girth, biceps girth, forearm girth, wrist girth, arm length, hand length, palm length, shoulder girth, chest girth, waist girth, thigh girth, calf girth, ankle girth, leg length, foot length, foot breadth, height and weight) were considered as independent variables in this study. The standardized means and methods were used to assess the selected criterion variables. The data thus collected were statistically examined by applying Pearson product moment coefficient of correlation to find out the existence of significant relationship and multiple regression analysis to analyze the predominant factors. The α value of 0.05 was set for statistical significance. The outcome of the study demonstrates that statistically significant relationship subsists between kabaddi playing ability and selected anthropometric measurements, and establishes that the kabaddi playing ability can be predicted on the basis of calf girth, thigh girth, standing height, and forearm girth.
Keywords: *kabaddi, anthropometrics*.

Introduction

In today's age of scientific knowledge man is making rapid progress in all walks of life and it is true in the area of games and sports. Sports performance is indeed an aspect of complex human performance, which has several dimensions. Sports scientists often acknowledge that a world-class performance is the result of several factors, advocating a multidimensional approach in studies on talented players (Regnier *et al*., 1993; Reilly *et al*., 2000). Burwitz *et al*. (1994) also recommend interdisciplinary performance-related sports science research.

Successful performance in sports is influenced by morphological and anthropometric characteristics such as body size and composition, functional parameters (*physical capacity*) (Scott, 1991; Singh *et al*., 2010) and fitness (*strength, speed, anaerobic and aerobic capacity, agility*) (Nikitushkin & Guba, 1998).

The ability of a player in a team game like kabaddi emanates from various anthropometric and physical fitness parameters of the players. Present day science is very much interested in estimating the optimum anthropometric make-up of a player. So the scanning and selection of a particular player may be achieved successfully to a great extent by measuring anthropometric components.

Anthropometric are dimensions of the structure of the human body taken at specific sites to give measures of girth and width. They include the body size and body proportions.

Measurements of body size include such descriptive information as height, weight and surface area, while the measures of body proportions describe relationship between height, weight, among length, width and girths of various body segments. It has been observed that top athletes in some sports tend to have those proportions to biologically aid the performance (Mathews, 1973).
It would be of interest to investigate the predominant characteristics that determines playing ability of kabaddi players, as there has been a scanty of research with regard to it. Hence, the investigator is motivated to determine the anthropometric characteristics that evolve the sports playing ability. The present paper was proposed to examine the predominant anthropometric characteristics determining kabaddi playing ability among college male students.

Methods and Procedures

One hundred and sixty five kabaddi players from Acharya Nagrjuna University area Andhra Pradesh, India, in the age group of eighteen to twenty three years degree college players were selected as subjects with an informed consent. The study was restricted to the objective assessment of selected anthropometric measurements (*neck girth, axillary arm girth, biceps girth, forearm girth, wrist girth, arm length, hand length, palm length, shoulder girth, chest girth, waist girth, thigh girth, calf girth, ankle girth, leg length, foot length, foot breadth, height and weight*) and subjective rating of playing ability by judges. The anthropometric measurements were assessed utilizing calibrated instruments, standardized methods, procedures and tests.
The experimental design used in this study was cross sectional design involving convenient sampling for selecting the subjects of the study. The data thus collected were statistically examined by applying Pearson product moment coefficient of correlation to find out the existence of significant relationship and the procedure of stepwise method of multiple regression analysis to analyze the predominant factors. The α value of 0.05 was set for statistical significance.

Results

The descriptive analysis of the data collected on various determinant and criterion variables is presented in Table 1. Table 1: Descriptive Statistics

Variables	Mean	Std. Deviation		Variables	Mean	Std. Deviation
Neck Girth	35.49	1.06		Waist Girth	77.32	2.52
Axillary Arm Girth	31.99	1.03		Thigh Girth	53.49	1.74
Biceps Girth	31.55	1.02		Calf Girth	33.43	1.66
Forearm Girth	26.40	0.94		Ankle Girth	23.77	0.77
Wrist Girth	17.13	0.54		Leg Length	97.54	4.32
Arm Length	75.53	3.00		Foot Length	26.22	0.83
Hand Length	18.64	0.58		Foot Breadth	10.33	0.38
Palm Length	9.15	0.33		Height	168.44	5.23
Shoulder Girth	117.70	3.58		Weight	64.65	5.52
Chest Girth	89.81	2.87		Kabaddi Playing Ability	7.81	0.89

The relationship between the criterion and determinant variables and inter relationship between determinants variables were calculated using the method of Pearson product moment correlation. The correlation coefficients thus obtained is presented in Table 2.
Correlation coefficients of the criterion variable with the determinant variables vary from 0.110 for height to 0.758 for calf girth. The correlation coefficient of the kabaddi playing ability with neck girth, auxiliary arm girth, biceps girth, forearm girth, wrist girth, palm length, shoulder girth, chest girth, waist girth, thigh girth, calf girth, ankle girth, foot length, and foot breadth, ensures a significant relationship at 0.05 level of confidence, since the obtained coefficient of correlation is greater than the required table value of 0.160 for 163 degrees of freedom. However, the arm length, hand length, leg length, height, and weight were not significantly correlated with kabaddi playing ability.

High multiple correlation results when the determinant variables correlate high with criterion, whereas, low correlation between determinant variables (Clarke & Clarke, 1972). The stepwise multiple correlations was utilized to select the minimum number of independent variables that would provide the highest multiple correlations coefficient with the criterion variable and to select them in the order of priority to the correlation.

The process of Stepwise multiple regression analysis is presented in Table 2.

Table 2: Regression Analysis of Selected Anthropometric Measurements

Predictors	R	R Square	Adjusted R Square	Std. Error	%Common Variance	F
Calf Girth	.758	.575	.572	.58036	35%	220.519
Calf Girth, Thigh Girth	.809	.655	.650	.52474	41%	153.564
Calf Girth, Thigh Girth, Height	.826	.683	.677	.50468	44%	115.385
Calf Girth, Thigh Girth, Height, Forearm Girth	.846	.716	.709	.47885	47%	100.839

In the process of computing multiple correlations on kabaddi playing ability, selected anthropometric measurements namely: calf girth, thigh girth, height, forearm girth respectively were selected with the zero-order correlation coefficient of 0.758, 0.751, 0.110 and 0.673. Out of the nineteen independent variables four variables were selected to derive stepwise multiple regression equation by obtaining a higher multiple correlations.

The obtained R^2 value of 0.716 denotes that calf girth, thigh girth, height, forearm girth having 47% common variance with kabaddi playing ability and the corresponding F ratio of 100.839 is significant at 0.05 level.

The results of the study indicate that kabaddi playing ability can be the composite effect of selected anthropometric measurements. Thereby, the equation that derives kabaddi playing ability is as follows:

Kabaddi Playing Ability = – 7.255 + 0.319 (Calf Girth) + 0.411 (Thigh Girth) – 0.035 (Height) – 0.446 (Forearm Girth)

As early as the 1920s, researchers were examining the potential of anthropometric (e.g., height) and physiological (e.g., strength) measures as discriminating factors between athletes involved in different sporting events. The list of variables considered was wide-ranging, from simple consideration of age, height, and weight to more extensive studies containing many anthropometric measurements, somatotyping, and tissue analysis. However, although numerous studies have contrasted senior and junior athletes, relatively few have examined the characteristics of the 'world-class' performer.

Many investigators support that the somatotypes of top young athletes do not substantially differ from the respective top adult athletes' somatotype (Malina & Shoup, 1985, Papadopoulou *et al*., 2002). There are many anthropometric variables that can be measured for the kabaddi players. However, it is not practical to measure each of these variables because of the time required to complete the tests. Therefore, it is necessary to find out the more critical variables and to build new indices system for the kabaddi talent identification.

The anthropometric characteristics such as calf girth, thigh girth, and forearm girth has been an essential prerequisite for better kabaddi playing ability. The anthropometric characteristics are of great importance for talent identification, as it is considered to be means for success.

Profiling young children on 'innate' anthropometric and physiological measures will enable the identification of individuals who have the potential to be successful in a specific event (Petiot, Salmela, & Hoshizaki, 1987). Thus, Grabiner and McKelvain (1987) stated, "the ability to identify young people whose profile is consistent with that of elite gymnasts may enhance the sport development of the individual by giving information about future success". Conversely, characteristics that are not innate are influenced continually by the environment and the individual's experiences. It is therefore unlikely that mature levels of these latter variables can be predicted.

Conclusions

The outcome of the study demonstrates that statistically significant relationship subsists between kabaddi playing ability and selected anthropometric measurements, and establishes that the kabaddi playing ability can be predicted on the basis of calf girth, thigh girth, height, forearm girth.

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A Comparative Study of Explosive Power of Legs among Shot Put and Discus Throwers of Hyderabad District in Telangana

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Introduction:

The shot put is a track and field event involving "throwing"/"putting" a heavy spherical object —the *shot*— as far as possible. The shot put competition for men has been a part of the modern Olympics since their revival in 1896, and women's competition began in 1948.Shot put competitions have been held at the modern Summer Olympic Games since their inception in 1896, and it is also included as an event in the World Athletics Championships.Each competition has a set number of rounds of throws. Typically there are three preliminary rounds to determine qualification for the final, and then three more rounds in the final. Each competitor is credited with their longest throw, regardless of whether it was achieved in the preliminary or final rounds. The competitor with the longest legal put is declared the winner.In open competitions the men's shot weighs 7.260 kilograms (16.01 lb), and the women's shot weighs 4 kilograms (8.8 lb). Junior, school, and masters competitions often use different weights of shots, typically below the weights of those used in open competitions; the individual rules for each competition should be consulted in order to determine the correct weights to be used.Two putting styles are in current general use by shot put competitors: the glide and the Rotation.

The **discus throw** is a track and field event in which an athlete throws a heavy disc—called a discus—in an attempt to mark a farther distance than their competitors. It is an ancient sport, as demonstrated by the fifth-century-B.C. Myron statue, Discobolus. Although not part of the modern pentathlon, it was one of the events of the ancient Greek pentathlon, which can be dated back to at least to 708 BC.

Discus is a routine part of most modern track-and-field meets at all levels and is a sport which is particularly iconic of the Olympic Games. The men's competition has been a part of the modern Summer Olympic Games since the first Olympiad in 1896. Images of discus throwers figured prominently in advertising for early modern Games, such as fundraising stamps for the 1896 games and the main posters for the 1920 and 1948 Summer Olympics.

The men's discus is a heavy lenticular disc with a weight of 2 kilograms and diameter of 22 centimetres the women's discus has a weight of 1 kilogram and diameter of 18 centimetres .The discus technique can be broken down into phases. The purpose is to transfer from the back to the front of the throwing circle while turning through one and half circles. The speed of delivery is high, and speed is built up during the throw (slow to fast). Correct technique involves the buildup of torque so that maximum force can be applied to the discus on delivery.

Methods and Materials:

The sample for the present study consists of 15 Male Shot Put and 15 Male Discus Throwers of the Hyderabad District between the Age group of 18-21 Years. The Shot Put and Discus throwers has taken part in the Inter College and State Level Athletics Championships. To asses the explosive Power the stand broad jump test is used for the study.

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

purpose: to measure the explosive power of the legs

equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred.

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.

Results and Discussion:

Table 1 showing mean values of Discus and Shot Put Throwers

Variables	Group	Mean
Standing Broad Jump	Discus Throw	2.49
	Shot Put	2.47

The Mean Performance of the Discus Throwers is 2.49 compare to Shot Put Throwers is 2.47. The Performance of Discus Throwers are better than Shot Put Thrower..

Conclusions:

It is concluded that Discus Throwers having good explosive power of legs compare to the Shot Put Throwers.

Recommendations:

It is recommended that similar studies can be conducted on other events in athletics and also female throwers.This type of study is useful to coaches to give proper coaching for development of motor qualities for improvement of performance among Throwers.

Acknowledgements:

Special Thanks to Prof.Rajesh Kumar, President, Hyderabad District Athletics Association and Mr.A.Xavier Athletics Coach, OU for their help in accomplishment in the Study

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Comparison of Self Confidence among Kabbadi Players and Wrestlers of Aurangabad in Maharashtra State

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Introduction:

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Kabbadi is a famous sports of Maharashtra. Kabaddi is a contact sport that originated in Ancient India. Modern Kabaddi is therefore a synthesis of the game played in various forms under different names. Kabaddi received international exposure during the 1936 Berlin Olympics, demonstrated by India. The game was introduced in the Indian National Games at Calcutta in 1938. In 1950 the All India Kabaddi Federation came into existence and framed the rules. The game was included for the first time in the Asian Games in Beijing in 1990 where seven teams took part.Kabaddi was introduced to and popularized in Japan in 1979 by Sundar Ram of India, who toured Japan on behalf of Asian Amateur Kabaddi Federation for two months to introduce the game. In 1979, matches between Bangladesh and India were held across India. The first Asian Kabaddi Championship was held in 1980 and India emerged as champion beating Bangladesh. The other teams in the tournament were Nepal, Malaysia, and Japan. The game was included for the first time in the Asian Games in Beijing in 1990 where seven teams took part.

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

The socio-psychological concept of **self-confidence** relates to self-assurance in one's personal judgment, ability, power, etc.Self-confidence in sports relies primarily on the athlete's ability to believe he can win and that he can be successful in his efforts. Consultants at the United States Tennis Association report that self-confidence is one of the most important attributes an athlete can possess and should be fostered by both athletes and their coaches.

Method:.

The sample for the present study consists of 20 Male Kabbadi Players and 20 Wreslters of Aurangabad. To assess the self confidence the Researcher has prepared his own Questionnaire through the Pilot Study.That test consists of 30 items, each item 'YES' 'NO' type alternatives. This Questionnaire were given Kabbadi Players and Wrestlers to write separately in different groups.

Results and Discussion:

The Results of the Study shows that Kabbadi Players are having more confidence than Wrestlers.

Mean Values of Kabbadi Players and Wrestlers

Variables	Group	Number of subjects	Mean
Self Confidence Inventory	Kabbadi Players	20	25.60
	Wrestlers	50	20.32

Conclusion:

It is concluded that Kabbadi Players are having more self confidence than Wrestlers Hence it is recommended that Psychological Training must be included in the Coaching Program in sports for development of Self Confidence among sports persons. Self confidence is the main psychological variable for key to success in sports and games.

Recommendations:
Similar Studies can be conducted on Women sports persons and other sports and games.

References:
Wikipaedia,Kabbadi and Wrestling
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Effect of Pranayama and Suryanamaskar on Pulmonary Functions in LLB (5YDC) Students Of University College of Law Osmania University

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Abstract
Pranayama Improved lung functions in numerous Studies. Yoga involve isometric contraction and improves skeletal muscle strength. Yoga training improves the strength of expiratory as well as inspiratory muscles. The present study is planned to find the effect of pranayama on pulmonary functions in LLB (5YDC) students. Pranayama helps in bringing the sympathetic and parasympathetic nervous system into harmony. Through breathing we can influence the nervous system. Pranayama may allow bronchio-dilatation by correcting abnormal breathing patterns & reducing muscle tone of respiratory muscles Yoga training improves the strength of expiratory as well as inspiratory muscles. Bhastrika Pranayama is a bellows type breathing in which one breath forcefully and rapidly and thus, exercises inspiratory as well as expiratory muscles .In breathing exercises like Kapalbhati, short powerful strokes of exhalation in quick succession with contraction of abdominal and diaphragmatic muscles train the subject to make full use of diaphragm and abdominal muscles in breathing.
Keywords: BHT, ERV, PEFR, Pranayama, Pulmonary functions, Surya namaskar,TV, 30minuts endurance, VC

Introduction

The word yoga means 'union': union of mind, body and spirit - the union between us and the intelligent cosmic spirit of creation- 'the oneness of all things' So pranayama literally, "control of prana" isn't just breathing exercises. Through pranayama, you use the breath to affect the constellation of energy that is your body mind.

Prana - "life force" or "life energy"
Yama - "discipline" or "control"
Ayama - "expansion", "non-restraint", or "extension

The five principles of yoga are relaxation, exercise (asanas), pranayama (breathing control), nourishing diet, and positive thinking and meditation, pranayama are yogic breathing techniques that increase the capacity of lungs. Pranayama which is control of inspiration and expiration The inspiration of prana-vayu is shwasa and expiration is prashwasa and cessation of both is characteristic of pranayama.Pranayama improves overall performance of the body. The regular practice of pranayama increases chest wall expansion and almost all lung functions. The beneficial effect of different pranayama is well reported and has sound scientific basis. Pranayama makes efficient use of abdominal and diaphragmatic muscles and improves the respiratory apparatus. Yoga strengthens the respiratory musculature due to which chest and lungs. inflate and deflate to fullest possible extent and muscles are made to work to maximal extent.

Yoga strengthens the respiratory musculature due to which chest and lungs inflate and Deflate to fullest possible extent and muscles are made to work to maximal extent. Abdominal breathing uses the diaphragm and performs respiration with least effort. While, chest breathing utilizes intercostals muscles.It is less efficient. With the regular practice of breath holding the individual's central and peripheral chemoreceptor's gets adapted to the anoxia, this result is achieved by the body by causing hypo metabolism. Thus, reflecting as prolonged breath hold and decreased urge to breathe while doing so. In addition to this, the training of the stretch receptors in the respiratory muscles, chest wall and also walls of the alveoli support the breath holding Pranayama training causes an increase in the voluntary breath holding time.

Objectives of The Study

Effect of pranayama on pulmonary functions in adults has already been studied by various researchers. This study is done to find out the significant increase in respiratory functions in LLB (5YDC) students under pranayama training. The primary purpose of this exploratory analysis is to study the importance of pranayama & surya namaskar on pulmonary functions.

Materials and Methods:

This study is conducted on 60 students doing LLB(5YDC) lst year. Consent form has been taken from them. They have been given yoga training 30 min daily for 2 mnth under the guidance of a trained yoga instructor. Vital capacity (VC), Tidal volume (TV), Expiratory Reserve volume (ERV), Breath holding time (BHT), 40 mm endurance, Peak expiratory flow rate (PEFR) are measured before & after yoga training.

Sixty LLB(5YDC0 students under the age 16-18 years from University college of Law Osmania University Hyderabad were involved in this study under voluntary basis. The study was performed after obtaining approval from the institutional ethical committee and informed consent from all the subjects. Students who had already undergone yoga training, smokers and alcoholics, students with any disorders, students who had undergone any surgery are abstained from this study. This study was conducted in the Department of Physiology. They were given yoga practice for two months. They were instructed to do yoga for 30 min daily under the guidance of a trained yoga instructor. Parameters such as Vital Capacity (VC), Tidal Volume (TV), Expiratory Reserve Volume (ERV), Breath Holding Time (BHT), 30 mm endurance, Peak Expiratory Flow Rate (PEFR) were assessed before and after two months of yoga training. The parameters were measured using Spiro meter and Wright's expiratory flow meter. The results were compared using student's paired t test. SPSS software is used for all statistical analysis.

Nadisuddi: Close the right nostril with the right thumb. Now inhale slowly through the left nostril and fill your lungs. After inhalation, close the left nostril with ring finger of right hand. Open the right nostril, exhale slowly. After complete exhalation, again inhale through right nostril and close it with right thumb. Open the left nostril , breathe out slowly. This is one round of Nadisukthi Pranayama. Students were given Nadisuddi training for 5 mins daily for two months .

Kapalbhati: Kapalbhati Pranayama is a type of breathing exercise that helps you rid of various ailments over a period of time. apal" means forehead and "bhati" means shining. Kapalabhati is done in a sitting posture. Focus on "exhaling". Inhale as normal. Exhale and simultaneously contract the abdomen muscles with each exhalation. Students were given Kapalbhati training for 5 mins daily for 2 months.

Bhastrika: Bhastrika is a Sanskrit word which means bellows. In Bhastrika pranayama, the breathing pattern resembles the blowing of bellows. Bhastrika pranayama is all about inhaling and exhaling completely so that your body gets maximum amount of oxygen. Students were given Bhastrika training for 5 mins daily for 2 months.

Bramhari: The word "Bramhari" comes from the Sanskrit name bhramar which is humming black bee. The practice of bramhari breathing calms the mind, reduces the stress or fight - flight response. In this pranayama one needs to create a sound while exhaling and inhaling in the throat. The sound is similar to chanting of Om, especially the long mmm. in Omkar. The sound should be deep, steady and smooth. Students were given Bramhari training for 5 mins daily for 2 months.

Pranava Pranayama: The Pranava is the full cosmic Om (or AUM), represented as the three distinct vibratory sounds of 'A' (ah), 'U' (oh) and 'M' (mm). The 'Ahh' sound originating from the solar plexus is related to lower lung breathing. The 'Ohh' sound originating from the chest region corresponds to mid-chest breathing. The 'Mmm' sound, as it moves upward and transcends its auditory character is associated with upper lung breathing. Students were given Pranava Pranayama training for 5 mins daily for 2 months.

Surya Namsakar: Surya Namaskar has a deep effect in detoxifying the organs through copious oxygenation and has a deeper relaxing effect. It is a series of 12 physical postures.These alternating backward and forward bending postures flex and stretch the spinal column giving a profound stretch to the whole body. Students were given Surya Namaskar training for 3 mins daily for 2 months.

Conclusion

Yoga practice can be advocated to improve pulmonary functions in healthy individuals and hence to prevent respiratory diseases in future After 2 months of yoga training, the readings of VC, TV, ERV, BHT, 30mm endurance, PEFR show significant increase. From the present study we may conclude that yoga practice can be advocated to improve pulmonary functions in healthy individuals and hence to prevent respiratory diseases in future. These benificial effect of pranayama can be used as an adjuvant therapy for many respiratory diseases. The daily practice could also be parts of physical fitness and life style modification programs in maintaining better physical and mental health. Hence, it can be said that pranayama improves respiratory breathing capacity by increasing chest wall expansion and forced expiratory lung volumes.

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Comparison of Explosive Power among Wushu Players and Taekwondo Players of Osmania University

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Abstract
The Purpose of the study is to find out the Explosive Strength among Wushu Players and Taekwondo Players of Osmania University . The Sample for the Study consists of 10 Wushu Players and 10 Taekwondo Players participated in the OU Inter College Athletics Championships for the year 2016-2017. To assess the explosive power the Standing Broad Jump Test is conducted by the Technical Officials of Athletics. The results of the study shows that the Taekwondo Players are good in Explosive Power and than wushu Players.
Key words: explosive power, wushu , Taekwondo etc.

Introduction:

Wushu is both an exhibition and a full-contact sport derived from traditional Chinese martial arts. developed in China after 1949, in an effort to standardize the practice of traditional Chinese martial arts, Competitive wushu is composed of two disciplines: taolu and sanda Sanda called sanshou is a modern fighting method and sport influenced by traditional Chinese boxing, Chinese wrestling methods called Shuai jiao and other Chinese grappling techniques such as Chin Na. It has all the combat aspects of wushu. Sanda appears much like Kickboxing or Muay Thai, but includes many more grappling techniques. Sanda fighting competitions are often held alongside taolu or form competitions.

Taekwondo is a Korean martial art, characterized by its emphasis on head-height kicks, jumping and spinning kicks, and fast kicking techniques.Taekwondo was developed during the 1940s and 1950s by various martial artists by incorporating indigenous Korean martial arts traditions such as Taekkyeon, Subak, and Gwonbeop, with foreign elements of karate and kung fu.

Taekwondo fight

Wushu fight(sanshou)

Methodology:

The sample for the present study consists of 10 Male Wushu sanshou Players and 10 Male Taekwondo Players of Osmania University those who participated in the OU Inter College Athletics Championships for the year 2016-2017. To assess the explosive power the Standing Broad Jump Test.

Standing Broad Jump:
The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power.
purpose: to measure the explosive power of the legs
equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The takeoff line should be clearly marked.
procedure: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards.
Scoring:The measurement is taken from take-off line to the nearest point of contact on the landing (back of the heels). Record the longest distance jumped, the best of three attempts. attempts are allowed.

Results and Discussion:
The results of the study shows that the Taekwondo Players are good in Explosive Power Compare to Wushu Players

Table I showing the Mean values and Independent Samples Test of Standing Broad Jump between Taekwondo Players and Wushu Players

Variables	Group	Mean ± SD	t	P - Value
Standing Broad Jump	Taekwondo Players	2.31 ± 0.157	3.55	0.001
	Wushu Players	2.27 ± 0.159		

*Significant at 0.05 level

In Table –I the Mean Values of Taekwondo Players in Standing Broad Jump is 2.31 and Wushu Players is 2.27. Hence the Taekwondo Players are having good explosive Power compare to Wushu Players.

Conclusions:

It is concluded that the Taekwondo Players are good in Explosive Power because they require good jumping ability to hit the opponents in the fight.Explosive power is vital in Taekwondo to kick fast and also for blocking and punching.

Recommendations:
Similar Studies can be conducted among females and in other Sports and games.
References:
Wikipaedia wushu and Taekwondo
www.topendsports

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Traditional Sports of India

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Introduction:

Ball badminton is a sport native to India. It is a racket game, played with a yellow ball made of wool, on a court of fixed dimensions (12 by 24 metres) divided by a net. The game was played as early as 1856 by the royal family in Tanjore, the capital of Thanjavur district in Tamil Nadu, India. It enjoys the greatest popularity in India. Ball badminton is a fast-paced game; it demands skill, quick reflexes, good judgment, agility, and the ability to control the ball with one's wrist. Games are usually played outdoors during the day. As a result, weather conditions wield a considerable influence, and ball badminton's rules allow the effects of weather conditions to be distributed more-or-less evenly between both teams.

Kabaddi is a contact sport that originated in ancient Indian Subcontinent. It is known by its regional names in different parts of the subcontinent, such as *Kapaddi* or "Chadukudu" in Tamil Nadu*. Kabaddi* in Karnataka, Telangana, *hadudu* in Bangladesh, *bhavatik* in Maldives, *kauddi* in the Punjab region and *chedugudu* in Andhra PradeshKabaddi is an ancient game played in many parts of India. The mention of the sport dates back to ancient times and is traced in Indian mythology. Generally, raiders are considered as bulls who play against the defenders. The essence of the game is the holding of the raiders by the defenders The first Asian Kabaddi Championship was held in 1980 and India emerged as champion, beating Bangladesh in the final. The other teams in the tournament were Nepal, Malaysia, and Japan. The game was included for the first time in the Asian Games in Beijing in 1990 where seven teams took part. At Present in 2016 India is World Champion in Kabbadi beating Iran. Korea secured the third place

Pehlwani is a form of wrestling from the Indian Subcontinent. It was developed in the Mughal Empire by combining native malla-yuddha with influences from Persian koshti pahlavani. The words pehlwani and kushtiderive from the Persian terms pahlavani and koshti respectively.A practitioner of this sport is referred to as a pehlwan while teachers are known as ustad. Many southern Indian practitioners of traditional malla-yuddha consider their art to be the more "pure" form of Indian wrestling, but most South Asians do not make this clear distinction and simply view kushti as the direct descendent of ancient malla-yuddha, usually downplaying the foreign influence as inconsequential.The ancient South Asian form of wrestling is called malla-yuddha. Practiced at least since the 5th millenniun BC, predating the Indo-Aryan invasions, and described in the 13th century treatise Malla Purana, it was the precursor of modern kushti. In the 16th century, northern India was conquered by the Central Asian Mughals, who were of Turko-Mongol descent. Through the influence of Iranian and Mongolian wrestling, they incorporated groundwork to the local malla-yuddha, thereby creating modern kushti. Babur, the first Mughal emperor, was a wrestler himself and could reportedly run very fast for a long distance while holding a man under each arm. Mughal-era wrestlers sometimes even wore bagh naka on one hand, in a variation called *naki ka kushti* or "claw wrestling. In the more recent past, India had famous wrestlers of the class of the Great Gama of British India and later Pakistan, after partition and Gobar Goho. India reached its peak of glory in the IV Asian Games in 1962 when all the seven wrestlers were placed on the medal list and in between them they won 12 medals in freestyle wrestling and Greco-Roman wrestling. A repetition of this performance was witnessed again when all the 8 wrestlers sent to the Commonwealth Games held at Kingston, Jamaicahad the distinction of getting medals for the country. During the 60s, India was ranked among the first eight or nine wrestling nations of the world and hosted the world wrestling championships in New Delhi in 1967. The conditioning exercises of pahlavani have been incorporated into many of the conditioning aspects of both catch wrestling and shoot wrestling, along with their derivative systems. These systems also borrow several throws, submissions and takedowns from kushti.

Tennikoit, also called ring tennis or tenniquoits, is game played on a tennis-style court, with a circular rubber ring ("tennikoit", c.f. the game quoits) hurled over a net separating the two players, with each endeavoring to catch and return the hurled ring into the opponent's court.The game is particularly popular in Germany, South Africa, Brazil, and the Subcontinent nations of India, Pakistan, and Bangladesh.

Mallakhamba or Mallar Kambam is a traditional Indian sport in which a gymnast performs feats and poses in concert with a vertical wooden pole or rope. The word also refers to the pole used in thesport.Mallakhamba derives from the terms *malla*/*mallar* which denotes awrestlerand *khamba*/*kambam* which means a pole. Mallakhamba/Mallar Kambam can therefore be translated to English as "pole gymnastics". On April 9, 2013, the Indian state of Madhya Pradesh declared mallakhamba as the state sport.

Other Traditional Sports
Chaturanga (Chess),Gilli Danda,Atyapatya etc

References:
Wikipaedia, Ball Badminton, Mallakhamb,Tennikoit, Phelwani,Kabbadi etc

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Cricket – A famous Game of India

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Introduction

Cricket is the most popular sport in India. It is played by many people throughout the country. The Indian national cricket team won the 1983 Cricket World Cup, the 2007 ICC World Twenty20, the 2011 Cricket World Cup, the 2013 ICC Champions Trophy, and shared the 2002 ICC Champions Trophy with Sri Lanka. Domestic competitions include the Ranji Trophy, the Duleep Trophy, the Vijay Hazare Trophy, the Deodhar Trophy, the Irani Trophy and the NKP Salve Challenger Trophy. In addition, BCCI conducts the Indian Premier League, a Twenty20 competition

India is a multi-sporting nation where a variety of games are played on a daily basis. Football, hockey, badminton, tennis are the mainly followed and played. Out of these cricket holds the majority share, both in terms of man following and playing numbers.

Why Cricket is famous in India

1.To play the game of cricket, you just need a bat and a ball and a minimum of two players can easily play the game. It can be played even in the smallest of smallest dimensions, like a road, a street ally or even in a room! in India the sport is so horribly popular amongst kids that they frequently play 'gully cricket' even in most congested streets! Compared to other sports, cricket has more number of coaching centers' in the entire country.

2. This factor is hugely responsible in drawing more and more young children, who aspire to be future cricketers. Similarly, almost in each and every state there is at least one world class cricket stadium present whereas if we take a peek into football and hockey, there are only a few FIFA accredited stadiums and genuine astroturfs respectively, present in India.India till now has won two ICC Cricket World Cups, two Champions Trophies, one T20 World Cup.

3.Moreover, with years India's performance in the cricketing arena has improved remarkably which undoubtedly makes India a reckoning force in today's cricketing fraternity. India over the years have produced a bunch of world class cricketing legends who at some point or the other have taken the cricketing world by storm. Batsmen, bowlers, all-rounders, captains consisting the likes of Kapil Dev, Sachin Tendulkar, Mahendra Singh Dhoni, Sourav Ganguly, Yuvraj Singh, Virat Kohli to name a few. Their pictures and posters are pasted over walls and are idolized by numerous boys and girls. Cricket in India is governed by BCCI, which is an efficient, rich, well-organized and systematic council. The BCCI, over the years have taken several constructive steps to protect and prosper the cricketing interests of India. It has been highly successful in establishing itself as a dominant body in world cricket.Money and cricket have almost become synonymous.

4.Cricketers in India have always been the richer breed of sportsmen compared to their peers. Be it the salary, prize money or government initiatives. The cricketers have always been ahead in the money race. With the advent of IPL, it was just another opportunity for them to get even richer. Cricket is that sport in India which always has attracted a wide range of sponsors and advertisements as its the mostly viewed game. Even cricketers have made fortunes for themselves by endorsing several products and appearing in numerous commercials. Ever wondered why this happens in cricket and not in any other sport? In 2008, when Lalit Modi first introduced this T20 extravaganza, it instantly became a huge sensation. Since then IPL has proved to be a game changer as well as a great money-spinner in the sporting history of the country. All the best cricket players from the world assembled in India to play this elite competition. Moreover it gave the platform to the relatively unknown players to become a hero. And the amount of money and glamour involved in the competition, would draw any budding cricketer towards itself. The IPL has amplified the popularity of cricket to a gigantic level amongst the Indians as for now every budding cricketer wants to be a part of the greatest cricket show on earth.

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6.Cricket is considered as a religion in India.

References

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