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Effects Of Aerobic Exercise Programme On Different Terrains On Blood Pressure And Total Cholesterol

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Abstract
The purpose of the present study was to find out the effect of aerobic exercise programme on different terrains on blood pressure and total cholesterol among middle aged women. For this purpose, thirty middle aged women residing at various places around Chennai city, Tamilnadu, were selected as subjects. The age of the subjects were ranged from 35 to 45 years. They were divided into three equal groups, each group consisted of ten subjects, in which experimental group - I underwent aerobic exercise as brisk walking on beach sand, experimental group - II underwent aerobic exercise as brisk walking on grass and group - III acted as control that did not participate in any special activities apart from their regular day-to-day activities. The training period for the study was five days (Monday to Friday) in a week for twelve weeks. Prior and after the experimental period, the subjects were tested on systolic and diastolic blood pressure and total cholesterol. Systolic and diastolic blood pressure was assessed by using sphygmomanometer. Total cholesterol was tested after taking 5 ml of blood samples by venous puncture method, using CHOD-POP method, recommended by Katterman *et al* [1984]. The Analysis of Covariance (ANCOVA) was applied to find out any significant difference between the experimental groups and control group on selected criterion variables. The result of the study shows that the brisk walking on beach sand group and brisk walking on grass group were decreased the blood pressure and total cholesterol significantly. It was concluded from the results of the study that brisk walking on beach sand and brisk walking on grass has bring positive changes in systolic and diastolic blood pressure and total cholesterol as compare to the control group. Moreover it was also concluded that there was no significant difference was found between the experimental groups in all criterion variables.
Key words: Brisk walking on beach sand, Brisk walking on grass, blood pressure etc

Introduction

Aerobic exercise is a kind of physical exercise which improves the efficiency of the cardiovascular system in absorbing and transporting oxygen. Aerobic means, relating to, involving or requiring free oxygen [**Cooper, Kenneth H.** (1997)] and it also refers the use of oxygen to adequately meet energy demands during exercise through aerobic metabolism.[**McArdle; Katch and Katch** (2006)].

The most available and simplest aerobic exercise is walking. Everyone can walk almost anywhere such as outdoors or indoors like malls, treadmill etc. This makes walking easy to continue throughout the year. The first and good choice for starting any exercise programme is walking.

Walking is good for the muscles because all the muscles in our body contract at the time of walking. We might feel a little pain when we start off because our body is not in the habit of exercising.[Meghna Mukerjee, "The Many Benefits of Walking", [2014]] Regular walking of a moderate to vigorous intensity has been shown to benefit both cardiovascular and psychological health.[Morgan A, Tobar D and Snyder L, (2010)] Psychological benefits include improved sense of well-being, more positive (i.e., vigor) and less negative (i.e., tension, depression) feelings and mood states and enhanced self-esteem.[Barton J, Hine R and Pretty J, (2009), Biddle S and Mutrie N, (2008)].

Hypertension is a major health problem. Elevated systolic and diastolic blood pressure levels are associated with a higher risk of developing coronary heart disease (CHD), congestive heart failure, stroke and kidney failure. There is a one-fold increase in developing these diseases when blood pressure is 140/90 millimeters of mercury (mm Hg).[Bouchard C and Despres JP, [1995)]

Aerobic exercise can reduce the amount of fat in the body. According to the National Federation of Personal Trainers Endurance Specialist Manual, 65 % to 95% of the calories from the body's fat stores, can burn during the aerobic exercise

Methodology

Thirty middle aged women from various places around Chennai city, Tamilnadu were selected as subjects. The age of the subjects were ranged from 35 to 45 years. The selected subjects were divided into three equal groups, each group consisted of ten subjects, in which group - I (n = 10) underwent brisk walking on beach sand, experimental group - II (n = 10) underwent brisk walking on grass and group - III (n = 10) acted as control, which did not participate in any special activities apart from their regular curricular activities. The two different training programmes were conducted five days (Monday to Friday) per week for twelve weeks. The researcher consulted with the yoga experts and selected the following variables as criterion variables: 1. Systolic blood pressure, 2. Diastolic blood pressure and 3.Total cholesterol. Systolic and diastolic blood pressure was assessed by using sphygmomanometer and total cholesterol was estimated by using CHOD-POP method, recommended by Katterman *et al* [1984]. For the purpose of collection of data, the subjects were asked to report at early morning, one day prior and one day after experimental period, in fasting condition. 5 ml of blood was collected from each subject by venous puncture method and the blood thus collected was stored in small bottles for pre and post-test for measuring the total cholesterol.

Analysis of covariance (ANCOVA) was applied to find out the significant difference if any, among the experimental groups and control group on selected criterion variables separately. In all the cases, .05 level of confidence was fixed to test the significance, which was considered as appropriate.

Results

The data collected on systolic blood pressure and total cholesterol among experimental and control groups were analyses and the results were presented in Table – I.

Table - IAnalysis Of Covariance On Selected Criterion Variables Among Exercise Groups And Control Group

Variable Name	Group Name	Brisk Walking on Beach Sand Group	Brisk Walking on Grass Group	Control Group	'F' Ratio
Systolic Blood Pressure (mmHg)	Pre-test Mean ± S.D	134.2 ± 6.14	133.0± 7.44	131.8± 6.63	0.315
	Post-test Mean ± S.D.	132.2 ± 6.13	131.9 ± 7.61	133.2 ± 5.83	0.107
	Adj. Post-test Mean	131.062	131.90	134.338	12.71*
Diastolic Blood Pressure (mmHg)	Pre-test Mean ± S.D	89.2 ± 3.994	88.9 ± 4.99	87.9 ± 4.41	0.230
	Post-test Mean ± S.D.	86.8 ± 4.32	87.8 ± 5.03	89.5 ± 3.54	0.991
	Adj. Post-test Mean	86.33	87.594	90.175	11.42*
Total cholesterols (mg/dl)	Pre-test Mean ± S.D	218.3 ± 7.21	219.1 ± 6.19	219.8 ± 9.55	0.093
	Post-test Mean ± S.D.	215.8 ± 6.62	215.5 ± 6.99	222.9 ± 8.77	3.102
	Adj. Post-test Mean	216.508	215.469	222.224	24.538*

*Significant .05 level of confidence. (The table values required for significance at .05 level of confidence with df 2 and 42 and 2 and 41 were 3.22 and 3.21 respectively).

Table – I shows that pre and post test means 'f ratio of brisk walking on beach sand group, brisk walking on grass group and control group on systolic blood pressure were 0.315 and 0.107, which were insignificant at 0.05 level of confidence. The adjusted post test mean 'f' ratio value of experimental groups and control group was 12.71, which was significant at 0.05 level of confidence.

The pre and post test means 'f ratio of brisk walking on beach sand group, brisk walking on grass group and control group on diastolic blood pressure were 0.230 and 0.991, which were insignificant at 0.05 level of confidence. The adjusted post-test mean 'f' ratio value of experimental group and control group was 11.42, which was significant at 0.05 level of confidence. The pre and post test means 'f ratio of brisk walking on beach sand group, brisk walking on grass group and control group on total cholesterols were 0.093 and 3.102 which was insignificant at 0.05 level of confidence. The adjusted post test mean 'f' ratio value of experimental groups and control group was 24.538, which was significant at 0.05 level of confidence. Further which of the paired Further to determine which of the paired means has a significant difference among the groups, the Scheffé *S* test was applied.

Table - II

Scheffĕ S Test for the Difference Between the Adjusted Post-Test Mean of Selected Criterion Variables

Adjusted Post-test Mean on Systolic Blood Pressure				
Brisk Walking on Beach Sand Group	Brisk Walking on Grass Group	Control Group	Mean Difference	Confidence interval at .05 level
131.062		134.338	3.276*	1.733405
131.062	131.90		0.838	1.733405
	131.90	134.338	2.438*	1.733405
Adjusted Post-test Mean on Diastolic Blood Pressure				
Brisk Walking on Beach Sand Group	Brisk Walking on Grass Group	Control Group	Mean Difference	Confidence interval at .05 level
86.330		90.175	3.845*	2.111678
86.330	87.594		1.264	2.111678
	87.594	90.175	2.581*	2.111678
Adjusted Post-test Mean on Total Cholesterol				
Brisk Walking on Beach Sand Group	Brisk Walking on Grass Group	Control Group	Mean Difference	Confidence interval at .05 level
216.508		222.224	5.716*	2.690995
216.508	215.469		1.039	2.690995
	215.469	222.224	6.755*	2.690995

* Significant at .05 level of confidence.

Table – II shows that the Scheffĕ *S* Test for the difference between adjusted post-test mean on systolic blood pressure of brisk walking on beach sand group and control group (3.276) and brisk walking on grass group and control group (2.438), which were significant at .05 level of confidence. There was a significant difference on diastolic blood pressure between brisk walking on beach sand group and control group (3.845) and brisk walking on grass group and control group (2.581) and also there was a significant difference on total cholesterol between brisk walking on beach sand group and control group (5.716) and brisk walking on grass group and control group (6.755) which was significant at 0.05 level of confidence after the respective training programme. Moreover the result of the study shows that there was no significant difference between the training groups on selected criterion variables.

Conclusions

There was a significant reduction in blood pressure for walking on sand group and walking on grass group when compared with the control group. The result of the study also shows that there was no significant difference between the training groups on blood pressure. Sohn, Hasnain and Sinacore (2007) found that walking with extra 30 minutes has reduced the blood pressure in hypertension patients after six months of trial. Stewart, *et al* (2006) found that there was a significant decrease in SBP and DBP after the aerobic exercise and resistance training.

In the present study, it was found that there was a significant reduction in total cholesterol, triglycerides and low density lipoprotein and a significant increase in high density lipoprotein for both the training groups when compared with the control group. Arazi, Farzaneh and Gholamian (2012) found that there was a significant change in TC, TGL, HDL and LDL in overweight sedentary females after the morning aerobic training. Rahimi *et al* (2013) found that there was a significant decrease in TC, TGL and LDL and a significant increase in HDL after the six weeks of walking on water and land among middle aged women.

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Effect of yoga on academic performance in relation to stress

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Abstract
Academic performance is concerned with the quantity and quality of learning attained in a subject or group of subjects after a long period of instruction. Excessive stress hampers students' performance. Improvement in academic performance and alertness has been reported in several yogic studies.The main objective of the study was to assess the effect of yoga on academic performance in relation to stress.The study started with 800 adolescent students; 159 high-stress students and 142 low-stress students were selected on the basis of scores obtained through Stress Battery. Experimental group and control group were given pre test in three subjects, i.e., Mathematics, Science, and Social Studies. A yoga module consisting of yoga asanas, pranayama, meditation, and a value orientation program was administered on experimental group for 7 weeks. The experimental and control groups were post-tested for their performance on the three subjects mentioned above.The results show that the students, who practiced yoga performed better in academics. The study further shows that low-stress students performed better than high-stress students, meaning thereby that stress affects the students' performance.

Keywords: Academic, performance, stress, yoga, yoga module

Introduction

Academic achievement is an attained ability or degree of competence in school task, usually measured by standardized tests and expressed in grades or units based on norms derived from a vide sampling of pupils' performance. Studies reveal that even low or moderate levels of stress can interfere with task performance Cognitive reactions of stress result in the inability to concentrate.

Yoga, which is a way of life, is characterized by balance, health, harmony, and bliss.Meditation, being part of yoga, which is the seventh limb of Ashtanga Yogaa state of alert rest as stated by Maharishi Mahesh Yogi, who founded a new technique of meditation, popularly known as transcendental meditation. By practicing yoga, a person is supposed to reach a state of mental equanimity, where responses to favorable or unfavorable external events are well under the individual's control, and responses are moderate in intensity. The science of yoga is a powerful stream of knowledge, which enables the practitioners to achieve radiant physical health, serene mind, continues spiritual uplift, and creates the ability for harmonious social living.Hatha yoga practices, like asanas (i.e., postures), pranayama (i.e., breathing practice intended to influence vital forces), kriyas (cleaning processes), mudras (i.e., certain interval attitudes), and bandhans (i.e., neuromuscular locks) are mostly taught as physical practices. While various meditational techniques work at the mental level, all these practices are intended to develop a certain type of awareness within oneself, which in turn brings about a change in emotional and visceral functions, and through them, a change in intellectual and somatic functions of the individual takes place.Six months of yogic practices (meditation, asanas, and pranayama) brings a feeling of well-being, a reduction in body weight, increased vital capacity, acceleration in endocrinal functions, and improvement in memory. Three months practice of Savasana has demonstrated an improvement in 86 patients, who had problem of headache, insomnia, and nervousness.Udupa revealed that yoga has the potential to influence the stress disorder and it helps the sufferer to achieve physical and metabolic stability. Sahasi has demonstrated the effectiveness of yogic techniques in the management of anxiety and reported increased attention/concentration.

Yoga through its techniques of meditation, asanas, and pranayama yields a positive effect in the management of stress in adolescents. The processing of sensory information at the thalamic level is facilitated during the practice of pranayamaand meditation. These two practices along with physical postures (asanas), cleansing practices, devotional sessions, and lectures on the theory and philosophy of yoga were focused to bring about an improvement in the steadiness of school students following 10 days of practice. This improvement was believed to be due to improved eye-hand coordination, attention, concentration, and relaxation.

In one study, it is found that a 4-week program of yogasanas and meditation lowers the aggressive behavior of students. Another study has reported that meditation (a) reduced problems related to maladaptive behaviors, (b) increased emotional and physical health and psychological well-being,(c) reduced the frequency of thought, (d) reduced substance abuse,(e) generally improved the quality of life.

Transcendental meditation reduces stress and improves academic performance. Chanting “Om” mentally causes increased alertness, and the practice of yoga brings improvement in competitive performance. The research done by Mind/Body Institute, Harvard Medical School, and Bruce D’ Hara and his team at the University of Kentucky in Lexington, U.S., revealed a positive influence of meditation on brain functioning and performance. The present study examines whether there is an effect of yoga on the academic performance of adolescent students in relation to their stress. With this background, the present study was conducted to find the following: (1) Is there any effect of yoga on the academic performance in Mathematics, Science, and Social Studies in relation to stress? (2) Is there any effect of yoga on the academic performance in the three subjects combined in relation to stress.

Materials And Methods

Subjects:-The study was conducted in eight public schools of Jalandhar, Punjab. Bisht Battery of Stress Scale (BBSS) was administered on 800 students of Class 9. The participants were 400 boys and 400 girls, with ages ranging from 14 to 15 years. BBSS was administered to identify two stress levels of the students, i.e., high stress and low stress. This test was developed for the measurement of 13 types of stress. Out of 13 scales, two scales, i.e., scale of academic stress and scale of achievement stress were selected. These scales were consisted of 52 and 80 items, respectively, which were 132 in total. Each item is of statement type (closed), to which students were to answer by ticking their option prescribed on the answer sheet. The students were assembled in a hall and made to sit in rows. Booklets containing statement items along with answer sheets were distributed to each student. Instructions were delivered by the investigator. Statements were written in Hindi. Meaning of difficult words was also explained. The students were told to finish their test within an hour.

The scoring was done as prescribed in the manual. On the basis of their stress scores arranged in ascending order, top 30% (i.e., 240) subjects were identified as students with low stress and bottom 30% (i.e. 240) students were identified as student with high stress. Out of these students, 50% of them were kept in experimental group and another 50% in control group. Finally 30% subject [high stress (exp) = 89 + low stress (exp) = 75 + high stress (control): 70 + low stress (control) = 67] were selected. Pretest was conducted in three subjects, i.e. Mathematics, Science, and Social Studies for both the groups. Ultimately, 301 subjects (116 girls and 185 boys) were selected for the present study.

Ethics

A code was provided to the students at the time of pretest to keep their personal identity closed. Their achievement scores were exclusively used for the research purpose and were not disclosed to their educational institutions. The project was approved by the Institutional Ethics Committee, and the signed informed consent was obtained from the school principal.

Assessments

Bisht Battery of Stress Scale was used to identify different levels of stress among the students, i.e., high stress and low stress. This was done before the start of experiment. Details of its administration ARE mentioned above under the heading “Subjects.”

Yoga module was used as an intervention treatment for the experimental group for an hour daily in the morning for 7 weeks.

Academic performance test was used as a pretest and posttest for the experimental as well as control groups to assess the effect of yoga module on the academic performance of the experimental group and to compare it with the control group, who never practiced yoga module.

Intervention

A yoga module [yogasana + pranayama + meditation + prayer + value orientation program] was shared daily for an hour in the morning with the experimental group for 7 weeks. Same academic performance test was administered on the both groups as a posttest.

Statistical analysis

To study an effect of yoga and stress on the academic performance, 2 × 2 factorial design (ANOVA) was employed on the gain scores of academic performance, wherein stress is a classificatory variable and is studied at two levels, i.e., students with high stress and students with low stress. Yoga module, taken as treatment variable, was given to the experimental group.

Discussion

The findings of this study reveal that the students who experienced yoga module performed better in overall academics as well as in their separate subjects than those students who did not experience yoga module. The results are in tune with the earlier studies, which found that meditation, practiced over long periods, produces definite changes in perception, attention, and cognition. Other study showed that yoga techniques are helpful in management of anxiety and improvement in concentration. Other researchers found that Transcendental Meditation improves academic performance and enhances problem-solving ability.Hows that the students with high stress performed better in the subjects of Social Studies and Science. This result is in tune with the inverted U-shape model of stress and learning, which explains that at first, performance improves as stress increases presumable because the stress is arousing or energizing. Beyond some point, though stress becomes distracting and performance actually drops as depicted.

Further the findings reveal that excessive stress affects overall academic performance negatively, and this result is in tune with the earlier studies, which conclude that excessive stress is harmful to academic performance and may lead to dropping out. Research has demonstrated that high levels of stress can lead to hyper vigilance (inability to focus attention) as arriving at a solution too quickly (premature closure).Higher levels of stress reduced grade point average (GPA) among 146 college men and led to increased psychological and somatic symptomology.When stress is perceived negatively or becomes excessive, students experience physical and psychological impairment. Stress overloads our mental and physical resources and interferes with the effective use of our skills, and thus, affects negatively on the performance. Moreover, when academic performance in individual subjects was analyzed, the performance was comparable in high stress and low stress groups, but having values very close to significant values. It may be concluded from the finding of the study that with the intervention of yoga, academic Performance improves by optimizing the stress levels. So it is suggested that yoga module should become a regular feature in the schools.

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Sports Need assessment of Tehran Firemen with Management Procedure

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Abstract
The general aim of this research was to find firemen's sports needs of Tehran city with management procedure and based on stated needs of firemen. Research method was descriptive and metrical kind. Research universe includes all firemen of Tehran city that were 4500 people. Morgan and Korsi table were used for selecting sample volume and 351 people were selected as the volume of statistical sample and it was based on clustering sampling method. Research tool was questionnaire made by researcher and comments of experts, sports management professors and sports managers of fire department were used for determining fluidity of questionnaire. Permanency of questionnaire was calculated 82% with using Cronbach Alpha coefficient. The results showed that sports needs of firemen were swimming, physical fitness, volleyball and mountain climbing. The purpose of these sports activities was feeling health and happiness, reducing stress and anxiety while confronting to disasters or events and increasing profession exploitation. The methods of enhancement morale so as to participate in sports activities include cases such as setting sports-recreational trips, performing sports activities with family and establishing sports-educational classes. The lack of experienced coach, unsuitable costs, tiredness from sports activities and participation barriers in sports activities were mentioned.
KeywordsSports Need Assessment, Firemen, Sports Participation, Participation Barriers

1. Introduction

Decreasing movement (or movement poverty) is the characteristics of modern world that has created due to development in technology and mechanized life and different jobs. This great evolution is the most important problems of today's human from perspective of health and safeness. Little movement causes problems such as increasing weight, blood pressure, heart and vessel diseases, health and therapy expenses, muscle erosion, decreasing respiratory- heart fitness, physical and morale exhausted and etc. human being is a multi-dimensional creature and has different needs (Ghaderzadeh, 2012). Health and dynamic manpower is one of the fundamental axes of development in different societies that is important in body and mind health, ability to creativity, innovation and applying different tools for achieving the aims of society. In today's comparative world, human is one of important means for creating organization evolution and survival and achieving to aims ideals. Human sources warrant evolution and organization survival. Human role in organization and attitude kind toward him will be effective in success or failure of organization (Hashemi, 2011). Many methods of life have been modified in such a way that sessions in a week are devoted to sports activities. This social procedure and guideline has lead to increase in attention and interest of people in creating and developing knowledge and expert information about various effects of physical activity and exercise for individual fitness and his health. The effect of activity and physical fitness can increase life (age). Organizations found sport as an effective action in happiness of manpower and deals to this affair with correct planning according to staff's sports need so that they can have exploitive organization. Need assessment is one the most important concepts in education and social services and is an analysis that locates two polar situations: present situation (where we are), ideal situation (where we should be) (Fathi and Ejargah, 2006). Need assessment is applying techniques that can help to collect suitable information about needs and achieve to needs pattern and individual, group and society demands (Summers, 1987).

Based on what united Way of America (UWA) has published, need assessment is a process of collecting and analyzing information for decision making about sources allocation to determine services and goods that are necessary based on standards and public agreement. Need assessment advantage is that moves away guess, doubt, comment and interpretation from available information about needs and clarifies changes that are emerged in life pattern of people's behavior (Babaie, 2007).

Need assessment is a system-oriented process for determining aims, locating the distance between present status and aims and defining preferences for action (Badri Azarin, 2012). Need assessment is important as a means for developing in society but its performance is expensive. Need assessment can define non secured needs of society, be a document for supporting options and increase public corporation in policy making. If Need assessment performs correctly, it can be either a process or a method. As a process, it can create leadership and group cohesion and participation sense in society. Need assessment as a method helps plans and performance of immediate strategies in advised fields. Firms' decisions about staff's health are made with the purpose of saving in therapy costs and losses that cause from absence from work and desired efficiency of staff. So investment in preventing from damages and staff's diseases is more important. Performing these decisions needs investment and need assessment will be the best way for assuring from this investment. Sports Need assessment and physical activity is the first step for guarantying that sports projects meet individual needs. With doing a suitable sports need assessment is possible that is paid attention to these projects and has profits for groups. Holding each program including sports programs needs to recognize available conditions and needs of that society. Sports need assessment has been defined as a process of collecting and analyzing information from sports needs stated by individuals, groups and societies. The aim of physical education as a branch of educational sciences is to present different education services to people that is the first step in sports planning for presenting sports fields and recognizing society's needs (Johnston, 2008). On other hand, now sport and physical activities as a social phenomenon liable to studying and thinking, has acquired prominent place in local and world level. In social space, places and in collective life, moments have been marked with sport. Developing public sports like developing sports clubs, creating health stations in public places such as parks, walkways and so on as well as spending time for sport during the week by people in recent years is a sign of people's attention to body and mind health in urban society (Gholipour et al, 2013). In a research with title of sports need assessment of staff's Mobarekeh cementite institution and presenting functional methods that has been performed on 346 people by Lotfi (2009), the following results were acquired: Sports needs of staff were swimming, mountain climbing, football and bodybuilding. Participants stated their aims to participate in sports activities as follow: Removing tiredness and pressure from work, increasing job exploitation, enhancement morale, fitness and health and happiness feeling. Participation barriers in sports activities are: time shortage, not accompanying with anybody, far distance to sports places and so on.

Gholipour et al (2013) in a research titled studying needs and youth exploitation rate of social, cultural and sports activities and programs of Tehran city showed that 31.2% of youth exercises every day and 16.15% never exercises. 56.5% from who exercise deal to sports alone and youth have more tendency to swimming, football and aerobic than other sports. 40.7% of reasons for not exercising refer to external problems such as lack of facilities and not accessibility and high costs and 59.3% of reasons concern to individual as not attempting, personal problems and lack of interest. Results confirm that pool, versatile saloon and sports assemble, natural and artificial grass land, Alzahra sports assemble (for women), library, skate land and open land are facilities that youth confirms their necessity. Studying several researches about individual's participation barriers in sports activities shows that time shortage, facilities shortage, being busy, laziness and impatience are the most important individual's participation barriers in physical activities (El-Gilany et al (2011); Lavl et al (2010); Gomez et al (2010). Salimi et al (2013) in a research titled prioritizing private firms' financial support development barriers from championship sports based on summation of results of methods MADM with using integrative technique POSET showed that prioritization was given to economical barriers among six barriers for developing financial support of private firms from championship sport and among its subsets, not accessing to new market and lack of more relationship between firms and present customers through financial support were the most important barriers. In a research titled sport and sport and physical activity that was done on 26788 people throughout united Europe at 2009, these results have acquired: 40% of participants exercise at least one session in a week. Men participate more in sports activities than women. On average, the rate of exercising decreases with increasing age. The first reason for exercising is improving health. Physical fitness and entertainment are in next ranks.

The most important reason for not exercising is time shortage. Most responders exercise in parks and spaces that aren't devoted to sport. 8% responders also exercise in their work place. In a research titled evaluating physical fitness related to profession that was performed on some firemen in America was shown that fire department is one of the most important job situations related to body fitness and facing with risks (adventures). Injuries, diseases and death from this profession have defined fire department as the most dangerous jobs in the world. The events that firemen face to can cause cancer, respiratory and heart sick in longtime. Eye damages, inspiriting dangerous materials, muscle bound and burnt are the most popular damages. The results of this research showed that firemen must have high aerobic capacity, low fat, muscle power and strength with flexibility. So physical fitness will be an important aspect in decreasing injuries from work pressure and disease (Faiyaz, 2005).

Fire department is the name of an institute, organization, private or public unit that its duty is fighting with fire and other events. In some countries including Iran, fire department duty isn't only fighting with fire. For example Tehran's fire department and security services have identified its duty as follow:
Controlling any fire
Rescuing confined people under collapsed building, accidental car, lifter and etc.
Preventing from falling trees and materials from height probable danger for citizens.
Rescuing fallen people in well, water canal, river, dam, pool and etc.
Fighting with wild animals
Rescuing injuries of events of meat minder, metal loops, and excavation machines and so on.
All other cases that is dangerous for property and life of citizens (Tehran security services and fire department site, 2011).

Firemen always face to many challenges so they should be ready from physical and mental aspects for undertaking their duties. Institutionalizing sport and physical activities among firemen is one of the methods to achieve this fitness or readiness. Due to above mentioned materials and present theoretical bases, this research with studying firemen's needs was following this question: what are Tehran firemen's sports needs based on prioritization. The aim of this research was that with studying performed researches about sports need assessment in Iran and other countries and relying on principle and scientific need assessment methods, defines needs and views of firemen towards sports activities and studies functional ways including individual and group attractive and happy sports programs and adopts as an agenda for fire department. Integral management in this field needs exact information about present status of programs, their effect rate and studied group needs.

2. Methodology of Research

Due to researcher was studying Tehran firemen's sports needs in this research; the research method is descriptive and metrical kind. On the other hand, as the results of this research can help sports managers of fire department in better planning for firemen; research is functional. Statistical universe of this research include all firemen of Tehran fire department that were 4500 people. Morgan (1970) and Kerjesi table was used for selecting sample volume and 351 people was selected as sample. Clustering sampling method was used because of operating regions and dissipation of fire department stations in Tehran city. First, an interview was done with 50 firemen that were selected randomly for measuring firemen's sports need assessment. Due to adopted responses from interview about firemen's sports needs and using questionnaires in internal and external researches, a new questionnaire was designed and planned. This questionnaire had two sections. The first section was related to demographics characteristics such as age, education and so on. The second section was related to measuring firemen's sports needs. Due to research nature, the second section had 4 tables and 5 questions. Table (1) involves 36 sports fields presented for helping and guiding firemen for selecting used preferences. Each fireman selects 5 preferences and writes down respectively. For prioritizing sports fields, fields selected first get 5 score, second fields get 4 score, selected third fields get 3 score, fourth fields selected by firemen get 2 score and finally the fifth fields get 1 score. The score of each field includes frequency of each field multiple by preference score.

Table (2) is measuring firemen's sports participation aims with 8 varieties, table (3) is methods for increasing participation morale in sports programs with 9 varieties and table (4) is about firemen's sports participation barriers with 10 varieties. Responses have 5 options (completely agree, agree, no idea, disagree, completely disagree) that take scores 1,…, 5 respectively.

The comments of professors and sports managers of fire department were applied for measuring questionnaire fluidity that after receiving their comments and creating necessary changes in questionnaire, contextual fluidity was confirmed. After an introductory study and performing questionnaire on 30 firemen for measuring questionnaire permanency, questionnaire permanency

coefficient was 82% with using Cronbach Alpha coefficient. Descriptive statistic and frequency statistical indexes, mean, standard deviation and son on have been used for ranking scores. One-variety T test and explorative factor analysis have been used for data inferential analysis. All data were processed in spss16 software. Due to questions factor loads, questions were allocated to factors. Factors were named due to allocated questions and theoretical concepts. The first factor was marked participation purpose (questions 1,…, 8), the second factor was named increasing morale (questions 9,…, 17) and the third factor was participation barriers (questions 18,…, 27). As you see in table (1), all varieties were considered in participation analysis because their factor load was 0/3 in more than one factor.

Table 1: explorative factor analysis with varimax rotation for distributing varieties in 3 factors.

Varieties (questions)	Participation purpose	Increasing morale	Participation barriers
Q1	./19	./22	./24
Q2	./22	./10	./72
Q3	./19	./18	./62
Q4	./16	./22	./24
Q5	./20	./10	./29
Q6	./18	./16	./29
Q7	./14	./78	./20
Q8	./20	./86	./17
Q9	./26	./74	./17
Q10	./11	./21	./11
Q11	./17	./20	./18
Q12	./10	./13	./24
Q13	./23	./17	./66
Q14	./18	./50	./28
Q15	./19	./67	./21
Q16	./21	./29	./28
Q17	./26	./23	./45
Q18	./25	./12	./17
Q19	./21	./22	./23
Q20	./41	./12	./23
Q21	./10	./21	./19
Q22	./19	./14	./23
Q23	./16	./39	./13
Q24	./23	./25	./23
Q25	./12	./14	./22
Q26	./29	./35	./28
Q27	./31	./22	./13

Explorative factor analysis was done in order to discriminate or separate sports need assessment dimensions. The results of explorative factor analysis on need assessment dimensions showed that all factors in factor analysis in previous steps have suitable and high factor load. The size of sampling 0/85 suggests that factors can measure used variables in research.

3. Research Results

Among participants in this research, 18/2% participants were 18-25 years old, 40/2% were 26-35 years old, 28/8%, 36-45 years old and 1/1% were 56-60 years old. 17/7% participants were single and 82/2% were married. Education of 9/1 participants haven't diploma, 44/4% have diploma, 33/9% have post diploma and 11/7% have bachelor degree or higher.36/2% of firemen had job or service precedency less than 5 years, 19/1% between 5-9 years, 17/1% between 10-14 years, 14/2% between 15-19 years and 12/3% , 20 years or more.

Table (2): prioritizing sports fields based on quandary preferences

Preference	Sports field	score	percent	preference	Sports field	score	Percent
1	Swimming	634	42/26	18	Automobile driving	70	4/66
2	Physical fitness	514	34/26	19	Weight lifting	65	4/33
3	Volleyball	504	33/60	20	Rock climbing	58	3/86
4	Mountain climbing	474	31/60	21	Body training	53	3/53
5	Footsal	354	22/53	22	Lifeguard	50	3/33
6	Football	338	21/40	23	yachting	47	3/13
7	Chess	321	17/86	24	Diving	36	2/40
8	Ping pong	268	14/66	25	Horseback riding	34	2/26
9	Track and field	220	12/73	26	Archery	33	2/20
10	Bodybuilding	191	10/20	27	Ski	21	1/40
11	Cycling	153	10/13	28	Handball	18	1/20
12	Ancient sport	152	9/53	29	Skate	16	1/06
13	Public sport	143	8/26	30	Land tennis	14	./93
14	Badminton	124	7/46	31	Gymnastic	9	./60
15	Motor cycling	112	6/13	32	Arrow and arch	8	./52
16	Basketball	92	5/93	32	Hepatic	8	./52
17	Epical sports	89	4/66	33	Hokey	4	./26
18	Wrestling	70	4/53	33	parachutism	4	./26

According to results and after prioritization (as shown in table (1)) swimming field is in the first preference, physical fitness in the second rank and volleyball in the third rank. Mountain climbing, Footsal, football, chess, ping pong and track and field are located in next preferences.

Table (3) : one- variety T test results, comparing the mean of Tehran firemen's participation aims in sports activities.

The aims of participating in sports activities	Medium level	Mean	Standard deviation	t	Significance level
1-health and happiness feeling	3	4/53	./67	42/20	0/001
2-reducing stress and anxiety facing with events	3	4/46	./73	37/11	0/001
3-increasing job exploitation	3	4/33	./67	37	0/001
4-increasing morale	3	4/07	./99	20/26	0/001
5-removing tiredness from work	3	4/04	./88	21/95	0/001

6- fitness	3	3/71	1/04	12/74	0/001
7- recreation and entertainment	3	3/59	1/10	10	0/001
8- participate in sports matches	3	2/57	1/07	-7/56	0/001

T test in level ($\alpha \leq ./.5$) was used in order to study significance level in inferential analysis and due to acquired means in all cases except "participate in sports matches" were greater than medium level (3), acquired t is also bigger than table's critical amount. So all mentioned cases were among firemen's aims from participating in sports activities and health and happiness feeling, reducing stress and anxiety while facing with events and increasing job exploitation are the most important factors (table 3)

Table (4): one- variety T test results, comparing the mean of increasing morale in Tehran firemen.

Methods of increasing morale for participating in sports activities	Medium level	Mean	Standard deviation	t	Significance level
1-holding sports-educational classes	3	4/24	./78	29/56	0/001
2-setting up sports-recreational trips	3	4/11	./90	22/78	0/001
3-hlding regular sports matches	3	4/09	./63	30/97	0/001
4-doing exercising with family	3	4/01	./81	25/26	0/001
5-constituting professional teams in different fields	3	3/90	./91	19/39	0/001
6-playing music with sports activities	3	3/86	1/01	15/88	0/001
7- providing suitable sports spaces and facilities	3	3/79	1/05	17/47	0/001
8-training different sports fields	3	3/78	./75	19/34	0/001
9-presenting sports attractive and various programs	3	3/47	./98	14/63	0/001

T test in level ($\alpha \leq ./.5$) was used in order to study significance level and due to acquired means in all cases were greater than medium level (3), acquired t is also bigger than table's critical amount. So all mentioned cases were among the methods of increasing morale of firemen for participating in sports activities. Holding sports-educational classes and holding sports-recreational trips had the most effect (table 4).

Table (5): one- variety T test results, comparing the mean of Tehran firemen's participation barriers in sports activities.

Participation barriers in sports activities.	Medium level	Mean	Standard deviation	t	Significance level
1-the lack of experienced coach	3	4/14	./90	23/69	0/001
2- the lack of enough facilities	3	4/11	./83	24/74	0/001
3- Unsuitable costs	3	3/78	1/04	14	0/001
4- Not having enough time	3	3/53	./80	12/24	0/001
5- tiredness from sports activities	3	3/49	1/11	8/22	0/001
6- not accompanying for exercise	3	3/42	./83	9/43	0/001
7- Great distance to sports places	3	2/96	1/03	-./66	./504

8- frightened from damage while exercising	3	2/62	1	-7/03	0/001
9- having special disease	3	2/26	./96	-14/28	0/001
10- not aware of sports advantages	3	1/74	./74	-33/19	0/001

T test in level ($\alpha \leq ./.5$) was used in order to study significance level and due to acquired means in cases (7-8-9-10) were smaller than medium level (3), one can't consider them as an effective factor for preventing firemen from sports activities. The lack of experienced coach and the lack of enough facilities are the most important barriers for not exercising.

4. Conclusion

The results about firemen's prioritization showed that swimming has the most advocates. In other words, swimming with 42/6% has been mentioned as the most fundamental firemen's sports needs. Swimming is one of the sports fields that is useful for all ages and causes peace and relaxation and reduces mental agitations and has many efficacies. Swimming causes to increase individual aerobic capacity and reinforce physical factors related to health (Gaieni and Rajabi, 2006). In studies by Elgiani et al (2011) on youth, swimming was recognized as one of the most important sports for doing sports activities. With considering results and mentioned cases, planning to do swimming sports activities by firemen was adopted as fire department's sports programs, this planning can include cases such as constructing new pools, contracting with private pools, establishing training classes for all staff and holding regular swimming matches in organization level. In studies by Walter (2010), Australia Sports Commission (2011), Azimi (2009) and Lotfi (2009), swimming was one of the individual quinary preferences and is parallel (same) with present research findings. Due to assimilation of present research finding with above mentioned researches, we can conclude that swimming is necessary and useful for all people of society and country sports managers should pay attention to this subject. Setting physical fitness, track and field and bodybuilding fields can be in basic preferences of firemen because of firemen's professional nature and knowing this point that having high physical fitness is the first principle in selecting fireman forces. So physical fitness will be an important aspect in reducing damages from job pressure and disease. The present research is parallel with researches of ataghiaa (1999), Lotfi (2009), Washington Network Institute (2007) and Australia Sports Commission (2001). Selecting volleyball as a third preference can have various reasons, but it is assumed that attractiveness, simplicity and creating correlation and union among team members are the most important reasons. Mountain climbing for reasons such as human relation with nature, creating union sense, increasing physical strength and plans that organization has done about this sport has located in fourth preference. The present research is the same with research of Totoni (1999) about volleyball and research of Lotfi (2009) about mountain climbing. In studies by Walter (2010), Australia Sports Commission (2011), Zarkhah (2009), Azimi (2009) and Lotfi (2009), football or soccer was among five individual preferences; this subject can be the effect of attractiveness of this sports field among most people of world. One should notice that sport role is important about firemen happiness. Encourage and pursuing firemen to different sports activities with various ways can be a positive step in meeting these needs. Firemen are aware of sport advantages and do exercise for job exploitation, health and reducing anxiety. These are aims that sports managers wish to access them. In researches done by Lotfi (2009), America Human Services and Health Department, Beth Thomas (200) and a research performed all over Europe continent (2009), similar results of participation purpose in sports activities were acquired. Among methods of increasing firemen's morale, establishing sports-training classes was in first preference and presenting sports various and attractive programs were in the last priority. Every method increases to participate in sports activities and organization sports managers should pay attention to them.

Findings about participation barriers in sports activities suggested that cases as the lack of experienced coach, unsuitable costs, tiredness from sports activities, not having enough time, the lack of sufficient facilities and not accompanying with anybody are participation barriers in sports activities. Lack of awareness of exercise advantages, having special disease and frightened of injuries while exercising aren't an important barrier for exercising since they are located under medium level. For eliminating present barriers and attempt to participate firemen in sports activities, managers should adopt methods such as using experienced coaches in different fields, providing enough facilities for exercising, undertaking a portion of sports activities costs and providing welfare facilities as: transport services, using pool and Jacuzzi after exercising and so on. In addition, Elgiani et al (2011) reported that individuals body activity levels depend on countries' cultural and economical development; so it seems that studying activity levels as well as participation barriers and not participating are particular for every country with economical status and culture level and due to permanent variations in socio-

economical status of countries especially a developing country such as Iran, studying these barriers should be permanent. Organization managers can reduce participation barriers with consistent planning with priorities. The present research is same as results of researches by Elgiani et al (2011), Lavl et al (2010), Gomez et al (2010) and Salimi (2013) about individuals' participation barriers in physical activities.

The results showed that staff feels need to physical health for doing duties; so sport development for all organizations is necessary and we should use effective and useful methods in this subject. Binding exercise in work place for firemen; providing equal sports facilities for all firemen and stations; constituting sports teams for all sports fields; installing and starting suitable sports equipment in stations; not concentrating on special sports fields; constructing pool and saloon for firemen; selecting suitable sports places for exercising, setting up sports-recreational trips with family; hiring suitable sports places for firemen; having professional coaches in different sports fields; holding matches in different fields between stations can present useful methods for achieving fire department long term aims and other organizations. Mentioned functional methods for meeting firemen's sports needs can be effective in developing sport among firemen and increase muscle strength and power for tolerating work. This can be effective in social aspect evolution of firemen personality and reduce mental pressure on them while doing operations. Organization sports managers should pay attention to this so that can achieve aims.

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Effects Of A Ten Week Training Programme On Cardiovascular Endurance Among Football Referees Of Malaysia

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Abstract

The objective of this study was to investigate the effectiveness and acceptability of a 10 week training programme to improve cardiovascular endurance of football referees in Malaysia. Sixty national football referees were randomly assigned into 3 groups (n=20 each group) namely the control group, experimental group one and experimental group two. Experimental group one followed a planned 10 week training programme (duration of training 3 days in a week, each session=90 minutes and time 5 pm) supervised by a physical education lecturer and his assistants. Experimental group two also reported for training at a different venue and trained on their own (duration, frequency and time of training similar to experimental group one). The design of this study focused upon the individual performances in the pre-test, providing training for 10 weeks and determining if the referees improved as a result of treatment. A mixed between-within subject analysis known as split-plot ANOVA (SPANOVA) was used to test the hypothesis. The null hypothesis was rejected [$F(2, 57) = 141.18$ $p<0.05$]. However, the results of Pillai's Trace and Tukey Pair Wise Multiple Comparison further confirmed the results of SPANOVA. Tukey Pair Wise Multiple Comparisons among groups indicated that the performance of all the three differed from one another with experimental group one showing the best performance and the control group the poorest and the training method used by experimental group one was the best. The results provided meaningful support that a planned10 week training programme was acceptable to improve performance in cardiovascular endurance. The training programme therefore, could be adopted as a formal training programme for football referees.

Keywords: cardiovascular endurance, national football referees, ten week training programme.

INTRODUCTION

Today, football is played at a professional level all over the world. Millions of people regularly go to football stadiums to follow their favorite teams stated Ingle, Sean Glendenning & Barry (2003). While FIFA (2003) announced that billions more watch the game on television or on the internet and a large number of people also play football at an amateur level. The major international competition in football is the World Cup, organized by FIFA. This competition takes place over a four-year period. More than 190 national teams compete in qualifying tournaments within the scope of continental confederations for a place in the finals. The finals tournament, the 2014 FIFA World Cup was held in Brazil from June 12 to July 13 (The FIFA Calendar, 2014). Wherever the game is played, referees are needed to supervise the matches. An official survey ("Big Count 2006") by FIFA revealed that in 2006 there were more than 840,000 registered referees and assistant referees worldwide. Quality refereeing provides players with a chance to display a high level of skills and tactics. It ensures smooth flow of play and this brings about satisfaction and enjoyment to the fans. Thus, the attributes of quality refereeing ensures that it is a challenging, exciting and rewarding task. On the other hand, poor refereeing creates anxiety, frustration, anger and eventually some negative physical behaviour by players who perceived that they had been unfairly judged. When this happens, the referees feel frustrated, abused and unappreciated (Machin, 1990)

According to Eissmann (1988), a good referee can be distinguished by his ability to judge incidents accurately, an ability which is directly dependent upon his physical condition, experience, knowledge and application of the laws of the game. This observation was supported by Castillo (1990), who stressed that the physical condition of a referee would strongly affect the quality of refereeing. He further emphasized that physical fitness was necessary for referees. He strongly felt that the days of the referee "as a friendly ageing gentleman' were over. Referees must be athletes whose running potentials and intensive movements were comparable to those of the players themselves (Casarin, 1992).Further, Castagna and D'Ottavio 2001; Krustrup and Bangsbo 2001; Castagna, Abt and D'Ottavio 2002 strongly stressed that referees with higher cardiovascular fitness run further during a game, spend less time standing and walking during a match and are able to remain closer to 'the play' which most likely will improve their ability to closely watch 'the play'.A study by Reilly and Gregson (2006) showed that during a football match, the cardio-circulatory system is severely taxed and football referees need to have high levels of aerobic fitness. To referee a football match, they must be alert and near the scene of action, and their level of fitness must be such that fatigue will not impair their decision-making. Referees are often subjected to proportionally increasing physical demands as years go by. Indeed, their peak performance is usually between 30 and 45 years of age, when cardiovascular athletic performance starts to decline. Asami et al., 1988; Castagna et al., 2004; Catterall et al., 1993; Da Silva and Rodriguez-Añez, 1999; Johnston and McNaughton, 1994; Krustrup and Bangsbo, 2001) reported that during officials matches football referees perform physical aerobic activities of low and moderate intensity and present a significant decline in energy expenditure between the first and second half. Other studies involving soccer referees have also confirmed that the physical activity of referees during match-play predominantly involves the utilization of energy originating from aerobic metabolism All the evidence presented supported the necessity of improving aerobic metabolism in football referees, but without forgets anaerobic fitness (Castagna et al., 2007).Football referees were often left on their own to develop their physical fitness efficiency. There had been no specific training programme designed to improve the cardiovascular fitness of football referees in Malaysia. Therefore, in order to ensure football referees could attain an optimal level of match fitness, emphasis within their fitness preparation programmes had to be firmly placed upon quality structured training sessions that provide an appropriate training stimulus to enable the attainment of such fitness. Hence, this study had been designed to investigate the effectiveness and acceptability of a ten week training programme to improve cardiovascular endurance.of football referees in Malaysia.The findings of this study would provide significant feedback on the effectiveness of a ten week training programme for football referees. This study would evaluate and validate a special Ten Week Programme which could be adopted as a formal training programme for football referees.After undergoing ten weeks of training, the referees could expect a significant improvement in cardiovascular endurance.. An achievement of this status would definitely be a strong motivating factor for these referees and also to all aspiring football referees.

Methodology

This investigation was an experimental research design which involved the measurement of cardiovascular endurance. Sixty National football referees who lived in Kuala Lumpur and Selangor were selected. As only sixty referees were available, all of them were chosen as participants for the study. The participants were randomly assigned into three groups namely the control group, experimental group one and experimental group two. Each group consisted of 20 participants.

Procedure

The participation of referees in this research was voluntary and a letter of consent from each referee was collected. An introductory talk was administered to participants in experimental group one and two. As the participants ate their meals in their homes, their diets were not regulated. The participants were asked to follow their training programmes vigourously. The participants were encouraged to bring along their spouses during the training sessions because a study by Heinzelman& Bagley (1970) indicated that the husband's adherence to the training programme was directly related to the wife's attitude towards the programmes.

Instrument

The participants were pre-tested on FIFA Fitness Test. Experimental group one and experimental group two were exposed to different experimental treatment respectively for ten weeks. Experimental group one followed a planned ten week programme while experimental group two also trained but on their own mainly jogging and playing minor games among themselves. The post-test was administered to the three groups after ten weeks. At the end of ten weeks training, the researcher investigated whether there was a significant difference in the performance of cardiovascular endurance. The design of this study focused upon individual performances in the pre-test, providing training for ten weeks and to determine if referees improved their performance in cardiovascular endurance as a result of experimental treatments.

Results

To determine whether there was a significant difference in the performance of the three groups in cardiovascular endurance after following a ten week training programme, a mixed between-within subject analysis known as split-plot ANOVA (SPANOVA) with a .05 significant level was conducted

Table 1 below provides descriptive statistics for the three groups in pre-test means, post-tests means (M), the standard deviation (SD) and number (N) of participants in each group.

Table 1:Comparison of Pre-Test and Post-Test Means and Standard Deviation of Three Groups in cardiovascular endurance.

Pre-Test	N	M	SD
Control Group	20	2.12	0.130
Experimental Group One	20	2.18	0.131
Experimental Group Two	20	2.16	0.127
Total	60	2.15	0.130
Post-Test	N	M	SD
Control Group	20	2.13	0.138
Experimental Group One	20	2.71	0.055
Experimental Group Two	20	2.26	0.131
Total	60	2.37	0.275

The pre-test results showed very little difference between the means and the standard deviations among the three groups: control group (M=2.12, SD = 0.13, N=20), experimental group one (M=2.2, SD=0.13, N=20), experimental group two (M=2.26, SD=0.13, N=20). The direction of effect showed the same statistical features for all of the participants in the three groups: total groups (M=2.15,SD=0.13, N=60). The descriptive statistical features for the three groups in post-test indicated control group (M=2.13, SD=0.14, N=20), experimental group one (M=2.71, SD=0.55, N=20), experimental group two (M=2.26, SD=0.13, N=20), total groups (M=2.4, SD=0.28, N=60).The direction of effect in post-test indicated that the performance of experimental group one in cardiovascular endurance was better than the performances of experimental group two and control group. The performance of experimental group two was better than the performance of control group.

Figure 1 indicates the Pre-Test means for the three groups in distance covered in kiolometre

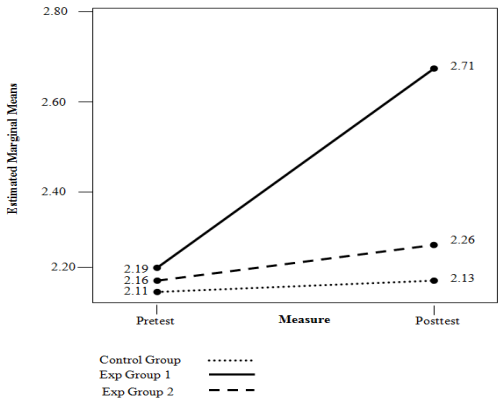

Figure1: Estimated Marginal Means of Measure 1. One Way Pre-Test and Post-Test by Group

Figure 1 shows the pre-test means for the three groups are clustered closely (control group mean 2.11, experimental group one mean 2.19 and experimental group two mean 2.16) indicating there was no significant difference in cardiovascular endurance among the three groups.The post-test means of three groups for cardiovascular endurance indicated the control group mean showed a slight increase from 2.11 to 2.13 indicating an increase of 0.02. The experimental group one mean increased from 2.19 to 2.71 in the post-test. The difference in means indicated an increase of 0.52. The experimental group two mean also increased from 2.16 to 2.26 in the post-test. It recorded an increase of 0.1.To determine further whether the different training programmes significantly contributed to the results, a mixed between-within subject analysis known as split-plot ANOVA (SPANOVA) was run on the tests, the results of which appear in Table 2.

Table 2 provides the descriptive statistics for the three groups.

Table 2: SPANOVA Test of Between Groups forPre-Test and Post-Test

Pre-Test	Sum of Squares	df	Mean Square	F	Sig
Between Groups	0.047	2	0.023	1.390	0.257
Within Groups	0.955	57	0.017		
Total	0.001	59			
Post-Test	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig**
Between Groups	3.705	2	1.853	141.18	0.000
Within Groups	0.748	57	0.013		
Total	4.453	59			

In Table 2 pre-test results indicated that there was a very small significant difference among the three groups in cardiovascular endurance [F (2, 57) =1.39, p<0.05] before treatment was administered.

After undergoing a ten week training programme, the post-test results indicated that there was a significant difference among the three groups in the performance of cardiovascular endurance [F (2, 57) =141.18, p<0.05]. The mean value of experimental group one out performed the other two groups. Experimental group one was the most effective group as compared to control group and experimental group two.To determine whether there was a significant difference between pre-test and post-test scores as a whole and to determine if there was a significant effect on the treatment for the three groups, multivariate tests using Pillai's Trace was administered. The analysis in Table 3, Pillai's Trace [F (1, 57) = 295.92, p<0.05] indicated that there was a significant difference between pre-test and post-test scores as a whole. It showed that the programme had significant effect on cardiovascular endurance after treatment. The post-test means indicated that the experimental group one had the highest mean score of 2.71 for cardiovascular endurance followed by experimental group two with a mean score value of 2.26 and the control group the lowest mean score of 2.13. There was also a significant interaction effect of the treatment for the three groups

[F (2, 57) = 164.17, p <0.05].

Table 3 displays the results of analysis.**Table 3:** Multivariate Tests[a]Using Pillai's Trace

Effect	Value	F	Hypothesis df	Error df	Sig
Pillai's Trace	0.838	295.922[b]	1.000	57.000	0.000
Wilk's Lambda	0.162	295.922[b]	1.000	57.000	0.000
Hotelling's Trace	5.192	295.922[b]	1.000	57.000	0.000
Roy's Largest Root	5.192	295.922[b]	1.000	57.000	0.000
Measure* Group	Value	F	Hypothesis df	Hypothesis df	Sig
Pillai's Trace	0.852	164.174[b]	2.000	57.000	0.000
Wilk's Lambda	0.148	164.174[b]	2.000	57.000	0.000
Hotelling's Trace	5.760	164.174[b]	2.000	57.000	0.000
Roy's Largest Root	5.760	164.174[b]	2.000	57.000	0.000

a. Design: Intercept + group Within Subjects Design: measure

b. Exact statistic

In order to investigate significant difference between groups, a Tukey pair wise comparison for the three groups in cardiovascular endurance was conducted.Table 4 shows Tukey pair wise comparison on the means for the three groups in cardiovascular endurance.Table 4:Tukey Pair Wise Comparison for the Three Groups in Cardiovascular Endurance

(I)group	(J)group	Mean Difference (I-J)	Std Error	Sig[b]
Control Group	Experimental Group 1	-0.3238*	.03556	.000
	Experimental Group 2	-0.0863*	.03556	.048
Experimental Group 1	Control Group	0.3238*	.03556	.000
	Experimental Group 2	0.2375*	.03556	.000
Experimental Group 2	Control Group	0.0863*	.03556	.048
	Experimental Group 1	-0.2375*	.03556	.000

Based on estimated marginal means

* The mean difference is significant at the 0.05 level.

bAdjustment for multiple comparisons: Least significant

Difference (Equivalent to no adjustment

The mean difference between the experimental group one and the control group was 0.3238. When the mean of experimental group one was compared with the mean of experimental group two, it indicated a mean difference of 0.2375. The results indicated that the mean difference of experimental group one when compared to the mean difference of experimental group two and control group was significant at alpha .05. The mean difference of the experimental group two and control group indicated a value of 0.0863. The mean difference was just significant at alpha .05 when the performance of experimental group two in cardiovascular endurance was compared with the performance of control group. The results indicated that there existed a significance difference in the performance of the three groups in cardiovascular endurance after ten weeks of training. Therefore, null hypothesis three was rejected at 0.05 significant level [$F(2, 57) = 141.18$, $p<0.05$]. The results of multiple comparisons among groups indicated that the performance of all the three groups in aerobic power differ from one another with experimental group one showing the best performance and the control group the poorest and the training method used by experimental group one was better than the training method used by experimental group two.

Discussion:

Thus, from the findings of this study, it could be concluded that there were three general reasons for the improved performance in aerobic power of the football referees in Malaysia.Firstly, training programme of this nature provided the football referees with an opportunity to train for four days in a week under the guidance of a trained physical education instructor. The instructor, playing a direct and ever-present role was recognized, as a result served as a strong motivating factor to the participants. Oldridge (1977) and Franklin (1984) reported that the exercise leaders appeared to be the single most important variable affecting training compliance and motivation.Secondly, during the present investigation there was an intense curiosity and interest regarding the training programme;

from the first exposure to instructors and at the pre-test to the last exposure at the post-test. The interest was true to all the three groups. All groups responded to the pre-test and post-test with seemingly equal engrossment. Interest in the training method might have grown even more intense for football referees in experimental group one who followed training method one as the investigation progressed.

Finally, the football referees in Malaysia never had an opportunity to participate in a group training programme. This study which offered a setting to train in a group could have motivated them to train harder as they were eager to know the training effects. A study by Heinzelman& Bagley (1970) reported that 90% of adult exercisers preferred group programmes those in which one trained alone. Other studies conducted by Massie & Shepard (1971); and Wilhelmsen et al. (1975) indicated poorer training compliance in individual programmes. It was further reported that social reinforcement and companionship associated with a group programme apparently facilitated increased training programme

Conclusion

This planned training programme was effective and acceptable to improve in the performance of cardiovascular endurance of football referees. Therefore, it should be adopted as a formal training programme for football referees.

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The impact of the use of exercises (reaction - and the kinetic response) to Repelling movements, arm and legs to the goalkeeper Handball

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Introduction and importance of research

The scientific and technical progress are the advantages of our modern times has included multiple aspects of life, including (sports side), we find that many of the natural and human sciences used to prepare the individual, to prepare a comprehensive and balanced as a prelude to reach him to the highest levels of sport activity, which was chosen, lasted for world countries on the use of scientific means to get to choose the perfect scientific methods of in sports training and the development of existing and successful scientific solutions.The game of handball games that rely mainly on the different sciences (such as training and kinesiology and mechanical bio-science and other sciences), handball players is characterized by physical and kinetic characteristics of high and mastery of technique distinct game.The goalkeeper in the game handball is particularly important derived through standing Between the crossbar and higher based of the net, Causing him to need a high physical ability to help him perform its function technically and tactically, here came the importance of research in that the reaction speed and the speed of the kinetic response of the goalkeepers in the game of handball great significance in the outcome of the game, so it considered goalkeeper at the present time, more than half of the team with the views of experts and analysts.

Research problem

In the game of handball be the goalkeeper clearly quite a strong effect during the match and for the benefit of his team against the opposing team, considered Goalkeeper of the most difficult centers that need to be very high physical capabilities, especially all the elements of speed, the researchers are representing the Iraqi national team in handball and one of them in the goalkeeper center goalkeeper and the two others are in center midfield and the other in pivot center of the player (6-meter line)and to their experience and long follow-up excellent League matches have noticed that there are obvious weakness among goalkeepers these clubs where it was found that there a clear lack of value performance (reaction speed - and the speed of the kinetic response) to the goalkeepers while performing Repelling skills against players corrigenda performed by attackers from the competition teams in the Premier League matches, as required by the researchers developed vocabulary training modules a focused to develop these two qualities tasks.

Research objectives

1-put vocabulary training curriculum to develop the reaction speed and the speed of the kinetic response of the arms and legs to the goalkeepers Handball Teams Premier League clubs for the sports season 2013.2014 research sample.

2-identifying the impact of vocabulary training curriculum in the development of reaction speed and the speed of the kinetic response of the arms and legs to the goalkeepers' handball research sample

3-identify the differences between the pre and post tests to the experimental group in the variables under consideration.

Research hypotheses

1- There are a positive vocabulary training curriculum influence the development of reaction speed and the kinetic response of the arms and legs to the goalkeepers in handball teams to Iraq the excellent clubs to sample individuals.

2- There are significant differences were statistically significant differences between the pre and post tests and for the benefit posteriori tests to the experimental group research sample.

Delimitation and limitation

Researcher depends on a study of the original sample composed of (goalkeepers' community) Diyala Sports Club team for season 2013 2014.
Research experiment was performed in indoor club Diyala sports hall, and the research period lasted from (15/02/2014 until 05/05/2014).

Research methodology and procedures

That the nature of the problem are determined by the research methodology used, the researcher used the experimental approach for suitability to the nature of the problem, that the definition of the experimental approach as a deliberate change and acceptable to the conditions specified for the some incident and observation the resulting changes in the same incident and interpretation, Was selected sample by the researchers in the manner intentional, through goalkeepers Diyala Club registered lists of Union Center handball for the year 2013/2014 they are participants in the Iraqi Premier League Handball who represent 100% of the research community's (5) goalkeepers, The goalkeepers homogenous because they represent one level and representing the club.

Pre tests

The researchers conducted the pre-test on the Sabbath day on 22.02.2014.
Skill tests for the experimental group in the internal chamber of Diyala Sports Club / the province of Diyala.
Tools and equipment used in research and assistant team work, the researcher explained how to conduct the tests and display attempts, number and make sure to absorb educated the conditions tests.

The training curriculum that was used in the research

Vocabulary was applied the experimental approach to individuals of the experimental group they are goalkeepers Diyala Sports Club, a Special set exercise for research carried out according to the following:

Application for vocabulary Training curriculum (for two months)
The number of weeks (8 weeks)
The number of training units each week (4 units) for the implementation of the approach exercises
The number of training units (32 units) all the period of application of the approach.
It takes a training module (120 minutes).
Training curriculum is equal to the total time (3840 minutes).
the researchers relied on the application of Training curriculum used during and after completion of training modules.

Post test

Posttest tests were conducted on Saturday, 05.03.2014 and under the same conditions in which the Pretest where he held the post test for tests carried out.

Statistical means

1- Mean 2- Standard deviation 3- median 4- Sprains coefficient 5- Percentage6- Coefficient of variation
7- Standard error8- t - test (independent samples, between two mediums interrelated)

Display and analysis of media, standard deviations, and physical tests used to search individuals the experimental group

After that was completed procedures for testing a posteriori in the period that have been identified by the team and the researchers trainer and with the help of assistant staff has been handling the research results statistically and so to get for these results values so that we can discuss these results in order to achieve the objectives and hypotheses of this research.

Conclusions

After it has been processing the results statistically was extracted objectives and hypotheses, the researchers identified the appropriate results of which the following conclusions

1- Has been applied the Special exercises carried out by the sample (goalkeepers) a positive effect in reducing the (time feedback movements), (Reply kinetic reaction), which was reflected in the performance (block movements) by the goalkeeper in the tests research.
2- That the process according to organize exercise programmer approach helps the emergence of differences between the tests (pre and post) in favor of a posteriori tests.
3- The exercises (motor response) and exercises (reaction speed) contributed to the development of (the capacity of the motor expectation) for goalkeepers, which is reflected in the (block movements of the arms and legs) clearly the results of the post tests.
4- The importance of programming exercises properly and according to determining the appropriate the period within the Setup for stage of or the stage of preparation for the competition and during the competition is very necessary for the development of goalkeeper's capabilities in these skills scientific approach.

Recommendations

Researchers recommend a set of recommendations to the (general and specific) including

1- Attention must be given by all the trainers who are working in the field of handball, training programs pertaining to (the goalkeeper) in the team.

2- Contain training special vocabulary curricula interested in to develop (motor and physical abilities), including the exercises (Reply motor reaction time) and exercise (response motor) because of their importance in the development and reflection on the goalkeepers and their movements in the (block) and this is what appeared in our research.

3- Increase recurrences (Applied exercises) (Reply motor reaction time) and (motor response) access to the correct mechanism for the implementation (block movements) are optimized.

4- Diversify the exercises by using various models of the new exercise for the (suspense) and keep away from the boredom during the application of the exercise in the overall the approach.

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Effect Of Alcohol On Sports Performance And Different Body Systems

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Abstract
As an athlete, you know that achieving optimal performance involves practicing hard, hitting the weight room and being on top of your game both mentally and physically. However, many athletes tend to underestimate the way in which alcohol use, even a few drinks, can nullify your hard work by erasing the effects of your workouts, reducing your endurance and compromising your mental game. The structure of the athletic season sometimes lends itself to small windows of opportunity to "party" that can contribute to nights of heavy binge drinking or over-indulgence, ending in situations of regret, blackouts, legal problems, and sometimes team and university sanctions. The purpose of this investigation was to identify the Effects of alcohol on sports performance and physical fitness.
Keywords: Alcohol, Sports performance, Physical fitness.
Alcohol: Alcohol (ethyl alcohol, ethanol) is a drug, but technically it can also be classified as a nutrient because it provides energy, about 7 kcal per gram. One drink of alcohol is considered to be an amount typically found in 340 ml of beer, 114 ml of wine or 35 ml of 40 percent (80 proof) spirits. Alcohol affects all cells in the body but the most immediate physiological and psychological effects are on the brain. Although alcohol is classified as a depressant drug, it may elicit a transient stimulant effect, and it has been theorized by some authors to be ergogenic for both these effects. How alcohol affects a person depends on the amount consumed, the environmental context, and individual differences in capacity. Overuse of alcohol is harmful for sports performance and physical fitness so, we can securely say that Alcohol affects a lot on performance and we can't achieve our goals while using them in our life.
Objective of the study
To find out the effect of Alcohol on sports performance and different body systems.

Sports and Alcohol
Alcohol is an ergolytic acid to sports performance. This means that alcohol will detract from, not improve, and exercise performance. Alcohol intake negatively impacts on a variety of psychomotor skills essential for successful exercise performance, including reaction time, balance and hand-eye coordination. It is important to note that alcohol is banned in some sports during competition. Although most athletes do not use alcohol immediately before exercise, consuming alcohol in bingers during the week or on weekend, is likely to affect recovery from exercise performance on subsequent days.
Short – term Effects
Alcohol is widely reported as causing dehydration.
Binge drinking exacerbates soft tissue injury
Alcohol increases blood flow to the area, which is likely to extend recovery time following injury.
Slower decision making.
Alcohol may increase your risk of serious injury from an accident or being involved in a brawl.
Long- term Effects
In the long term, regular binge drinking can add significant kilojoules. People talk a lot about the carbohydrate in beer as the reason for men putting on weight.
The athlete being distracted from carrying out appropriate recovery strategies to help the body refuel rehydrate and facilitate muscular repair.
Athletes might place themselves at an increase at an increased risk of violence or being involved in a brawl, leading to serious injury and/or adverse publicity.

Effects of alcohol on sports performance

Alcohol has been described as a performance impairing drug. Exercise is a complex activity utilizing many of the body's organ systems; alcohol exerts an effect on most of these systems, including the central nervous system, muscle energy stores and the cardiovascular system. Overall, alcohol is detrimental to sports the body during exercise performance because of how it affects Alcohol has been described as a performance impairing drug. Exercise is a complex activity utilizing many of the body's organ systems; alcohol exerts an effect on most of these systems, including the central nervous system, muscle energy stores and the cardiovascular system.

Greater risk of muscle cramps,Reduced Endurance,Slower reactions,Dehydration ,Vitamin and Mineral Depletion,Reduced aerobic performance,Muscle Injury,Alcohol and motor skillsAlcohol and strength, power, and short-term performances

How alcohol affects your different systems

Alcohol affects you even after you've finished drinking. Alcohol affects the central nervous system and slows down the information processing ability of the brain. This in turn slows down your reaction time, hand-eye-coordination, accuracy and balance. Even a small number of drinks can affect performance these affects are under below :

Alcohol affects the central nervous system and slows down the information processing ability of the brain.

Alcohol keeps the liver too busy to produce the required sugar levels to sustain an athlete's energy and stamina to perform at their peak.

Alcohol decreased hand tremors slowed reaction time decreased hand-eye coordination further slowed reaction time and reduces body's functional activity and playing efficiently, balance and judgment and decreased hand-eye Coordination.

Alcohol Increase the risk of dehydration and impaired tracking, visual search, Recognition and response skills Weakness brain and its nerves, both the extension and contraction of muscles decreases and muscles do not exert maximum force.

Alcohol decrease in overall performance levels lowed running and cycling times weakening of the pumping force of the heart impaired temperature regulation during exercise decreased grip strength, decreased jump height, and

Alcohol decreased 200- and 400-meter run performance faster fatigue during high waster's energy, strength, power, speed, endurance and causes early tiredness and fatigue leading to poor performance in play.

Conclusion

So, no matter how much training and conditioning you have put in, drinking up to 72 hours before a match will take the edge off your fitness. If you want to be the very best you can be at your sports, you will have more of a chance of achieving that by not drinking alcohol However , if you do want to drink it's best to drink a little and not too often. As a result, your coordination, dexterity, concentration and reactions could be adversely affected too.

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Physical Exercise and Well being

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Introduction:

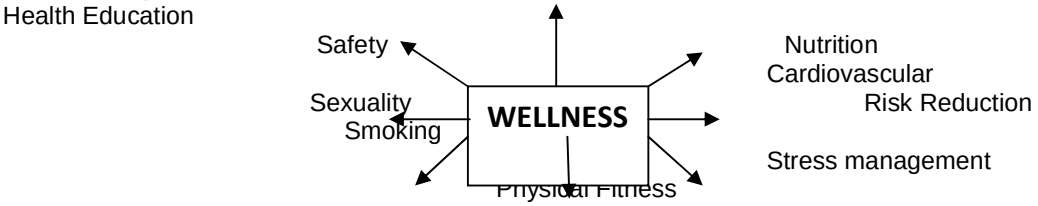
A moderate, well planned, well structured and well organised physical exercise work out engaged in regular of 30 min a day very effectively improves standard of a one's health, maintains a reasonably high level of fitness for work and sport and ensure well being. All living being are instinctively active. They move and they live, they live because they move. Life is characterised by movement or activity. All functions of the organism are a function of movement. Movement is the cosmic principle of matter and mind. Physical exercise, in formal sense of the term, may refer to the physical activity that is planned, structured and repetitive bodily movement done to improve or maintain one or more of the components of physical fitness.Aerobic capacity,Muscular strength,Muscular endurance,Flexibility,Body CompositionWell being: Well being is the very wide term but form the view point of health and happiness, it is the highest state of physical, mental, intellectual and emotional wellness in which an individual lives most and serves best.It is a rare kind of feeling, a pervasive sense that life, as a whole, has been and is good, fulfilling, meaninggul and pleasant. That way, it is one of those elusive things that a person is more aware of when it is missing. Physical well to a great extent, automically leads to mental, intellectual and emotional well being.

Feeling of physical well being:

Free of general aches and pains of life that come from not being adequately fit and health.

Our basic need for food, water and shelter are adequately met.Enough energy and stamina to accomplish our daily tasks and full fill our recreational desires, and still left with some energy to meet emergencies.Our brains can maintain sufficient alertness and focus to enable our mental processes to function at an optimal level of deficiency, and we are sensitive to the changes taking place in our environment and are able to respond to them.Able to achieve satisfying physical experiences, with in the limit of our own awareness and awakening.The concept of wellness incorporates many components in addition to those associated with physical fitness. These include proper nutrition, smoking, stress, alcohol and drug.

Wellness concept



E**ffect of exercise on well-being:**

There is little doubt that regular physical activity, as a measure of physical well being, can improve health and reduce the risk of premature death for it a) reduces the risk of developing coronary heart disease (CHD) and the risk of dying from CHD, b) reduce the risk of stroke, c) reduce the risk of having a second heart attack in people who had already had one heart attack, d) lowers both total blood cholesterol and triglycerides and increases high density lipoproteins, e) lower the risk of developing high blood pressure, f) helps reduce blood pressure in people who already have hipper tension, g) lowers the risk of developing non insulin dependent (type -2) diabetes mellitus, h) reduce the risk of developing colon cancer, i) helps people achieve and maintain a healthy body weight, j) reduce feeling of depression and anxiety, k) promotes psychological well being and reduce the feelings of stress, l) helps build and maintain healthy bones, muscles, and joints, m) helps older adults become stronger and better able to move about without falling or becoming excessively fatigue.

There are at least three main mechanisms by which physical exercise has positive effects on mental well-being.

Biochemical mechanisms: Probably the most well known example of a biochemical contribution comes in form of a feeling of euphoria following intense prolonged exercise. Known as “runners high” increases in plasma b-endorphin are believed to underlie this mental state, though it is still unclear if it promotes mental well being long-term. More promising research points to norepinephrine, and serotonin (5-HT) as mechanisms for improved mood, both are elevated following acute exercise. Given that many anti-depressant medications also work by increasing the levels of these neurotransmitters in the brain, it seems reasonable to assume that this may be the means by which exercise operates.

Physiological Mechanisms: Many of the feelings of stress, anxiety and depression we experience come from appraisals of the way our body feels at any given point. For example if we perceive muscle tension in our neck as stress, then it is stress, and we may react in a manner consistent with stress responses. Elevations in pulse and breathing rate may be perceived as anxiety, which in turn really makes us anxious. Given that exercise results in lower blood pressure, slower pulse, and easier breathing, we might assume that this is effecting our perceptions of depression and anxiety. Though only a weak relationship is found between physical fitness and reduction of depression and anxiety, this doesn’t rule out the increase in cerebral blood flow and improved muscle relaxation that accompanies physical fitness.

Psychosocial mechanisms: A number of hypotheses are offered within this area, and is probably the most easily understood. The idea that regular exercise and physical fitness can improve perceptions of our self-worth and self-esteem is not now, and is probably a drive to participate in exercise for most of us whether depressed or not. In today’s materialistic society “Body image” appears to be one of the biggest obsessions. It affects us to the point that our every move is guided by it. Eating patterns, dressing habits, exercise habits and even the way we walk or hold ourselves is in some way related to our drive to have a good body image. It’s not unexpected to find that body image and self-esteem are more closely associated with each other than any other dimension of self. Many of the effects of exercise such as losing fat and improving muscle shape and definition offer a means to improvement of body image and therefore self-esteem. It should be noted that positive self-esteem is related to good mental well-being. Changing our body appearance through exercise may also contribute to positive self-esteem through the sense of control we gain when we bring about change in our bodies. Another factor that may contribute is social interaction that accompanies activities that involve exercise. However, this would also suggest that playing chess could be just as effective if it was a simple act of social interaction.Exercise is an important part of keeping children healthy. Encouraging healthy lifestyles in children and adolescents is important when they grow older. Lifestyles that are learned in childhood are more likely to stay with the child into adulthood. Changes in lifestyle are harder to make the older the person becomes. The best way to promote healthy lifestyles is for the whole family to become involved.

Nutrition Prescription

Weight: Your weight should confirm to your height. If necessary you should reduce by a combination of exercise and diet.

Calories: a) Your maximum calories intake should not exceed to your current weight in kgs x 24.

B) If you are to lose weight, do an hour’s walking daily and reduce your calorie intake to between1000-1500.

C) Do not reduce your calories intake by more than 500 calories daily from your maximum intake.

D) Do not go below 1000 calories ever.

E) When you achieve your correct weight, your consumption of calories should be correct weight x 24 and you must continue your daily exercise.

Diet : Foods to avoid: A) Sugar : Puddings, sugar in tea, ice creams, mithai etc

B) Fats: Butter, ghee, dalda, fat meats, eggs etc

C) Drinks: Alcohol, aerated drinks

D) Additives: Salt, Sauces, Pickles

Recommended foods: A) Fruit – daily

B) Vegetables – daily

C) Water – 6/8 glasses daily D) Grain and pulse daily: Rice, Wheat, dhal E) Health foods - overleaf

Dieting is a life time commitment and not done crash basis.Exercises should be both aerobic and muscle forming.Maintain meal timing, All meals including breakfast should be eaten.Eat sufficient complex carbohydrates such as potatoes, rice, chapattis etc.Preferably use a small plate and avoid second helping.

Eat light dinner, medium lunch and heavy breakfast.

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The Relation between Organizational Trust and Organizational Citizenship Behavior of Physical Education Teachers Working in North Khorasan Province in Iran

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Abstract
This study aims at analyzing the relationship between organizational trust and organizational citizenship behavior (OCB) of physical education teachers working in North Khorasan Province, Iran. The statistical population of our study consisted of all physical training teachers working in North Khorasan Province schools (n = 480) and the sample size was estimated 210 using Morgan Table. Totally, a number of 187 questionnaires were analyzed after discarding the unusable ones. Two standard questionnaires, organizational trust (Gary Roder, 2003) and Organizational Citizenship Behavior (Podsakoff, 1990), were used to collect data. Both questionnaires' validity was confirmed using reformative viewpoints of sport management university professors. Internal consistency reliability of the two questionnaires, e.g. organizational trust and OCB, was calculated using Cronbach's alpha (0.93 and 0.80, respectively). A descriptive correlation design was used to field test. Descriptive indexes, the Kolmogorov-Smirnov statistical tests, Pearson's correlation coefficient and multivariate regression were used to analyze data. The Kolmogorov-Smirnov test result confirmed that our data are normal ($p \leq 0.05$). The results of correlation test indicated that there is a positive and significant relationship between organizational trust and OCB ($p \leq 0.01$, $r = 0.349$). The regression analysis showed that OCB is influenced by organizational trust of physical training teachers who are working in North Khorasan Province schools.

Keywords: Organizational Trust, Organizational Citizenship Behavior, Physical Training Teachers.

Introduction

A certain set of employees' behaviors affect considerably an organization's success; especially voluntary behaviors relying on which the employees work for an organization. Likewise, contemporary organizations emphasize the recruiting and retaining useful and committed employees who act beyond the expectations. Performance beyond expectations is an inseparable part of the performance management; as employees' contribution in such behaviors will be followed by their organization's success [1]. Organizational citizenship behaviors (OCBs) are a sample of such behaviors. Researchers believe that OCB is practically important because it improves the organizational effectiveness and efficiency through contribution in development of human resources, creativity and adaptability [2]. Historically, for studying the relation between occupational behaviors and organizational effectiveness researchers used to concentrate often on in-role performance of employees. However, OCB includes employees' voluntary behaviors, which are not among their formal duties and are not considered directly by the formal reward system but are considered as the extra-role performance [3]. Voluntary behaviors refer to the activities that would not be resulted in punishment, if are not carried out [4]. The difference between voluntary and compulsory cooperation is very important. Under compulsory situation, one carries out his/her responsibilities in accordance with the regulations and acceptable standards of an organization and does not cross the imperatives; while under voluntary situation the responsibility is concentrated and people exert their efforts, energy and insight to develop their abilities in favor of their organization. In this case, people usually neglect their personal interests and prioritize their responsibility in favor of others' interests [5]. Researchers have not achieved any consensus on dimensions of the OCB, so far; as there are more than thirty different theories about citizenship behavior [6]. Perhaps, it can be said that the most authenticated category proposed about the dimensions and components of OCB has been offered by Organ (1988), which is now used in various studies.

In addition to OCB literature indicates that trust is a vital and essential factor for both personal and organizational success. That trust in workplaces is a potential major factor that results in the improved organizational performance and that can be a source of competitive advantage in long terms has attracted many attentions. Developing a place with the organizational trust brings about many positive outcomes for the organization; in contrast, negative consequences of lack of trust caused by employees' reluctance to contribute and cooperate with others, risks due to improper behaviors, low-quality and need-to-be-controlled works would be cumbersome [9]. Most researchers believe that generally trust and optimism about incidents or trusting others without reasons are compulsory [10]. In fact, trust is our belief in the fact that others are doing exactly what we expect them to do; without any necessity to monitor them. In a nutshell, trust means beliefs that people have about the next behavior of the opposite group [11].

Forming trust in organization needs a strategy to increase level of trust among all employees and managers. Yilmaz and Atalay (2009) categorized effective elements of organization trusts into two categories: organizational elements (including appraisal of employees' success using modern techniques; equipping with fair reward systems; reflecting regular and on-time feedback to employees, etc.) and personal elements (e.g. inclination to relying, values, habits and behaviors, etc.) [11]. In contrast, researchers have pointed to various outcomes for the organizational trust; for example Jeon (2009) suggests that the impact of organizational trust includes formation of ideal trends such as generating and exchanging knowledge, job satisfaction, organizational citizenship behaviors, organizational commitment, etc. as well as decreasing undesirable trends such as job turnover, defensive behaviors, regulatory behaviors, etc. [13]. Yilmaz and Atalay (2009) have suggested that the organizational trust has a positive effect on organizational commitment and OCBs and also on improving social communications [11]. Bulent (2005) has introduced the organizational trust as the predictor variable of OCB. One can enhance performance and efficiency of an organization and guarantee its long-term survival through strengthening organizational trust and citizenship behavior. Therefore, being aware of different effects of organizational trust on OCB would be very useful for most managers who are seeking for increasing their organization's effectiveness. Furthermore, the organizational trust develops the feeling of fairness, caring among employees and makes them sure about their organization's supports; with they are assured that the organization will never exploit them [10].Regarding what was discussed so far and in order to improving the organizational performance and effectiveness managers in the Education Organization, as the most important training institute of the country and other public organizations and institutions need to provide a condition in the workplace and organization under which teachers, especially physical education teachers who directly involve with the physical training of students, feel the necessary trust; because this sort of trust plays an important role in organizational commitment and teachers' OCB. In general, regarding the lack of such studies in the educational and cultural organizations, especially the Education Organization, the necessity of such studies is felt.

Methodology: It is a correlational study and is sorted as an applied one in terms of its objectives. The sample of the study consisted of 210 physical training teachers of North Khorasan Province who have been selected from seven counties of the province (including Bojnord, Shirvan, Farooj, Esfarayen, Maneh and Samalghan, Garmeh and Jajarm, Raz and Jargalan). Teachers were sampled using simple random sample technique regarding the population of each city and the questionnaires were distributed among them. After collecting questionnaires it turned out that a number of 187 questionnaires were useable which according to the 5-point Likret scale the same was considered as the sample of the study. The reliability was measured using Cronbach's alpha (organizational trust $\alpha = 0.93$ and OCB $\alpha = 0.80$). Facial and content validity of surveys were verified by professors of physical education and management professors. Finally, data was analyzed, in two descriptive and deductive levels, (Kolmogorov-Smirnov test, Pearson's correlation and step-by-step multivariate regression) using SPSS software (version 20) ($p \leq 0.05$).

Results:

Table1. Coefficient of correlation between variables of organizational Trust and OCB

		Variables of organizational trust		
		Horizontal trust	Vertical trust	Institutional trust
OCB	**Coefficient of correlation**	0/365*	0/188*	0/418*
N	187			

*P ≤ 0/05

Table2. The results of regression

Predictor variables	Predicted variable	F	P	R	R^2	β	P
Horizontal trust	OCB	2/8	0/01	0/571	0/33	0/073	0/003
Vertical trust						0/044	0/067
Institutional trust						0/023	0/053

Discussion and Conclusion

The results gained from the analysis of hypotheses of this study showed that there is a positive and significant relationship ($p \leq 0.01$; $r = 0.349$). It means that employees consider positive either environment or atmosphere of their organization in a condition under which employees feel that their organization protects them and is sensitive to their problems. These employees are sensitive about improving works and their organization's image; so they embark on organizational citizenship behaviors voluntarily and unconsciously. Presence of trust in an organization keeps people together and enables them to show a trustful and open behavior to each other. Organizational trust brings about a sense of security for employees and improves their organizational commitment and performance and encourages people to perform beyond their formal duties. Alunen et al believe that when 1) The promotion systems are so that all people and groups can promote; 2) objectives and mission of the organization are clear and acceptable for employees; and 3) employees are aware of the organization's strategy, then employees' trust on their organization will be increased. Since these employees like their workplace, they likely spare no efforts to do what are not among their duties but may help to improve the image of the organization and other employees.

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The Impact Of proposed Training In Developing Offensive Skills & Explosive Power In Fencing Game

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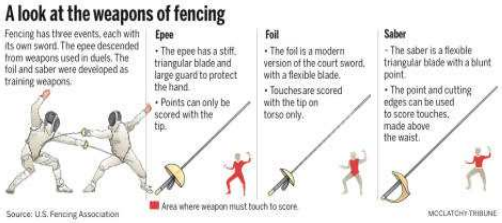
Introduction

Fencing is quite basically sword fighting made into a sport. It's a reflex based sport, react to the sword which is going to hit you in the face, etc, but there's an elent of strength, speed and skill to it which you might not see in other sports. Ostensibly Fencing is a great option for guys and girls who want to avoid the outdoors sports, but don't expect sothing which requires no work at all. Fencing needs balance and thigh strength is a must in the 'En Gamerde' position. It might not have a great reputation in a Rugby based School but it is well worth the ti people put into it. There are three different disciplines in Fencing, each with its own rules and quirks. Firstly there's Foil; the training sword. This sword is thin and springy and has quite a few rules to it which fencers need to acquaint themselves with. It has rules of Right of Way which makes it more tactical than pure force based.You have to judge what your opponent will do, cater your reaction to do what he or she won't

Fencing Game

The sport of fencing is fast and athletic, a far cry from the choreographed bouts you see on film or on the stage. Instead of swinging from a chandelier or leaping from balconies, you will see two fencers performing an intense dance on a six-feet-by-40-feet strip. The movement is so fast the touches are scored electrically - more like Star Wars than Errol Flynn.

The Weapons (Foil , épée sabre)are the three weapons used in the sport of fencing. While it is not unusual for fencers to compete in all three events, they generally choose to develop their skills in one weapon. Until recently, won were permitted to compete only in foil, but now the USFA & FIE offer national competitions for won in épée and sabre. Won's épée was added to the World Championships in 1989 and was held for the first ti at the Olympic Games in 1996.



Foil and épée are point-thrusting weapons. Sabre is a point-thrusting as well as a cutting weapon. The target areas differ for the three weapons, though all three are scored electrically.

The main object of a fencing bout (what an individual "game" is called) is to effectively score 15 points (in direct elimination play) or five points (in preliminary pool play) on your opponent before he scores that number on you. Each ti a fencer scores a touch, she receives a point. Direct elimination matches consist of three three-minute periods.

Foil

The foil has a flexible rectangular blade, approximately 25 inches in length, weighing less than one pound. Points are scored with the tip of the blade and must land within the torso of the body. The valid target area in foil is the torso, from the shoulders to the groin, front and back. It does not include the arms, neck, head and legs. The foil fencer's uniform includes a tallic vest (called a lamé) which covers the valid target area, so that a valid touch will register on the scoring machine. A small, spring-loaded tip is attached to the point of the foil and is connected to a wire inside the blade. The fencer wears a body cord inside his uniform which connects the foil to a reel wire, connected to the scoring machine. There are two scoring lights on the machine. One shows a green light when a fencer is hit, and one shows a red light when her opponent is hit. A touch landing outside the valid target area (that which is not covered by the lamé) is indicated by a white light. These "off target" hits do not count in the scoring, but they do stop the fencing action temporarily.

Épée

The épée (pronounced "EPP-pay"), the descendant of the dueling sword, is similar in length to the foil, but is heavier, weighing approximately 27 ounces, with a larger guard (to protect the hand from a valid hit) and a much stiffer blade. Touches are scored only with the point of the blade. The entire body is the valid target area.The blade is wired with a spring-loaded tip at the end that completes an electrical circuit when it is depressed beyond a pressure of 750 grams. This causes the colored bulb on the scoring machine to light. Because the entire body is a valid target area, the épée fencer's uniform does not include a lamé. Off-target hits do not register on the machine.

Sabre

The sabre is the modern version of the slashing cavalry sword, and is similar in length and weight to the foil. The major difference is that the sabre is a thrusting weapon as well as a cutting weapon (use of the blade). The target area is from the bend of the hips (both front and back), to the top of the head, simulating the cavalry rider on a horse. The sabre fencer's uniform includes a tallic jacket (lamé), which covers the target area to register a valid touch on the scoring machine. The mask is different from foil and épée, with a tallic covering since the head is valid target area. Just as in foil, there are two scoring lights on the machine. One shows a green light when a fencer is hit, and one shows a red light when the opponent has hit. Off-target hits do not register on the machine.

Techiniques

Holding the grip too tight leads to numerous problems. The arm must be the primary strength control, although these muscles should be used to a minimum until action occurs. Many fencing attacks and parries require very flexible wrist movements in order to properly execute parries, counter-parries, envelopments, disengameges and coupes. A tight grip also degrades the accuracy of point placent, since the arm will then move with the wrist and displace the point. Any preliminary arm movement is a signal of things to co ("telegraphing your moves"), and the movements become larger and slower. The famous Italian fencer and master, Santelli, told his fencers to "....grip the weapon as if you have a small bird in your hand". All of my fencing masters have made similar comments. First pick up the weapon with two or three fingers as shown below: Three Finger Grip(Note that this is a pistol grip foil, and that the French foil is held and fenced differently, since the grip is comparatively long and must be maneuvered around the wrist as the blade changes position). Then lightly wrap the other fingers around the grip as shown below. The blade should be in line with the arm, both vertically and horizomentally. Note that three fingers do most of the holding.

Methods

Fencing athletes in number of 20 took part in the study. Their were divided according to the age criterion recommended by the Polish Fencing Union. Following age groups were created: Status 1 - (n=5) athletes classified as the Senior trained group; Status 2 - (n=7) athletes classified as junior groupStatus 3 - (n=8) athletes classified macro-region group. Athletes of 3 different fencing weapons took part in the experiment: sabre, foil and epee. Measurements were taken by coaches during senior and junior grouping and macro-regional camps. *Age and somatic features:* Markings of the mean age, body height and mass were done by the Roeher's index calculation according to: body mass [gr]x100/height [cm]^3 formula.

Specialistic tests: special endurance - measurement of time in which athlete goes through the fencing floor on the 16x6m distance forwards and backwards in on-guard position.

Motions precision and spatial orientation - scored pinning on with the blade's end of falling glove (3 trials, 5 series). The gymnastic bench was put by the wall-bars in standard angle (70 cm from vertical point). The place of pinning on responded the place of hitting in the corpus - it was restricted by tapes at 100 to cm height

Speed of motions complex in respect of coordination - test encompassed 3 fencing actions which were timed electronically: first was the corpus thrust, then on-guard position taking, thrust executed with a beat and corpus lunge or in sabre fencing - cut on the mask, on-guard position - step backwards, feint attack with corpus step lunge, in sabre fencing - with flank cut and back to the on-guard position. The above exercises combination was used during lessons with coach.

The ability of motorial adjustment - the test presented obstacle track with fencing armour on. It was placed on 9x9m square and obstacles were placed on each straight segment. The first were 3 athletic hurdles, second was the gymnastics box put lengthwise, third were 2 mattresses and forth was the biggest element of gymnastic box through which subjects had to do interlacement. Examined could not separate with their fencing weapon. Obstacles could be overcome according to individual ideas. The time of Results

Table 1

Average variable values and standard deflection in examined groups

No	Variable	Olympic Gr. n=5		Junior Gr. n=7		Macro region Gr. n=8	
		Variable	±SD	Variable	±SD	Variable	±SD
1.	Age (years)	23.28	12.45	17.23	4.32	14.52	3.84
2.	Body height (cm)	179.44	5.44	177.84	7.88	170.76	7.18
3.	Body weight (kg)	76.10	5.44	68.28	8.29	57.00	9.58
4.	Roeher's index (points)	1.33*	0.06	1.24*	0.06	1.16*	0.15
5.	Cross apparatus (points)	113.69*	22.55	76.12	30.54	43.76*	21.36
6.	Simple reaction time	0.18	0.02	0.19	0.03	0.21	0.03
7.	Choice reaction time (s)	0.37	0.03	0.36	0.51	0.44	0.05
8.	Simple reaction errors index (points)	0.54	0.90	1.11	1.94	1.69	4.66

Summary

Fencing is an elegant, prestigious and traditional sport which reflects the success qualities that are important to contemporary people who seek a challenge to both body and mind through a competitive blend of patience and determination, discipline and competitiveness. In fact, fencing is also referred to as physical chess by many proponents. While there may be a relevant comparison here, the physical aspect of fencing is underestimated more often than not in this analogy.

Fencing is a game of the mind but it does require immense forethought, precise execution and great focus. Nonetheless, fencing is a game that demands physical power, agility and flexibility. Professional fencers spend a lot of time being physically fit. The training routine involves exercises, weight training and stretches. Over the years, the importance of physical fitness has not been given as much importance by the athletes as it should be given. Individually, fencers do their regular runs, weight lifting and follow various other exercise routines while they should ideally be following a more specific routine to improve their fencing skills Fencing has many features and skills fencer should have to be distinguished by from other sports because it requires a great efforts in specific time with ability to do his best continually at uneven periods for one or two days. Therefore, there is need to develop special training program for fencers to attain the basic physical fitness and skill which is a key for success in fencing competitions. In this context it was thought to introduce yogic exercise program as a training part for elite fencers. As yoga is an ancient Indian system which helps to keep person physically and mentally fit. It has been scientifically proved that yoga helps to improve health related fitness and concentration which is a key factor for achieving success in competitions. In this investigation, therefore, an attempt has been made to see the efficacy of yoga training on health related fitness and fencing skills of state level fencing players.

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Effects Of Imitation In Unilateral Strength Training Programme On Observational Learning And Strength

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Abstract

The purpose of this study was to investigate the potential imitation primary motor cortex (M1) effect in strength gains prior to strength training and the effectiveness of observational learning design on strength gains in biceps muscle. In total, twenty healthy male volunteers were volunteered to participate in this study. All subjects wereright handed, physically active in non-competitive recreational activities and did not engaged in any resistance training for at least past 6 month prior to the of the study. Subjects were randomly assigned to two groups (n=10 each group) namely the control group and experiment (video) group. Baseline information was collected during pre-test for 1RM biceps curl test and the anthropometric measurement of biceps muscle girth. Subjects assigned to the experiment group, performed a strength training programme (80% of their baseline 1RM) of the right elbow flexor with imitation via video, three times per week for four weeks (12 sessions in total). Aone way analysis of covariance (ANCOVA) with a .05 significant level was conducted to compare the right 1RM strength training in the video and control groups. There was a significant difference in the 1RM biceps curl test for video (M=13.1, SD=0.96) and control (M= 11.1, SD=1.17) groups; test [F (1, 17) =71.24, $p<0.05$]. These results suggest that video really does have an effect on strength gains. However, the study found that there not a significant difference in the right bicep girth in the video (M=26.9, SD=3.67) and control (M=26.1, SD=2.95) groups after four weeks of training[F (1, 18) =0.289, $p<0.05$]. Specifically, our result suggest that four weeks of unilateral strength training enhance strength gains but without the muscle hypertrophy. These findings provide and insight to the effect of an imitation strength training programme which could reduce the training times, mayenhances sport performances and may be an effective new techniques for the strength training programmes of coaches and athletes.

Keywords: Imitation, observational learning, primary motor cortex (M1), strength training.

INTRODUCTION

In experimental psychology, imitation paradigms are utilized to surmise cognitive processes. It is considered on a system that matches the observation activity with an internal motor representation of that activity.Generally, these adjustments don't happen quickly and practice is needed to perfect performance. Even though physical practice is most common, it can be time-consuming, energy demanding and expensive. Therefore, imitation observation has been adopted to enhancing the physical performance.Imitation observations have been expected to share neural, functional commonalities and similarity to physical practice (Fadiga et al., 1995; Stefan et al., 2005). Besides, Cross et al. (2009) found that observational training and physical training affect the pre-motor cortex and parietal lobule during a five day watchand dance sequence. Accordingly Cross et al. (2009), noted observational learning can occur and this process can selectively facilitate the brain's motor

circuit when a similar action is executed. This study indirectly showed that observational learning influenced the brain area and might affect performance.

Moreover, one neurophysiological process that may influence how the motor system adapts following observational training is the amount of corticospinal system activation that occurs during action observation. If the action observation can increase the excitability of the corticospinal system, it may possibly strengthen the network by enhancing the motor output in strength gain. Some studies claimed that MNS is strongly activated and increased primary motor cortex excitability when an observer is presented with a previous action related experience (Howatson et al., 2013; Lago-Rodriguez et al., 2013; Sakomoto et al., 2009). In addition, observational studies have reported an increased activity in the corticospinal system during action observation (Fadiga et al., 1995) and changes in the primary motor cortex have been reported following repeated action observation (Stefan et al., 2005).Furthermore, Lawrance et al. (2013), conducting a training bout in observational learning using a video clip which subjects viewed 20 times, and with each viewing lasting 30 seconds, found that high imagery ability and observational learning have greater effect suggesting that the relationship between observational learning and successful imitation performance is moderated by imagery ability. The present investigation suggests, a possible mechanism for the moderating role of imagery ability on the benefits of this intervention developing a faster cognitive visual- spatial representation (imitation effect). It is viewed that if a first behavior imitate a second consequent behavior then the underlying cognitive processes for the two practices must be effected. In its simple form, repetition imitation demonstrates that if a behavior is completed and repeated, the first behavior imitates the second and probably the cognitive process also need to be repeated. Thus we decide to use video task approach which theprimary motor cortex (M1) in relation to the mirror neuron system are activated may enhance strength gains. Recent literatures in strength training revealed that adaptation in the motor cortex has partly contributed to strength gains (Carroll et al., 2011; Hortobagyi et al., 2009; Selvanayagam et al., 2011; Weir et al., 2012). More specifically the Primary Motor Cortex (M1) has been identified as one of the most likely sites of neural adaptation as evident through the involvement of M1 based on neural activity that involved in strength training (Classen et al., 1998; Selvanayagam et al., 2011). For example, the studies by Classen et al. (1998) and Selvanayagam et al. (2011), used Transcranial Magnetic Stimulation (TMS) to identify the involvement of M1 based on neural network revealed that the shift in TMS-evoked twitches towards the training direction following strength training.Based on the focused results ofClassen et al. (1998) and Selvanayagam et al. (2011), researcher's aim is to test the hypothesis (M1 has been identified as one of the most likely sites of neural adaptation as evidenced through the changes in neural networks and substrates involved in strength training), by creating a motor learning design that could excite M1 into strength training (video clip in weight training design). Researcher decided on an observational learning model using imitation to test the hypothesis through the specific use of a video clip (of an action) to investigate strength gain responses utilizing one repetition maximum (1RM) biceps muscle curl test with a specific end goal to inspect the impact of activity strength observation on the resulting executed strength gain.This is done by comparing the strength gain video group and control groupafter four weeks of training**.** It is hypothesized that, this imitation effect on M1 prior to strength training may enhanced strength gains. This can be important for sport performance, by contributing an effective weight training programme, to enhance strength gain over a short period and minimize sport injury.

Methodology

This investigation was an experimental research design which involved the measurement of 1RM biceps curl test. 20 students who studied in Sekolah Menengah Kebangsaan Labuan (SMKL) were selectedas participants for the study. The participants were randomly assigned into two groups namely the control group, experimental (video) group. Each group consisted of 10 participants.

Procedure

All participants were right handed, as assessed by the Edinburgh Handedness Inventory (Oldfield, 1971), to determine their preferred hand to perform their daily activity and beingphysically active and healthy in non-competitive recreational activities, none of the subjects were involved with any resistance training for at least 6 month prior to the start of the study. All participants' consented to participate by signing a form approved by University Malaya Research Ethics Committee (Non-Clinical) for conducting the study. After that, participants underwent a familiarization session prior to baseline assessment. The 1RM test was performed following the anthropometric measurements (biceps muscles girth) on the first day. After 48 hours, the 1RM test was repeated to determine test-retest reliability. The heaviest load achieved on either of the test days was considering the pre-training 1RM (baseline). No exercise was allowed in the next 48 hours between the 1RM tests, to avoid interference in reliability results.

Instrument

The participants were pre-tested on 1RM bicep curl test on the trained (right) arm. Experimental (video) group were exposed to the strength training programme (80% of their 1RM baseline) of the right elbow flexor, three times per week for four weeks (12 sessions in total). Participants spent two minutes watching the video before starting the first set and during the rest interval for each set. At the end of four weeks of training, the researcher investigated whether there was a significant difference in the performance of 1RM bicep curl test. The design of this study focused upon individual performances in the 1RM bicep curl pre-test, providing training for four weeks and to determine if participants improved their performance in 1RM bicep curl test as a result of experimental treatments.

Results : To determine whether there was a significant difference in the strength gains of the two groups in 1RM biceps curl test after following a four week unilateral strength training programme, a one way analysis of covariance (ANCOVA) with a .05 significant level was conducted.Table 1 below provides descriptive statistics for the two groups in pre-test means, post-test means (M), the standard deviation (SD) and number (N) of participants in each group.**Table 1**Comparison of Pre-Test and Post-Test Means and Standard Deviation of Two Groups in 1RM Right (Trained) Biceps Curl Test

Pre-Test	N	M	SD
Control Group	10	10.95	1.05
Experimental Group (Video)	10	10.95	0.93
Total	20	10.95	0.97
Post-Test	**N**	**M**	**SD**
Control Group	10	11.13	1.17
Experimental Group(Video)	10	13.10	0.96
Total	20	12.11	1.45

The pre-test results showed no significance difference at the $p<0.05$ level in 1RM right trained bicep curl test between the means and the standard deviations among the two groups: control group (M=10.95, SD = 1.05, N=10) and experimental group (video)(M=10.95, SD=0.93, N=10. The direction of effect showed the same statistical features for all of the participants in thetwo groups: total groups

(M=10.95,SD=0.97, N=20). The descriptive statistical features for the two groups in post-test indicated control group (M=11.13, SD=1.17, N=10) and experimental group (video)(M=13.10, SD=0.96, N=10), total groups (M=12.11, SD=1.45, N=20).The direction of effect in post-test indicated that the performance of experimental group (video) in 1RM bicep curl was better thanthe control group.

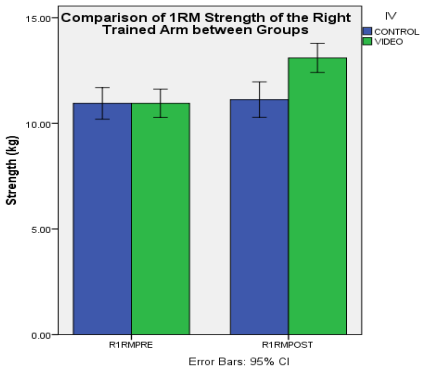

Figure1: Comparison of 1RM Strength of Right Trained Arm Pre-Test and Post-Test by Group.Figure 1 shows the pre-test means for the two groups are clustered closely (control group mean 10.95 and experimental (video) group mean 10.95) indicating there was no significant difference in 1RM bicep curl test among the two groups.The post-test means of the two groups for 1RM bicep curl test indicated the control group mean showed a slight increase from 10.95 to 11.13 indicating an increase of 0.18. The experimental (video) group mean increased from 10.95 to 13.10 in the post-test. The difference in means indicated an increase of 2.15. To further determine whether the different training programmes significantly contributed to the results, a one way analysis of covariance (ANCOVA) was run on the tests, the results of which appear in Table 2.

Table 2 provides the descriptive statistics for the two groups. Table 2: ANCOVA Analysis of Co-Variance for 1RM Bicep Curl Test by Control and Video Group

Source	Sum of Squares	df	Mean Square	F	Sig
Right 1RM Bicep Curl Test	1 5.863	1	1 5.863	1 46.782	0 .00
Groups	7 .669	1	7 .669	7 1.240	0 .00
Error	1 .837	7	0 .108		
Total	2 415.750	2 0			

In Table 2 results indicated that there was no significant difference between the two groups in 1RM bicep curl test [F (1, 18) =0.539, p<0.05] before treatment was administered. After undergoing a four week training programme using video, the post-test results indicated that there was a significant difference among the two groups in the performance of 1RM bicep curl test [F (1, 17) =71.24, p<0.05]. Experimental group showed that the effect of imitation in M1 via video clip can enhance the strength gains.In addition, the study showed no significance difference in arm circumference after four week training programme between control and experimental (video) groups [F (1, 18) =0.289, p<0.05].

Discussion: In this study, researcher investigated whether the imitation effect especially using the video and mirror would imitate subsequent action and result in strength gains without any overload principle in the strength training programme. Researcher believes that, the use of imitation of observation activity may modulate observer's brain activity specifically the mirror neuron system and tap into M1 which may result in strength gain after a short time period without any overload strength training programme. The main findings of the study were the significant increase in 1RM strength without the muscle hypertrophy. In this study, we have found that imitation with video increased 20% in the right trained hand after a short term (4 weeks) intervention strength training programme. It showed that imitation using a motor learning programme (video) may facilitate strength gain through changes in brain activity and neural adaptation to enhance the strength gain. These results confirmed the same expectation with previous studies in Classen et al. (1998) and Selvanayagam et al. (2011). Results from this study are consistent with the previous studies that imitation through observation learning by viewing an action through the video can facilitate the imitation effect (Fadiga et al., 1996; Griffiths &Tipper 2009; Lawrance et al., 2013; Salama et al., 2011). Improvement in 1RM bicep curl test may be due to the participants were exposed to watching the video before performing the strength training exercises which the imitation had occurred before the implementation of the strength training programme. This study proved that imitation conditioned by observation via a learning process (video) might lead to faster initial execution of the planned action response (strength gain).Previously, the strength training programme studies (Farthing et al., 2007; 2011; Hortobaygi et al., 2011; Kidgell et al., 2010; 2011; Pearce et al., 2013) concluded the progressive overload principle during the four week strength training programme to investigate the effect of strength training programme in mirror neural system, brain activity and neural adaptation in strength training effect. The novelty of this study as compared to previous studies is all participants performed the same intensity for the four week strength training programme in a short time without any progressive overload principle because our study was focus on how the imitation effect on M1 in strength gains. Based on the previous study, imitation effect on observation learning was towards improvements to the skills training compared to the strength gain (Lawrance et al., 2013; Lago-Rodriguez et al., 2013; Sakomoto et al., 2009). In addition, Howatson et al. (2013), proposed using a mirror in unilateral strength training might enhance strength gain. So, Howatson et al. (2013) study, proved that imitation in observational learning (video or mirror) can enhanced strength gain. The possibility of this strength gain may be due to the changes in brain activity especially in the primary motor cortex area (Classen et al., 1998; Selvanayagam et al., 2011) and activation in the mirror neuron system during the imitation process.

Conclusion: In conclusion, the study confirmed that the imitation effect through observational learning (video) increased the 1RM bicep curl test without any progressive overload principle in a four week strength training programme. The imitation effect may an effective weight training programme to enhance sport performance and also useful for rehabilitation. In this study, it suggested that imitation effect may give windows of opportunity to youth athletes to involve themselves in strength training programme which may minimize sport injury by reducing the overstrain problem among athletes

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Effects Of A 12 Week Resistance Training Program On Body Composition And Body Mass Index Of Malaysian Sports School Adolescent Athletes

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Abstract
The purpose of this study was to investigate the effectiveness of a 12 week resistance training program on body composition (BC) and body mass index (BMI) of the Malaysian Sports School adolescent athletes. Sixty four adolescent athletes aged between 13 to 15 years *(14.43 ± 0.79)* old boys and girls student athlete of the Bukit Jalil Sports School, Kuala Lumpur, Malaysia who were randomly assigned to 2 groups based on sexual maturation status. The experimental group (RTUMB)*(n=32)* performed a resistance training program via a 10 station circuit using medicine ball twice weekly for 12 weeks, whereas the control (CON)*(n=32)* performed their normal training sessions for the same duration. All the participants were tested on body composition and body mass index for pre and post intervention. Normality data showed that all data was normally distributed (Kolmogorov-Smirov test). SPANOVA analysis revealed a significant difference in body composition [F (1, 62) = 120.82, p< .000], and body mass index [F(1, 62) = 335.25, p< .001] from the pre-test and post-test of the experimental group compared to the control group with a significant level of p<.05. The findings indicated that the designed 12 weeks resistance training program had effectively elicited a statistically significant and positive effect on body composition and body mass index of the adolescent athletes of the experimental group compared to the control group. The results demonstrated that the designed circuit training program is an effective training program to improve body composition and body mass index in adolescent athletes.
Keywords:resistance training, adolescent, sexual maturation, body composition, body mass index.

Introduction
Physique is an important aspect in athletic performances. World class performances in sports are attributed to physique. Thus, the wide range of body sizes and body composition are evident in sport performances. Body composition as the physiological factor plays a critical role in performance by itself though there are other factors that determine sporting performances such as psychological, tactical, technical and morphological factors. As such body composition could be a limiting factor in athletic performances whereby a long distance athlete has a long slender physique with low body mass whereas a thrower has a larger physique and a higher fat free mass is required in both events and excess body fat is detrimental to top class performances.Body composition consists of absolute and relative amounts of muscle, bone and fat tissues, water, minerals and other components of total body mass (Heyward, 1991). Generally, body composition refers to fat percentage, fat mass, and fat-free mass, with fat-free mass as body structures excluding fat-mass (Wilmore &Costill, 1994). Components such as fat-free mass respond to training and influences athletic performances.In addition body composition is one of the key components of an individual's health and physical fitness profile. It is important to realize that an individual may look overly-fat even though they do not appear to be over-weight and this condition may due to lack of physical activity. Therefore body composition analysis assessment should be an integral part of each individual's physical fitness regardless of body weight. The average relative percentage body fat is 12-15% for college-age men and 22-25% for college-age women. But for optimal fitness, experts recommend the body fat level of 12-18% for men and 16-25% for women (Wilmore, 1986). Since body weight is composed of water, protein, mineral and fat. And these two component model of body composition divides the body into a fat component and fat-free body component. The fat component includes all extractable lipids from adipose and other tissues of the body. Thus, the fat weight is expressed relative to the total body weight. Whereas the fat-free body component consist of residual chemical sand tissues including water, muscle (protein) and bone (mineral).

Consequently, body weight and body composition are directly related to energy balance in an athlete sporting career. Energy balance is influenced by expenditure from physical activity in one's daily life.

As such, regular exercise has a positive effect on body weight and body composition (Jakicic& Otto, 2006; Andersen &Jakicci, 2009), through muscle based adaptations include hypertrophy, hyperplasia, fiber type modifications and architectural changes, consequently improving body composition (Faigenbaum, 2000; ACSM, 2002: Kraemer, et. al., 2002). A spectrum of varied exercise modes benefited body composition, improves health and enhances sport performances. Thus Moderate-intensity cardio respiratory induced exercises and strength training, regardless of gender, are effective for decreasing body fat, fat weight and body weight (Heyward, 1991).

As such, body mass index (BMI) or Quetelet is a widely used clinical assessment of appropriateness of a person's weight. This value is calculated by dividing the body weight (in kilograms) divided by height (in meters) squared to interpret body weight of an individual. BMI correlates with body fat (adipose tissue). It relationship varies with age and gender. For adults, BMI falls into these categories: below 18.5 (underweight); 18.5-24.9 (normal); 25.0-29.9 (overweight); 30.0 and above (obese) (National Center fro Health Statistics, United States of America's Centers for Disease Control and Prevention, 1990). BMI is quick and easy method for determining if body weight is appropriate for body height but BMI does not differentiate between fat and fat free mass weight. So incorporating body composition analysis along with BMI screening provided a more complete measure of one's actual body composition. Whereas body composition measurement consist of measuring Body Fat (kg) (The percentage of total body weight that is fat); Fat Mass (kg) (The actual fat mass); Fat Free Mass (kg) (Fat free mass is comprised of muscle, bone tissue, water, and all other fat free mass in the body; a healthy ratio for the Fat Free Mass is approximately 5: 1 for females, and 7:1 for males thus males carry more muscle than females and therefore will report a higher fat free mass; and Total Body Water (kg) reflects the amount of water in the body. Hydration level is monitored using the following formula: Total Body Water/Weight x 100 =% hydration. According to dialysis standard, women should be approximately 50-60% hydrated, and men should be approximately 60-70% hydrated) (Rhodes &Pflanzer, 1992).

Therefore, body composition is directly related to performance, other physiological parameters and training adaptations, thus monitoring the body composition of athletes on a regular basis provides useful information for training. Training is an integral part of any coaching program and training refers to a systematic process with a long duration of physical and mental exertion to improve an athlete's qualities to produce a higher level of performances in any sports. And with increasing participation of children in a wide variety of youth sports, there is a significant need for a better physical preparation to prevent sport-related injuries.

As a result, resistance training program has become a primary component of athletic conditioning, injury prevention, rehabilitation, enhancing general fitness program by inducing positive changes in altering body composition and improving athletic performances (Bompa, 2000; Kraemer & Fleck, 2005).Resistance training is defined as a specialized method of conditioning that involves the progressive use of wide range of resistive loads and a variety of training modalities that includes usage of free weights, body weight, medicine balls, elastic tubing, and weight training machines as means to increase one's ability to exert and resist force (ACSM, 2009 & NCSA, 2009). Although early studies questioned both the safety and the efficacy of resistance training, however recent evidence indicated that both children and adolescents can increase muscular strength due to resistance training, thus with proper supervision appropriate designed program young athletes participating in a resistance training can increase their strength. Previous studies, literature reviews and reports indicated that regular participation in a youth resistance training program increases strength, local muscular endurance (Faigenbaum, et.al, 1993), improve local muscular endurance, and enhance bone mineral density (Ramsey, et.al., 1990), and reduce the risk of injuries in sports and recreational activities (Avery, et. al, 1996; and Faigenbaum, et. al., 2009).
Similarly, resistance training can improve physical functions for daily activities, physical appearance, enhance psychological well being, reduction of body fat thus improving body composition (Hospital for Special Surgery, 2009), increase far-free mass (Malina, 1991), and are most easily observed in obese youth following resistance training (Watts, et. al, 2005; Sothern, et. al., 2000). And isotonic resistance training produces significant changes in body composition of men and women (Brown & Wilmore, 1974; Mayhew & Gross, 1974; & Wilmore, 1974).Previous studies and reviews indicated that resistance training helps to build fat-free mass as well as in promoting positive changes in body composition (Marra, et. al., 2005; and Ucan, 2013). Changes in biochemical, neurological and morphological components from resistance training had shown positive changes in body composition (ACSM, 2001& 2004). Thus improvements in fitness components, muscular strength and size, fat-free

mass, and decreased body fat have a positive effect in athletic performance (Hoffman, 2002; Velez, et. al, 2010). Furthermore, resistance training of 8-12 exercises performed 2-3 times per week involving major group muscles enhanced the development, maintain and gain of muscular strength, lean body mass and athletic performances (Hass, et. al., 2001; and NSCA, 2009) and resistance training twice weekly for eight weeks had induced significant muscle mass gain (lean weight) (Wescott, et. al., 1995).

However the existing resistance training literature focusing on adolescent based on sexual maturation status and the effects of resistance training intervention program on adolescent and sexual maturation are limited. It is unclear if the resistance training as an intervention training program via circuit resistance training has any effect if imposed upon adolescent athletes based on sexual maturation status, thus raises questions regarding the recommendations of the per said training modalities and intervention program for active adolescent athletes. Consequently more research concerning sexual maturation status and circuit resistance training program via an intervention program, and how this intervention training program affects the body composition and body mass index of adolescent and youth athletes are paramount as to provide vital information for coaches who are coaching these age group athletes.Thus the main purpose of the study is to establish the effectiveness of a 12-week resistance training intervention program on the body composition and body mass index based on sexual maturation status of Malaysian Sports School adolescent athletes and to provide mechanistic (empirical) and practioners (practical) evidence based recommendations that can be utilized by the coaches, fitness trainers, conditioning experts, physical educators, parents, and interested individuals to enhance the overall physical development of an athlete and athletic performances level of the athletes involved in sports especially the adolescent athletes in Malaysia.

METHODOLOGY

A total of seventy, males *(n=40)* and females *(n=30)*participants were engaged for this study from Bukit Jalil Sports School, Malaysia aged between 13 to 15 years old who have novice level experience of resistance training and are of various sports namely, Track & Field, Netball, Field Hockey, Basketball, Squash, and Cricket, and following baseline testing the subjects were randomly assigned to either experimental group, circuit training using medicine ball (RTUMB) or control group (CON) based on sexual maturation status. Participants were volunteers and were informed of the experimental risks and the research was approved by Ministry of Education of Malaysia and Internal Research Committee of University of Malaya Sports Centre. All the testing and training procedure were fully explained, and written parental consent was obtained for each participant who agreed to participate in the study due to the age of the participants which is below 18 years old. Six participants were excluded from the study due to injuries not related to the study. Subsequently, all subjects completed a medical screening form. The characteristics of the remaining 64 subjects who completed the study are as in Table 1.

Table 1: Participants Characteristics: Group*Mean*±*SD*

	Experimental Group	Control Group	*t*-test	*p*-values
Participants *(n)*	32	32		
Age (years)	14.49 ± *0.78*	14.37 ± *0.81*	t_{64} = .242	.624
Height (cm)	1.70 ± *8.17*	1.67 ± *5.34*	t_{64} = 5.280	.025
Weight (kg)	60.23 ± *1.10*	57.28 ± *9.90*	t_{64} = 1.122	.293
Sexual Maturation (pre-PHV or post-PHV)	1.48 ± *.51*	1.51 ± *.51*	t_{64} = .000	1.000

Procedure

Participants underwent familiarization sessions to ensure consistent during testing. Subsequent to familiarization, pre-tests was conducted before the commencement of the training phase. All participants were tested on seven skinfold measurement sites tests for pre and post intervention, and the measurements were carried out at least 24 hours after the last meal to minimize the effects on the results for BC as well as for BMI. Thus, it correlates with the purpose of this study which focuses on the effects of the designed resistance training intervention program on BC and BMI. The prescribed amount of repetition or training load for each exercise was determined by the repetition maximum (RM) test based on the maximum repetition of effort the participants could execute within 60 seconds (1RM) with the rest between the test was set at 5 minutes permitting an adequate amount of time for recovery for all the selected exercises (Baechle, et. al., 2000; BASES, 2004) using the medicine ball (2kg for males and 3kg for females) (Jespen&Potvin, 2003; Jones, 1997). Nevertheless, the repetition maximum test was done earlier before the commencement of the training intervention program and the amount of repetition the participants needed to execute for each exercise was recorded. Subsequently, repetitions for each exercises for each station of the circuit training was then calculated based on 70% maximal motions load of 1RM test. Although, traditionally circuit training is considered to be a compromise between aerobic and strength training, and 8-12 repetitions per set are generally recommended to elicit improvements in muscular strength and endurance as well as muscle hypertrophy (ACSM, 2009; Fleck & Kraemer, 2004),however resistance or strength training that uses higher intensity loads with longer rest periods, usually 60-90% of 1RM with 1-5 minutes of rest developed greater strength (ACSM, 2002; NSCA, 2009).A 10 station circuit training with the loading of the main muscle group changes using varied selected exercises and the participants move from one exercise station to another in a sequence upon completing the calculated repetition. The participants performed 1-3 sets of calculated repetitions (i.e., calculated repetitions + 1-3 added repetition divided by 2 for 1 to 3 sets) based on the prior 1RM test on the subset of upper body, core muscle, and lower body exercises using the medicine ball, for the designated sessions accordingly. The participants were allowed to rest for 60-90 seconds (Arent, et. al, 2005) between exercises with exercises at each station are done at 70% maximal motion based on prior 1RM test of concentric and eccentric muscle actions with a slow to moderate intensity that would elicits strength gains due to the nature of the intervention training program, and the age of the participants involved, thus adapting to the principle of progressive overloading (Williardson, 2006& 2008; Williardson& Burkett, 2008), with the rest interval between sets is 3-5 minutes is likely enough time to uptake H^+ and delay fatigue, then in turn likely will allow participants in the age specified for the study to complete the set repetition and volume of training, therefore improve and enhance strength gains (ACSM, 2009; Baechle, et al., 2000). Each exercise station within the circuit is numbered and the participants worked in pairs and progresses from one station to another in sequence, completing a prescribed repetition of workout at each station which is recorded and read aloud by the partner-B to ensure the exercising partner-A will execute the calculated number repetition that needed to done in each exercising station, before moving on to another station, i.e. from station 1 to station 2 and so upon completion of the 10 stations in the circuit, thus completing one circuit or one set of circuit training than it's the partner B's turn to repeat the training with the assistance of partner A. The set rest for the performer is when he is assisting his or her partner doing the training with the medicine ball by counting the partner's targeted dose. Thus, the rest is actually is an active rest, between 3-5 minutes upon completion of all the 10 stations, thus complying the prerequisite of rest needed when training for strength gains (ACSM, 2009; Kreamer& Fleck, 2005 &2007; Williardson, 2006; Williardson& Burkett, 2008), and in accordance with the progressive overloading that is the continuous increase of workload on the body, tolerance in continuously increasing charges of which is imminent for progress in a program, thus the body continuous to adapt as long as it is given stimuli of a higher workload than of what it is used to. Therefore in the current study, after every three weeks, or six sessions or for every ten sets of training a new RM test was conducted and a new score is gathered, and a new amount of repetition was calculated based on 70% maximal motion of 1RM test that needed to be exercised at each of the 10 stations, and the training sessions progressed as in the previous stage and so on for 12 weeks upon completion of the current research (Lawrence & Hope, 2007; Scholich, 1992).

After baseline measurements, participants were randomly assigned to two groups-one experimental group (RTUMB) *(n=32)* and one control group (CON) *(n=32)*, based on sexual maturation status. Subsequent to randomization, the participants of the RTUMB group *(n=32)* engaged in the designed resistance training program that was divided into three sections: 1)

Warming up and stretching (jogging, dynamic stretching and ABC drills) which lasted for 10 minutes to addresses the adequate joint mobility, neuromuscular compliance and functional range of motion

capacities which is needed to carry out the intended resistance workouts that follow suit (Thomas, 2000); 2) Progressive Resistance Training via 10 stations circuit training using medicine ball of varied exercises namely, Toe Touch, Front Raise, Split Squat, Pelvic Thrust, Reverse Lunges, Overhead Toss, Lying Trunk Twist, Chest Press, Lunges, and Squat, Toss, Bounce and Catch using medicine ball (Benjamin & Glow, 2003; Jones, 1997) twice weekly for 12 weeks that lasted for 60 minutes for the resistance training program that was designed to induce overall strength gains of the experimental group participants especially in the four major muscle groups namely, leg, abdomen, arms and shoulders, back, and trunk; and 3) Limbering Down (Striding and static stretching) that lasted for 10 minutes. Conversely, the experimental group participants through their respective coaches were asked to refrain from any additional resistance training other than the program prescribed by the researcher, whereas, the control group only performed their normal training session and abstain from any kind of formal or additional resistance training throughout the duration of the study, however both groups adhered to their normal training program, maximum of nine sessions that accumulated to 14 hours per week. The resistance training intervention program lasted for approximately 90 minutes per session and took place at the Bukit Jalil Sports School gymnasium.

Instrument

The instruments utilized in this study consisted of Sexual Maturation Status which was determined based on a maturation index that was calculated using the Mirwald and colleague equation. This technique is a non-evasive and practical method of predicting years from peak height velocity (PHV) as a measure of maturity onset using anthropometric variables, thus avoiding ethical and technical complexities found in other techniques (Mirwald, et. al., 2002).The measurement of body composition was done through the skinfold measurement of subcutaneous body fat with a skinfold caliper. Moreover measuring skinfold thickness is one of the most frequently performed tests to estimate percentage body fat. This quick, non-evasive, inexpensive method provides a fairly accurate assessment of percentage body fat. The value obtained by skinfold equation is typically within 3.5% of the value measured with underwater weighing. Skinfold measurement is based on the assumption that, as a person gains adipose tissue, the increase in skinfold thickness will be proportional to the additional fat weight (Howley& Franks, 2007).The major requirement for a skinfold caliper is that it exerts a constant force of 10 g/mm^2 throughout the range of measurement at the skinfold site, regardless of the skinfold thickness and the instrument used in the skinfold measurement of the body composition for this current study was the Harpenden Calipers. The Harpenden calipers traditionally are the ones most often used in research setting because of their precision and reliability. The Harpenden caliper has better scale precision of 0.2 millimeters (Harrison, et al., 1998).

Furthermore, experts in the field of anthropometry have developed standardized testing procedures and detailed descriptions for identification and measurement of skinfold site. Some of the most commonly used sites are described in the Anthropometric Standardization Reference Manual by the International Society for the Advancement of Kinanthropometry (ISAK) (2001);&Harrison, et. al., (1988). The standardized sites as in the Anthropometric Standardized Reference Manual for the skinfold measurement are: 1) Chest; 2) Subcapular; 3) Midaxillary; 4) Suprailiac; 5) Abdominal; 6) Triceps; 7) Biceps; 8) Thigh; and 9) Calf.

As a result, for the current study the researcher took seven sites skinfold measurement as suggested in the Anthropometric Standardized Reference Manual by ISAK(2001). The seven skinfold measurement sites that were identified for the current study are: 1) Triceps; 2) Subscapular; 3) Bicep; 4) Suprailliac; 5) Abdominal; 6) Thigh; and 7) Calf.

For BMI the value is calculated by dividing the body weight (in kilograms) with height (in meters) squared to interpret body weight of an individual.All the tests were done for pre and post intervention and were conducted by the National Sports Institute of Malaysia (NSI)ISAK level II qualified and certified staff at the NSI of Malaysia.

Results: Subsequent to randomization division of groups, an independent t-test was used to determine any significant difference between the RTUMB and CON group. The data from the pre test

and post test was treated and analyzed using SPANOVA or known as Split-plot ANOVA. It is a 'mixed between-within subjects' ANOVA, and this two-way mixed design repeated measure analysis combines between subjects and within subjects variables in one analysis (Chua, 2009). Effect sizes (ES_s) too were calculated to compare the magnitude of changes in between the groups as well as the significance of the effects of the data analysis using Rhea's equation (Rhea, 2004). And α level of p<0.05 was used as the criterion to determine either significant main or interaction effects. Analysis was conducted using SPSS 16.0 statistical program.The significant result based on the Mauchly'sSphericity Test shows that there is need for adjustment of the *df* value. The result of the adjusted value of *df* using the Huynh-Feldt Test value was found that there is a significant treatment effect on BMI [F (1, 62) = 4.90, p< .000; ES_s = 0.73], BMI*BETWEEN GROUP was found significant [F (1, 62) = 6.61, p< .013], and the BMI*GROUP INTERACTION EFFECT too was found to be statistically significant [F(1, 62) = 120.82, p< .000]. The results on pairwise comparisons using the Bonferroni method with the (mean difference between experimental and control group = .355, p < 0.13] shows a significant difference between the experimental and control group.Similarly, for BC, the result of the adjusted value of *df*using the Huynh-Feldt Test value too shows that there is a significant treatment effect on BC [F(1, 62) = 11.48, p< .001; ES_s = 0.69], BC*BETWEEN GROUP was found to be statistically significant [F(1, 62) = 4.26, p< .043] and BC*GROUP INTERACTION EFFECT too was statistically significant [F(1, 62) = 335.25, p< .001]. The results on pairwise comparison using the Bonferroni method with the (mean difference between experimental and control group = 3.47, p< .001) too shows a significant difference between the experimental and control group(Table 2).

Table 2: Split-Plot ANOVA or SPANOVA Analysis for the Effect of Resistance Training Program on Physiological Parameters-BMI and BC of the Current Study

	Experimental Group		Control Group		MultivariateHuynh-Feldt Test		
Item	Pre-test Mean	Post-test Mean	Pre-test Mean	Post-test Mean	*F*-ratio value at (*df* = 1, 62)	*P*	Effect Size (ES_s)
BMI	20.50	18.39	20.38	21.79	120.82	.000*	0.73
BC	69.25	47.01	63.56	78.85	335.25	.001*	0.69
Total	44.86	32.70	41.97	50.32	228.04	.000*	

Note. *$p<.05$Further inspection on the profile plots of BMI indicates that there is a significant interaction effect, thus it shows that the administered resistance intervention training program has significant effect on BMI therefore has significantly controlled and lowered the body mass index of the experimental group participants compared to the control group (Figure 1).

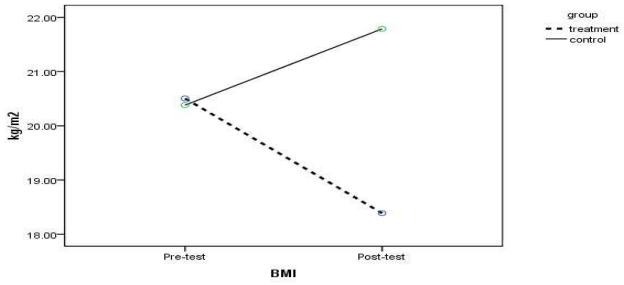

Figure 1:Profile Plot for Comparison between the Experimental Group and the Control Group on BMI

Whereas further inspection on the profile plots of the body composition indicates that there is a significant interaction effect, thus it shows that the resistance intervention training program administered has significant effect on BC and consequently has significantly controlled the body composition by reducing the body weight percentage of the experimental group participants compared to the control group (Figure 2).

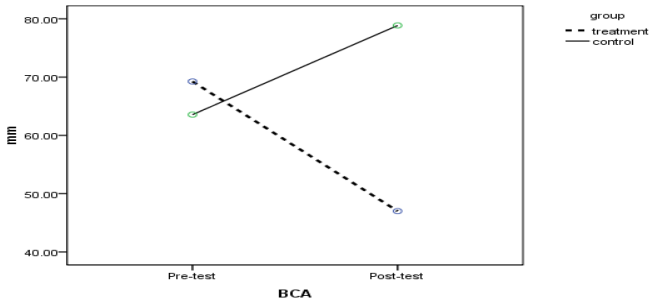

Figure 2: Profile Plot for Comparison between the Experimental Group and the Control Group on Body CompositionTable 2 illustrates the statistical differences for both the Body Mass Index (BMI) and Body Composition (BC) derived from the administered resistance training program.From the analysis performed, it can be concluded that the treatment (the resistance training program) instigated a statistically significant effect on thephysiological parameters-BMI (p< .000; ES_s = 0.73), and BC (p< .001; ES_s = 0.69) by controlling and lowering the body mass index (5.5%) and reducing the body fat percentage (19.2%) of the participants of the experimental group compared to the control group of the current study and the analysis too shows the same result even after controlling for age and sexual maturation factors (Table2, Figure 1 and Figure 2).

Discussion: The findings of the study indicated that compared to the typical non active participants as a control group and active experimental group of participants in most experimental studies, the 12-week designed resistance training program utilizing actively training participants has yielded significant and positive changes and improvements in mean scores of body mass index and body composition of the adolescent participants. The resistance trained group demonstrated significant improvements in both the physiological parameters measured (BMI & BC) compared to the control group from pre-test to post-test indicating that progressive resistance training at varied volume and intensity manipulation resulted in positive changes in body composition by 19.2% and body mass index by 5.5%, thus this leads to decrease in the experimental group participants' body fat percentage. Consequently, the findings of the study are similar to previous studies that found that resistance training does decreases the percentage of body fat whereby, Shaw, et al., (2009), findings demonstrated that 16 weeks of resistance training for 3 times per week on twenty five health males resulted in significant decrease in body fat, total skin fold and BMI. Similarly, Ferreira, et al., (2010), study on 14 sedentary females aged 35-45 years old using a 3 day per week circuit training program for 10 weeks resulted in increased in free fat mass and decrease in fat mass and body fat percentage.Ucan (2014) study on twenty eight active males on 3 days per week circuit resistance training that lasted for 12 weeks resulted in increase in free fat mass and decrease in body fat percentage of the experimental group.However, Wilmore's (1974) study using a 2 days per week of resistance training for 10 weeks on twenty six males and seven males with mean age of 20.3 years indicated that at the end of the duration of study, there was no change in body weight but relative fat mass decreased by 10% for males and 7.6% for females respectively. Conversely, findings of Brown & Wilmore (1974) study on seven throwers aged 16-23 years old with3 days per week resistance training program for 6 months resulted in a considerable gain in strength but there is no change in body fat percentage and body weight. And in Hanson, et al., (2009) study on 3 days per week of resistance training on eighty one healthy subject aged 65-85 for 22 weeks demonstrated that there was an increase in free fat mass with no difference in body fat percentage in both males and females. And Harber, et al. (2004) study on the effect of 3 times per week of ten exercise circuit training

program for 10 weeks on ten young adult men aged 18-35 years old resulted in no difference in body weight, free fat mass, fat mass and percentage of body fat.Whereas, the effect size in the current study for BMI is 0.73 and for the BC is 0.69, this denotes a small effect size based on the scale for determining the magnitude of effect sizes in resistance or strength training research that categorize the current study participants in recreationally trained individuals whereby, this individual falls in individual who trained consistently from 1-5 years (Rhea, 2004). However this effect size may be due to the lifestyle of the participants of the current study whoare student athlete of the Bukit Jalil Sports School who actively trains for nine sessions per week and only abstain from any kind of formal resistance training throughout the duration of the study, but they do train other requires health and motor related skill to improve their talent in the respective sports, games or events they were identified to excel in.Nevertheless, the present study is distinct from the past research due to the combination of 2 aspects: adolescent and sexual maturation status. Although previous studies clearly outlined the advantages of resistance training, but there's little empirical as well as practical evidence related studies with regards to effects of resistance training program on adolescents based on sexual maturation status. Therefore the findings of the current study could be useful and can be adopted by coaches, physical trainers and conditioning experts who are working with individuals whom aspired in enhancing their physical appearance and fitness profile especially the health and wellness aspect, and with the young athletes to effectively induce positive changes in body composition and improving thus enhancing their athletic performances as well.

Conclusion: As a result the administered 12-week resistance training program significantly has induced a significant and positive effect in controlling BMI by 5.5% and decreasing the body fat percentage by 19.2% in adolescent athletes of the experimental group participants compared to the control group. Consequently, it can be concluded that the administered treatment-resistance training intervention program has instigated a statistically significant effect in improving body composition. The findings of this study demonstrated that a well designed, planned and executed resistance training program via circuit training reduces fat percentage especially in adolescent athletes. Furthermore, the result of this study could be reasonably enhanced further if it could be carried consistently over a period of time as in a periodized training plan. Moreover, the presence of the life-like structure of the designed resistance training program structure of the study, in a circuit format that is characterized with brief rest periods between sets and exercises which has been observed to be more typical of how young athletes play as in playing a game or sport, and could be reasonably assumed that it would be adequately challenging to maintain motivation of the athletes.

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A Comparative Study On Socio-Economic Status Of Volleyball, Handball, Kho-Kho And Kabbadi Intercollegiate Women Players Of Ranichennamma University

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Abstract
Man is social animal," this is an early saying of ancestors; even this statement reveals that man is mainly dependent on his 'Socity'. Thorndike defines "social intelligence as the abilty to undestand others and act wisely in human relations. It is the human capacity to understand what is happening in the world and responding in situations to understand personally and able to act socially in an effective manner India's backwardness and indifference towards sports and physical education is mainly due to her economic poverty. The research conducted in 1952 at Helsinki Olympic and repeated in 1960 at Rome, reveals that the participation and scoring in Olympic Games "directly related to the per capita income of the nation. It is not the quantity but the quality which matters (Singh, 2010). Human behavior whether at work or at play. Is greatly influenced by the social milieu in which the individual finds. Him self at specific time and by the social environments he has been exposed to in the past (Tani, 2002). Specifically the filed of sports sociology can be distinguished from other sub- discipline in the sports science. It is concerned with the status in the life cycle. That is where as other sub disciplines or more itestested in describing and explaining the present elite status or performance of those who have achieved the elite level. Sociologists are intersted in the process by with they attain this elite level status and why others did not (Tani, 2002). Since sports rules are achieved rather than ascribed, they must be learned through the process of socialization. Wherein individuals acquire the motor and social skills. The knowledge and the attitude characteristics and the ways of behavior and thought considered acceptable to society. It inculcates basic disciplines ranging from toilet habits to the society. It inculctes bases disciplines ranging from toilet habits to the method of technology. Socialization does not take place in a vacuum. Precisely the opposite it is normally an attempt to transmit a particularized view of the world not generalized in which there are no alternatives (Tani, 2002). The purpose of the study was to compare the socio-economic status and performance level among Ranichennamma University intercollegiate kho-kho, kabaddi, volleyball, handball women players. The achieve the purpose 20 players in discipline of kho-kho, kabaddi, volleyball and handball women player selected randomly during the Ranichennamma University intercollegiate women's games meet held at Tarikeri during February 2013. Purposive sampling technique was adopted because of specific target group of sports persons

Introduction

"Man is social animal," this is an early saying of ancestors; even this statement reveals that man is mainly dependent on his 'Society'. Thorndike defines "social intelligence as the abilty to understand others and act wisely in human relations. It is the human capacity to understand what is happening in the world and rersponding in situations to understand personally and able to act socially in an effective manner (Gupta, 2011). The level of intelligence differs among individuals. There are many factors affecting intelligence level as external and internal factors. The socio-economic status is also one of the important factors affecting social intelligence. Higher secondary students belong to the age of adolescence. Adolescence is a period of social awakening. Thorough this reserch work the researcher can analyze the social intelligence of higher secondary students in relation to their socio- economic status (Gupta, 2011).

In any game individual's socio-economic status may influence his opportunity for participaiton, his desire to excel , his choice of activity, and his success. Nobody can deny the importance of the standard of living upon the success of an individual in games and sports. Young people growing up in poverty ridden communities will have fewer available tennis courts, back yard, swimming pools and golf courses (Singh, 2010). When compared to urban areas the rural areas the situations is very fewer. They will have more difficulty finding means of travel to beaches, ski areas, and lake regions. Many of the greatest football and basketball player's, boxers, volleyball and track and field athletes

have come from the ghettos. On the other hand children form wealthy homes often have tennis courts and swimming pools in their backyard and travel to ocean beaches or island retreats for vacations (Singh, 2010).

The Delimitations Of Study

The study delimited to Ranichennamma University intercollegiate women players.

The study subjects were delimited to games like kho-kho, kabaddi, volleyball and handball game.

This study was delimited to the players between the age group of 18 to 28 years.

The Limitations Of Study

In the study structured questionnaire was used to know about the socio-economic statue of the subjects. The questionnaire method employed in the study has its own limitations.

Methodology

The purpose of the study was to compare the socio-economic status levels of kho-kho, kabaddi, volleyball and handball players intercollegiate players of Ranichennamma University area.

Construction Of Questionnaire

A questionnaire was constructed by the investigator to know the socio-economic status of the players. The researcher's own knowledge, supervisor's consultancy and by experts' opinion a questionnaire was constructed for 50 questions initially. The following aspects were considered while framing the questions:

Education back ground of family members and players.Family back ground and family strength.

Family income of college players.The age of joining the sports.Sports practice hour of women player in day. Support encouragement and participation in sport of women sports persons.

Fifty structured questions were sent to experts' / guide's suggestions. They have finally approved 25 questions. The scholar had translated English version to Kannada (Regional Language) version by taking language expert in Kannada and given those 25 questions to 20 women players studying in BPEd course at University Campus for trial run. The doubtful questions and the questions with ambiguity were removed and finally the questionnaire was developed which constituted 20 questions

Sampling Technique

Simple purposive sampling technique was used to collect the data. The subjects were identified for the study were the players playing at Ranichennamma University intercollegiate women's games held at Tarikere during February 2013. The players representing their respective colleges in women game. The study was intended to know the sports persons socio-economic status and hence the purposive sampling technique was used to collect the data. Data Collection The responses were collected by the research scholar personally during the women's game competitions for the year 2012-13. Players were asked to sit in a class room and the scholar explained the purpose of research work and also assured of the confidentiality of responses to the subjects. Then the questionnaire was given to the players. Where ever the doubts raised by the subjects was clarified by the researcher and finally all the players responses form four sports disciplines namely kho-kho, kabaddi, volleyball and handball. The response rate was hundred percent because the investigator visited competition place personally to collect the information.

Analysis And Interpretation Of Data

The purpose of the study was to evaluate and find the difference in socio-economic status and performance level of female players in inters collegiate competitions of Ranichennamma university. The data collected has been presented in tabular form and analyzed in this chapter to reveal the results of research worktable 1**. Education Background Of Family Members And Players**

Game	Player			Father		Mother		Brother		Sister	
	Education	Nos.	Percentage	Nos.	Percentage	Nos.	Percentage	Nos.	Percentage	Nos.	Percentage
Volleyball	1 or 2	7	35	15	75	16	80	7	35	8	40
	3 or 4	13	65	5	25	4	20	13	65	12	60
Handball	1 or 2	7	35	12	60	15	75	7	35	9	45
	3 or 4	13	65	8	40	5	25	13	65	11	55
Kho-kho	1 or 2	8	40	15	75	15	75	8	40	8	40
	3 or 4	12	60	5	25	5	25	12	60	12	60
Kabaddi	1 or 2	9	45	13	65	14	70	8	40	7	35
	3 or 4	11	55	7	35	6	30	12	60	13	65

1=Upto SSLC, 2=UG, 3=PG and 4=UG to Graduate

Analysis of the table reveals that the educational background of players and their family members. Majority of Volleyball(VB) and handball(HB) players were (65 per cent) post graduates. Comparitively Kho-kho(KK) players (60%) and Kabaddi(Kab.) players (55%) were laging behind other two sporting event. Since the players were considered from intercollegiate tournament all are graduates and they

have 100 per cent good educational background.The fathers' educational back grounds of players are remarkably lesser in volleyball and Kho-kho (75%) games. Kabaddi and handball players' parents are slightly better (65% and 60% respectively) in their educational qualifications. Post graduate fathers' per cent is 40 per cent and below. The mothers' exucational background still lesser to that of fathers' majority of them are below graduation level (VB 80%, HB & KK 75% and Kab 75%). Post graduate mothers percent is very less maximum of 30 percent.The educational qualificatons of brothers and sisters are almost identical in all the sports disciplines averaging 60 per cent post graduates and 40 per cent graduates and below.The players' education levels are higher that that of parents and siblings, which speaks of the concern of the parents to educate their wards though they possess lesser educational background.

Table 2. FAMILY BACKGROUND AND FAMILY STRENGTH

Game	Woking Member			Family members		Male strength		Female strength	
	Mem bers	Nos.	Perce ntage	Nos.	Perce ntage	Nos.	Perce ntage	Nos.	Perce ntage
Volleyball	Upto 2	15	75	14	70	16	80	15	75
	Above 2	5	25	6	30	4	20	5	25
Handball	Upto 2	15	75	13	65	12	60	14	70
	Above 2	5	25	7	35	8	40	6	30
Kho-kho	Upto 2	12	60	10	50	14	70	13	65
	Above 2	8	40	10	50	6	30	7	35
Kabaddi	Upto 2	16	80	15	75	11	55	17	85
	Above 2	4	20	5	25	9	45	3	15

Perusal of table two depicts that majority of working member are maximum two members (VB & HB 75%, Kab 80% and KK 60%) and members working more than two are less (Except KK 40%) in volleyball, handball and kabaddi.. A query was asked in respect of family strength, majority of the families of sports persons were nuclear (two or less children) except kho-kho players where in their members were equal in nuclear and big families (above two children). Male role was dominating in almost all the families except in kabaddi. The results reveal that substantial numbers of working family members were there in all sports persons family which speaks of resonably good economic power and in turn the male members were dominating in their families.

Table 3. ANNUAL INCOME OF THE FAMILY MEMBERS

Game	Income	Number	Percentage
Volleyball	1*	13	65
	2*	7	35
Handball	1	16	80
	2	4	20
Kho-kho	1	11	55
	2	9	45
Kabaddi	1	15	75
	2	5	25

*1 = Below one Lakh Rupees *2 = Above one Lakh Rupees

Introspection of table three depicts that majority of the families of sports persons income was below one lakh. Volleyball players' was 65 per cent, handball players' was 80 per cent, kho-kho players' was 55 per cent and that of kabaddi players' was 75 per cent. Above one lakh income was better in kho-kho players (45%), when compared to volleyball (35%), kabaddi (25%) and very least in handball (20%) players' families. This depicts that though the working members were greater as per table 2, the income part is very less. May be the labour class people are greater than officials working in the government organizations. Normally, sports persons for poor economic background and they struggle hard to come up in sports.

Table 4. AGE OF THE PLAYERS AT THE TIME OF JOINING SPORTS

Game	Age	Number	Percentage
Volleyball	1*	12	60
	2*	8	40
Handball	1	11	55
	2	9	45
Kho-kho	1	14	70
	2	6	30
Kabaddi	1	12	60
	2	8	40

*1 = 10 to 13 years *2 = 15 to 18 years

The analysis of the table four reveals that majority of sports persons joined sports at the age between 10 to 13 years. Kho-kho players joined early was 70 per cent followed by volleyball and kabaddi (60%) and handball was just abvoe average (55%). The result reveal that kho-kho being an indigenous game and also develops basic strength and endurance attracts children to opt for that game. Where as game like handball needs extra equipment and needs specialized trainers to train, so that players opt less the handball game. The other two games volleyball and kabaddi are fairly attracted by the sports persons.

Table 5. TIME OF PRACTICE HOURS OF PLAYERS

Game	Time	Number	Percentage
Volleyball	1* to 2*	7	35
	3* to 4*	13	65
Handball	1 to 2	5	25
	3 to 4	15	75
Kho-kho	1 to 2	5	25
	3 to 4	15	75
Kabaddi	1 to 2	4	20
	3 to 4	16	80

*1 6.00 to 8.00 am *2 8.00 to 10.00 am *3 3.00 to 5.00 pm *4 4.00 to 6.00 pm

Perusal of the table five gives clear idea about players' practice hours. Majority of the players opt evening sessions (Kab 80%, KK & HB75%, and VB 65%) than morning sessions, this is probably because the playing facilities are available in the institutions of players than near by their residences. The morning session practices were less of which volleyballers (35%), handball and kho-kho players were 25 per cent and kabaddi (20%). If all the players practice both the sessions the achievement in their respective sport will be greater. Since they are confined only to inter collegiate level it would be sufficient if they practice one session per day or partially two sessions wherever possible to play.

Table 6. **Support, Encouragement And Participation In Sport Of Women Sports Persons**

Responses Sought from the Players	Volley ball			Handball		Kho-Kho		Kabaddi	
	Opinion	No.s	Percentage	No.s	Percentage	No.s	Percentage	No.s	Percentage
Are you pacticing the game daily?	Yes	8	40	12	60	9	45	13	65
	No	12	60	8	40	11	55	7	35
1. Are there any sports persons in your family?	Yes	11	55	6	30	10	50	4	20
	No	9	45	14	70	10	50	16	80
2. Are you getting any support from your familiy members for sports participation?	Yes	13	65	13	65	11	55	16	80
	No	7	35	7	35	9	45	4	20
3. Did your family get benefit from sports participation?	Yes	16	80	15	75	14	70	17	85
	No	4	20	5	25	6	30	3	15
4. Did you get	Yes	15	75	18	90	12	60	15	75

distrubded for you study due to sports participation?	No	5	25	2	10	8	40	5	25
5. Are you getting encouragement for sport from your institution?	Yes	17	85	16	80	16	80	13	65
	No	3	15	4	20	4	20	7	35
6. Is your college giving sports scholarships?	Yes	15	75	12	60	17	85	12	60
	No	5	25	8	40	3	15	8	40

The analysis of table six reveals the information of respondents from participation in sports, family members sports participation, support from the family, college, encouragement from the family and college. In a query to daily practice of sport by the respondents, handball (60%) and Kabaddi (65%) were practicing daily. The responses from volleyball and kho-kho was below average (40% and 45% respectively. If the grounds and playing facilities are nearby house the chances of practicing the sport are very high than practicing in the institutions.

Volleylball (55%) and Kho-kho (50%) players' family members use to participate in sports when compared to handball (30%) and kabaddi (20%) wherein their contengency was very less. In case of family support for sports persons majority of players were getting the support for sports participation (Kab. 80%, VB & HB 65% and kho-kh0 55%) this is a good point from the point of view of women participation in sports. In a question towards family benefit out of players participation in sport, very encouraging responses were received by the women players (Kab. 85%, VB 80%, HB 75% and KK 70%).

Most of the families were benefitted out of women sport participation. Benefits such as education, job, social recognition, scholarships, etc. are some of the aspects where the players are satisfied and even the family members were satisfied. Majority of the players responded if favour of disturbance to their studies (HB 90%, VB & Kab. 75% and KK 60%). Institutional encouragement was given to most of the players as per their responses, almost 80% agreed to institutional support in volleyball, handball and kho-kho and kabaddi (65%). The institutions were giving sports scholarships to women players, this was true with the responses (KK 85%, HB & Kab. 60% and VB 75%).

Introspection of the results reveal that handball and kabaddi players are practicing the sport regularly, which is not true in case of volleyball and kho-kho players. Family members sports participation was not encouraging, where as support for the sports persons was very good. Surprisingly the players were getting disturbed for their studies due to sports participation, may be the semester system and time bound academic activities like exams are the causes of disturbance to the sports persons. The encouragement form the institutions was good and they were also giving the scholarships for sports persons.

Conclusions

Despite the limitations of this study, the results provide a useful insight into the socio-economic status of different games players. The result also provide a useful insight comprised of socio-economic status of players of two or more games. There is significant differnce in socio-economic status between team and game players. The volley ball players are having higher socio-economic status than team game players. There is significant difference in Handball players as they are having high socio-economic status than team players. There is significant differnce in middle socio-economic status between team kho-kho and kabaddi players. cted during the Ranichennamma University Intercollegiate Women's Games Competitions.

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A Study On Self Confidence Of Kabaddi And Kho-Kho Men Players Ranichennamma University Belagavi

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Introduction

Sports games and physical education activates are looked upon an avenues for achieving and establishing supremacy, prestigious social recognition and etc., the achieve this recognition, one requires extraordinary talent, skill, sustained interest, determination, training and so on (Agya, 1982). The players are creating and breaking new records in today's competitive sports. Traditionally the motto of Olympic festival is higher and stronger is still alive in the field of physical education and sports. The aim of the games and sports is firstly suited with every field. The old records are not remaining on boards they are establishing time the level of physical fitness and motor ability is increasing day by day because of development of science and technology today's athletes are trained scientifically the equipments of training are also developed scientifically the 'dandbethak' and 'akhadas' activities become out high-tech gymnasium and health centres takes its place.(Russel,1971).The sports have been of great interest to people from times immemorial even today's a sport is on its world map, Olympic, world cup tournament, Asian game and test matches of national comply the breadlines in newspapers every day columns after columns are devoted to the sports news the importance and the recognition which the sports have received from government press and public clearly indicate that sports are not taken up for more creation presage purposed the preparation in sports.(Byrne,1974). A sport is highly specialized activity at one or event and involvement of in sports even receive say basic desire to conflict and excel in performance. It is needless to say that the sports activity is meaningless. Without competition however success in competition depends on the performer of an individual. Higher the performance, greater would be the chances, it is true that for these kinds of competitive activities. A sport is one of the most enduring of all human activities. Virtually from the beginning of any written of human records in civilization across the world accounts of sports and sports related activity are found for less than the last century sports has been studied scientifically and sports psychology is an important part of that scientific study.(Encyclopedia,2012. The importance of physical education and activity was recognized by Plato when he side "lack of activity destroys and good condition of every human being while movement and methodical physical exercise save it and preserve it". (Bell, 1983). Physical education and sports being an integral part of education have also experienced the impact of scientific advancements. Now, the sportsman have been able to give outstanding performance because of involvement of new scientifically substantiated training methods and means of execution of sports exercise such as sports techniques and tactics, improvement of sportswear and equipments as well as other components and conditions of the system of sports training. It is evident in this modern world that sports and games are no more only an area of play and pass time; indeed it is area of new finding and experimentations, with an aim to enhance the performance of each sports person.(Ibid,p.288)

Today in the modern competitive year every sports man is a race to excel others and competition has become a fundamental mode of human expression as it is one of the every important functions by which national and international recognition and prestige is gained. From its very simple form, sports have emerged into highly organized activity of human society and it has becomes a complex social and cultural phenomenon. Most of the games and sports activities, which originated as leisure pursuits and recreational activities have acquired a strong competitive and challenging form technological and scientific advancement has influenced the mode of selection, screening and training the athletes in various sports activities.(Kenneth,1985).

Physical education is a phase of total education and contributes to all the objectives of education each activity contributes to the organics near muscular interpretative and emotional development of the individual sport is one of the most enduring of all human activities virtually form the beginning of any written human records in civilization across the world account of sport and sport related activities are found for less than last century sport has been studied scientifically and sport psychology is an important part of the scientific study in international field holding the promise of becoming important and only to the understanding of competitive athlete. But to areas of behavior that relate to many domains of human health and activity games and sports have been part human life almost since the time immemorial. (Atkinosn, 1964). Though the origin of sports is lost in antiquity, it is quite certain that physical activity has been a part of the life even primitive man. For hum it might have been a basic necessity of life more than fun and diversion for his survival depended on it. (Alderman 1974).

Psychology: Human beings and animals are product of a long process of biological evolution. Their activities are highly complex in nature and directed from within. Since ancient times philosophers have tried to understand why human beings and other animals behave as they do (Murphy, 1955).

Kabaddi

Kabaddi is basically a combative sport, with seven players on each side; played for a period of 40 minutes with a 5 minutes break (20-5-20). The core idea of the game is to score points by raiding into the opponent's court and touching as many defense players as possible without getting caught on a single breath. One player, chanting Kabaddi!!! Kabaddi!!!! Kabaddi!!!! Charges into the opponent court and try to touch the opponent closest to him, while the seven opponents make maneuvers to catch the attacker. This is Kabaddi, the match of one against seven, known as the game of struggle. The players on the defensive side are called "Antis" while the player of the offence is called the "Raider". The attack in Kabaddi is known as a 'Raid'. The antis touched by the raider during the attack are declared 'out' if they do not succeed in catching the raider before he returns to home court. These players can resume play only when their side scores points against the opposite side during their Raiding Turn Or If The Remaining Players Succeed In Catching The Opponent's Raider.

The Delimitations Of Study

The study was delimited to Players of Ranichennamma University and Davanagere University.The study was delimited to male players.The study was further delimited to the sample size of forty. The study was delimited to psychological profile self confidence only.The subjects selected for this study were in the age of 18 to 28 years.

The Limitations Of Study

Questionnaires are having their own limitation.Opinion of the subject may be one of the limitations of the study.Data given by the subject may not be faith or honest in all the times, it is another limitation of study.Co-operation, socio-economic status, academic pressure, health status etc, of the subjects could be constraints for the study.No motivational technique was used during the data collection was another limitation of the study.

HYPOTHESIS

It was hypothesized that there will not be significant difference in self confidence between Kabaddi and Kho-Kho men players.

The Significance Of Study

The study helps to find out the level of self-confidence of kabaddi and kho-kho players.

Sports psychology

The level that an athlete performs on any given day depends on five main tings physical skills and mantel skills level of technical skills strategic awareness and chance is all those variables that are not under the athlete's control such as the wither and how good the opposition is, has there are always some uncontrollable tings in sports. Performance is left up to chance some extent to help an athlete get the chance aspect out their mind some sports teams and athletes have chosen to hire sports psychologist.

Self confidence:

Self-confidence is what you understand about yourself. It is not the same as self-image or self-consciousness.Self confidence is the relation to what we want to do, but feel too anxious, nervous or worried about!

So for one person self-confidence might be about speaking in public. For another, it might be about beings confident in social situation. For a third, it might mean having the confidence to approach potential sexual partners. But whatever the situation that reveals our lack of confidence, the definition of that is implicit here is always something about being self-assured, showing self-reliance, or not being anxious or nervous.

Methodology

The purpose of the study was to assess the level of sports competition self confidence of Ranichennamma university and Davanagere university male players.

Selection of subjects:In order to achieve the purpose of study 50 players from each game during the intercollegiate tournament of Ranichennamma and Davanagere University.

Orientation of the subjects :The investigator explains the purpose of the study and oriented the players about the test at different stages of administration. The meaning of different words and statements in the questionnaire were explained to the subjects. The self confidence questioner was administered to the players during the Ranichennamma University and Davanagere University intercollegiate tournaments. The questionnaires were handed over to the subjects and the subjects were asked to the answer all the questions without omitting any questions. Before collecting the questionnaires were answered or not. The scoring was done by the answer keys suggested by concerned authors.

Conclusions

Within the limitations of present study, the following conclusions were drawn.The study showed that there was a significant between Kabaddi and Kho-Kho men players of Ranichennamma University and Davanagere University. Kabaddi men players better then Kho-Kho men players in self confidence

Recommendations:

On the basis of the present research and findings. Of the study, below mentioned recommendations are made.It is recommended that similar study may be conducted to different age groups.

Same study may be conducted on larger sample.

Similar study may be conducted for different levels.

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Assessment of Nutritional Knowledge and Dietary Practices among Selected Sports Women.

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Abstract
The general objective of this investigation was to assess the nutritional knowledge and dietary practices of collegiate sports women from the city of Hyderabad and Secunderabad . In this context a detailed assessment of their nutritional knowledge and various dietary practices was carried out. Accordingly a total of 348 sports women of the age group 17-24 years as available from all the Women's Colleges, affiliated to Osmania University, Hyderabad and having district, university, state, national or international level representation were selected. A specially designed proforma to assess the nutritional knowledge and dietary practices was formulated and was admininistered to the subjects under study. Findings revealed that the nutritional knowledge of majority of the sports women were far from satisfactory .Majority of them (83.6%) have not undergone any formal nutrition education and 73.9% did not consume any special diet on a daily basis. These findings are clear indicators regarding the lacunae in nutrition information among the athletes. The process of preparation and training of promising sports men and women must therefore include measures not only to train them and coach them but also to equip them with authentic and scientific information relating to the role of good nutrition in sports performance. Thus there is a need for continuing nutrition education programme for both coaches and sports men and women
Key words: Nutrition education, Dietary Practices, Pregame meal

Introduction

Basic nutrition education is always the first step in helping athletes, coaches and trainers understand the importance of nutrition in athletic performance. Many sports women have an imbalanced dietary intake is because of their lack of nutritional knowledge The process of preparation and training of promising young men and women must therefore include measures not only to train them and coach them in the intricate techniques of playing these games and sports but also to equip them with authentic and scientific information relating to the role of good nutrition in physique and physical performance (Clark. 1999). Many studies have shown that that coaches and athletes are less informed regarding nutrition and its effect on exercise and performance (Jacobson et al., 2001). Pratt and Walbey (1988) are also of the opinion that athletes as a group are very vulnerable to erroneous nutrition information as they attempt to gain a competitive edge. The purpose of this study was to elicit detailed information on the nutritional knowledge and various dietary practices of collegiate sports women from Hyderabad and Secunderabad.

Methodology

All the women's Degree and PG colleges in the city of Hyderabad under Osmania University were selected for the study. A total of 348 sports women of the age group 17 to 24 years as available from the above institutions and having district, university, state, national or international level representation were selected. Specially designed proforma to assess the nutritional knowledge of the 348 sports women was formulated. This questionnaire included aspects on nutrition with particular reference to anemia, its causes, food sources and its relation to work capacity and performance. Dietary practice questions mainly comprised of aspects regarding daily food intake pattern, dietary intake of supplements and special foods during training period, and intake of pre-game meal. This proforma was administered to all the subjects under study and the data was collected. The percentage response was computed to assess the knowledge and practice of the selected sports women.

Results and Discussions

Knowledge attributes were classified as K1, K2, K3, K4 and K5 and the description of these attributes is given in Table I. The percentage response of sports women on knowledge attributes is given in Table II

Table I:**Description Of The Sub Classes Of Knowledge Attribute**

Knowledge attribute	Description
K1	Done a course in nutrition
K2	Knowledge regarding the condition called anaemia
K 3	Causes of anaemia
K4	Whether anaemia affects exercise / sports performance
K5	Food sources of iron

Table Ii:Percentage Response Of Sports Women On Knowledge Attributes

Knowledge attribute	Negative		Positive	
	No.	%	No	%
K1	291	83.6	57	16.4
K2	191	54.9	157	45.1
K3	198	56.9	150	43.1
K4	189	54.03	159	45.7
K5	187	53.7	161	46.3

Overall positive response for knowledge attributes was lesser when compared to the negative response which indicated the lack of nutritional knowledge among the selected sports women. Regarding K1, that is whether done a course in nutrition, only 16.4 percent gave the positive response and remaining 83.6 percent expressed that they did not undergo any formal nutrition education. Regarding K2 that is knowledge about the condition called anaemia, only 45 percent knew about it and remaining 55 percent were totally unaware.Regarding K3 that is knowledge about cause of anaemia, only 43 percent responded as iron deficiency and 57 percent were not aware of it. Regarding K4 as to whether anaemia affects exercise and sports performance only 45.7 percent gave the positive response and 54.03 percent were not aware of the concept. Regarding K5 attribute on knowledge of sources of iron rich foods, only 46.3 percent knew the right kind of foods.

Table III gives percentage distribution of sports women consuming special diet.

Table Iiipercentage Distribution Of Sports Women Consuming Special Diet

Special diet intake	Sports women	
	No.	%
Do not consume any special diet on a daily basis	257	73.9
Have special diet during training period	91	26.1
Have special diet few days before event	55	15.8
Have special diet on the day of the event	38	10.9

Majority (73.9%) of the sports women did not have any special diet consumption on a daily basis which might be due to lack of nutrition information on their part. Only 26.1 percent consumed special foods in the form of eggs, milk, liver, etc., during training period and 15.8 percent had special diet just a few days before the event. Comparatively a low percentage of sports women (10.9 percent) had special foods like wheat porridge, oats, banana, fruit juice, etc., on the day of the event like a pregame meal. This dietary intake pattern may be attributed to their inadequate knowledge regarding sports nutrition.

Conclusion

These findings are clear indicators regarding the lacunae in nutrition information among the athletes. Their dietary practices also were far from satisfactory as many were not consuming a balanced diet and were not aware of right kind of pregame meal. Nutrition education is an effective tool in helping athletes to modify their nutrient intake. In addition, imparting nutrition knowledge will bring in sustainable healthy dietary habits which alone can help athletes practice the knowledge gained, throughout their career as sports women.

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A Comparative study of Explosive Strength and Flexibility between Rural and Urban Female student at Nandurbar District

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Abstract
The purpose of the study was to identify the Explosive strength and flexibility of rural and urban female student.60 student,30 rural and 30 urban from Nandurbar district were selected as a subjects for the study. The data was collected by use of test like seat and reach test for flexibility. The data was analyzed with help of statistical procedure. In which arithmetic mean, standard deviation and t-test were employed. The mean of flexibility of rural female student is 11.97and urban female student mean is 11.57.significant difference was found in flexibility 0.4between rural and urban female student. rural female student is more flexible than urban female student. The mean of Explosive Strength of rural female student is12.6 and urban female student mean is11.63.significant difference was found in flexibility 0.97between rural and urban female student. rural female student have more Explosive strength than urban female student.
Keywords:- Flexibility, Explosive strength, Rural and Urban female.

Introduction

In this period physical education is most important in society. physical education is part of education. through the physical education overall development of person is possible. for good health physical fitness is very important. physical education define as physical fitness is compulsory for players as well as non players. Female is required more physical fitness than male. speed, endurance, flexibility, agility, strength is a components of physical fitness also call motor fitness. muscular contraction is provide a movement to joint. every movement lost a more energy. female required more energy. she work full day so she required lot of energy. physical component help to provide her lost energy. all the component help for workout to the female. flexibility is most important factor for women. flexibility is depend on muscular contraction as well as flexion of joint. in working situation muscles is stretched. Flexibility refers to the range of motion through which a body joint can be flexed or extended and the ease with which this is accomplished. Some activities like ballet, gymnastics, and Olympic weightlifting require excellent flexibility, while most daily life activities and many sports such as football and boxing do not require great flexibility. More flexibility is not always better. People who are extremely flexible may be susceptible to joint injuries, while those who are less flexible risk muscle injury. Flexibility Flexibility is the degree to which an individual muscle will lengthen. Stretching improves flexibility. The ability to move the joints or any group of joints through an entire, normal range of motion. Flexibility diminishes in part as a result of physiological development and bone and muscle growth. But flexibility can also suffer from disuse. Sports that limit flexibility limit children's alternatives in sports selections. Strength is an important aspect of our physical fitness definition, and is the ability to exert force. The strength required of a sport or other physical activity is specific to the movements involved and the speed at which force must be exerted. For example, a tennis player exerts force at high speeds against the relatively low inertial resistances of his body, the racket and the ball, while a football lineman must exert high force against an opposing player at movement speeds restricted by the other players resistance. That is why these athletes have very different kinds of bodies and must train differently to produce optimal performance.

Methodology And Procedure

The 30 women were randomly selected for the purpose of the study. The age of subject ranged from 25-30.for collecting data using simple random sampling technique. Flexibility and Explosive Strength were measure after conducting the test.

For measure a Flexibility seat and reach test was followed and Explosive strength was measure by vertical jump.

Statistical Procedure

Reiteration the objective of the study data was treated by employing a standard statically procedure and express as mean, standard division by repeated measure 'T' test to compare pre and post test data. The level of significance was set at 0.05 levels.

Result

The 'T'test was applied to find out the significance difference between Rural and Urban student means of flexibility and Explosive strength.

Table -1 Flexibility

SR.NO	SUBJECT	MEAN	S.D	T
1	Urban student	11.57	2.22	0.71
2	Rural student	11.97	2.2	

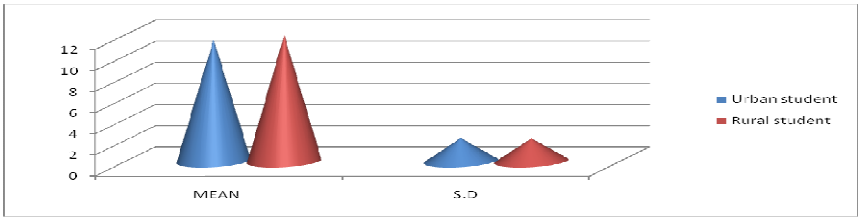

Table no.1 Indicates the mean, S.D with regard to flexibility were recorded 11.57, 11.97 and 2.22, 2.2 respectively and 't' ratio (0.71)was found statistical significant at 0.05 level.

Table -2 Explosive Strength

SR.NO	SUBJECT	MEAN	S.D	'T'
1	Urban student	11.63	2.38	1.62
2	Rural student	12.6	2.25	

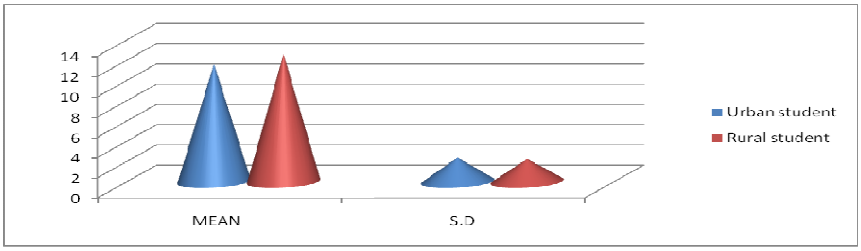

Table no.2 Indicates the mean, S.D with regard to flexibility were recorded 11.63, 12.6 and 2.38, 2.25 respectively and 't' ratio (1.62)was found statistical significant at 0.05 level.

Conclusion

In the light of finding it is concluded that, Rural female student is more flexible than Urban female student. Rural female student have more Explosive strength than Urban female student.

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Olympic Brand and Ambush Marketing

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Abstract
This paper will provide an overview about Olympic Sponsorship, Olympic brand and Ambush marketing in Pakistan including a study of Revenue distribution of the IOC to its all stake holders and a study of Olympic Brand and Ambush marketing in Pakistan.The system used by the IOC marketing to co-create value with its stakeholders and the delivering of the Revenue to its members for the development of IOC mission in all over the world to fostering the Olympic games values and participation. The IOC's Sponsorship and the distribution of the finance to all the IF, and NOC,s including OCOG made with achieved sponsorship through the IOC's four spheres of activity corporate branding, staging the Olympic and Youth Olympic Games, managing partnerships, television broadcasts and new media, and the Olympisum in Action program which are the Major IOC Programme for the Sponsorship from their sponsor partners and they facilitate to his stake holders through the system make by IOC following their law .
Key Words.
Olympic Sponsorship, Olympic Revenue Distribution, Ambush Marketing in Pakistan, Ambush Examples. Ambush Techniques

Introduction.
Today, ambush marketing most commonly occurs in association with major sports events, although potentially other types of events could be used as a venue. Sponsorship is big business, and one brand may pay millions of dollars to become the exclusive and official sponsor of an event. This exclusivity then creates a problem for the other brands, and they have to find ways to promote themselves in connection with the event, but without paying the sponsorship fee and without breaking any laws.The birth of Ambush marketing was started at the 1984 Los Angeles Olympics, as a result of the International Olympic Committee's restructuring of their sponsorship platform in the early 1980s. Prior to Los Angeles, Olympic sponsorship was organized on an open, unrestricted basis, allowing interested parties to associate themselves with the event at a cost. The result of this original sponsorship scheme was an unlimited number of Olympic partners tying themselves to the event, reaching as many as 628 'official' sponsors at the 1976 Montreal Summer Olympics, which, although providing financing the Games, 3. also meant the dilution of the Olympic brand, and smaller impact for, and awareness of, official sponsors (Shani & Sandler, 1998). Stemming from financial constraints experienced in the late 1970s and early 1980s, the IOC had sought to reform their sponsorship programme for the Los Angeles Games. In an effort to provide greater value for sponsors and generate greater revenue for Olympic organizers, the IOC instituted a product category, exclusivity-based sponsorship plan in time for the 1984 Games. However, despite encouraging greater investment from official sponsors, and the Los Angeles Games being one of the most profitable and financially successful Olympic Games (Shani & Sandler, 1998), granting exclusivity also opened the door to ambush marketers seeking to capitalize on the event, as they were no longer able to do so legitimately. In subsequent years, as sport sponsorship has grown in importance and sophistication, so too has ambush marketing emerged as a distinct threat to sponsorship value.
Unfortunately, while research on ambushing marketing has taken steps towards identifying and exploring the issue in greater detail, considerable confusion about ambushing remains, and the existing strategies to combat it have yet to match the sophistication and creativity of ambushing campaigns. As such, the Centre for the International Business of Sport (CIBS), at Coventry University, has begun a major research project into ambush marketing, aimed at identifying the effects of ambushing on sponsorship, and the measures available to official understanding for ambushing over the past two decades. Burton and Chadwick (2008) - 1 - The CIBS Working Paper Series – no.3 Ambush Marketing in Sport: An Assessment of Implications and Management Strategies .

The IOC's revenue distribution model

The IOC's two main sources of revenues, sponsorship and broadcasting rights, have contributed greatly to financing the Olympic Movement. The IOC's revenue distribution model has been a vital element in this success, as it has kept key stakeholders (OCOGs, NOCs, IFs) united under the control of the IOC and contributed to the creation and co-creation of value. The IOC distributes over 90% of Olympic marketing revenues to organisations across the Olympic Movement, in order to support the staging of the Olympic Games and to promote the worldwide development of sport. The IOC retains less than 10% of Olympic marketing revenues, which it uses to cover the operational and administrative costs of governing the Olympic Movement (IOC, 2010a).

IOC Olympic marketing contributions to OCOGs

The IOC International Olympic Committee contributes a proportion of its marketing revenues to OCOGs Organizing Committee of the Olympic Games to support the staging of the Summer Olympic Games and Olympic Winter Games, youth Olympic Games and, since Vancouver 2010, it has entirely funded the operations of the host broadcaster, Olympic Broadcast Services (www.obs.es).

The summer Olympic and winter Olympic OCOGs for each Olympic quadrennial generally share approximately 50% of the revenue and goods and services contributions obtained via the TOP programme. Goods and services, often referred to as VIK (value-in-kind), can take the form of products, services, technology, expertise and personnel employment. VIK contributions are of great benefit to OCOGs in organising and staging the Olympic Games

IOC Olympic marketing contributions to NOCs

National olympic Committee,s NOCs receive financial support to help them to give training to their Athletes for the Summer, Winter and Youth olympic games athletes and up-and-coming athletes, for the development of their Olympic teams for better performance during the games. The success of the TOP programme and Olympic broadcast agreements has been beneficial for the NOCs, as it has allowed the IOC to increase the support it gives them with each Olympic quadrennium. In addition, the NOCs receive substantial indirect support through the provision of the athletes' village and travel grants for the Olympic Games (IOC, 2010b). The IOC gave approximately 40% of TOP sponcership revenues to the 204 NOCs participating in the programme. In addition, NOCs also share a proportion of the income from Olympic Games television rights, which are managed and distributed by Olympic Solidarity, an IOC-subsidised body that was set up for this purpose (http://www.olympic.org/olympic-solidarity-commission). The mission of the Olympic Solidarity which is an other programme to help all the NOC,s related to their financial part is "to organize assistance for all 204 IOC members countries particularly those with the greatest needs, so they can develop their own structures to favor the expansion of sport in their country" (IOC, 2011a).

Olympic Solidarity

There are 3 ways to help National Olympic Committees from IOC

World programmes,

Continental programmes (designed to meet the specific needs of each continent) and,

Olympic Games subsidies.

Olympic Solidarity's world programmes cover the four areas deemed essential for NOCs to accomplish the mission entrusted to them by the Olympic Charter. These four areas -Athletes, Coaches, NOC Management and Promotion of Olympic Values – are currently the subject of 19 world programmes covering the following 4 main Domains

Athletes: Scholarships (Rio Olympic games 2016, Beijing Olympic games 2008, Vancouver 2010 and London 2012), team support grants, and athlete preparation for Continental, Regional and Youth Olympic Games;

Coaching. Scholarships and development of national sport structures like better technology for the development of the better performance of the Coaches and Athletes

Management Funds Administration development, national training courses for sports administrators, international executive training courses and NOC exchanges and regional forums;

Support to fostering Olympic Values: Sport and the environment, sports medicine, women in sport, culture and education, International Olympic academy, sport for all and NOC legacy. Scholarship to IOA International Olympic academy for the development of IOC Educational mission including support to NOC,s to send the students in International Olympic academy .

All 204 NOCs belong to one of the five Continental Associations (CA) covering Africa, America, Asia, Europe and Oceania, and to the Association of National Olympic Committees (ANOC). Olympic Solidarity's programmes for each continent are managed by the relevant CA's Olympic Solidarity office and coordinated by Olympic Solidarity's international office in Lausanne (IOC, 2011).

Continental programmes are based on recommendations the ANOC makes to the IOC about how NOC funding from television rights should be used (http://www.acnolympic.org). The CAs then chose which continental programmes to implement and how to distribute funds.

The third way in which Olympic Solidarity supports NOCs is through the Olympic Games subsidy programme, which helps NOCs send teams to the Summer and Winter Games. Financial assistance is provided before, during and after the Games and includes assistance with the cost of sending an NOC representative to the meeting between the OCOG and Chefs de Mission, travel expenses for athletes and officials attending the Games, and a subsidy to acknowledge the fact that each NOC's participation in the Games contributes to the success of the event (IOC, 2011).

IOC Olympic marketing contributions to IFs

In order to support the development of sport worldwide, the IOC allocates a proportion of the revenues from Olympic marketing to the 26 IFs of Olympic summer sports and the 7 IFs of Olympic winter sports.

The financial support the IOC gives to the IFs has increased substantially with each successive Games. For example, the sums allocated to the summer IFs following the 2000 Sydney Games were five times greater than those awarded after the 1992 Barcelona Games. Similarly, there was a fivefold increase in the contribution Olympic marketing revenues made to the winter IFs between the 1992 Albertville Games and the 2002 Salt Lake City Games. The IOC's sources of revenue and the distribution of this revenue amongst the Olympic Movement are summarised in Figure 5.1. Revenues from the TOP programme and broadcasting rights are distributed among the NOCs, OCOGs and IFs, and used to fund programmes to support athletes, administrators and officials, to develop sports worldwide, to support the organization and staging of the Olympic Games and to promote Olympic ideals worldwide. In turn, the interest generated by these programmes and the Olympic Games help NOCs, OCOGs and IFs generate their own revenues and increase value for the IOC's partners and sponsors. Thus, the distribution of revenues creates value for both the IOC and its stakeholders.

Ambush Marketing.

"Ambush marketing is a form of strategic marketing which is designed to capitalize upon the awareness, attention, goodwill, and other benefits, generated by having an association with an event or property, without an official or direct connection to that event or property." Burton and Chadwick (2008) . any attempt by an individual or an entity to create an unauthorized or false association (whether or not commercial) with the Olympic Games, the Olympic Movement, the IOC, the National Olympic Committee of the Host Country or the Organising Committee of Olympic Games ("OCOG") thereby interfering with the legitimate contractual rights of official marketing partners of the Olympic Games.' Burton, N. and Chadwick, S. (2008) Ambush marketing in sport: an assessment of implications and management strategies.

/wwwm.coventry.ac.uk/researchnet/CIBS/Pages/Workingpaperseries.aspx

[Accessed 24 January 2011]

Promotion of Brand

Although Pakistan is the member of IOC since its Independence but There is really no necessity for the Olympic Brand to be promoted in our country but in some sports competitions which are associated to the Olympic games, IOC, Paralympics, Winter Olympics games companies are doing the ambush marketing trying to promote their business to show association with the official partners during the Olympic games whenever the Olympic games organized anywhere in the world. In the other hand promotion of an Olympic brand is very complex as Pakistan do not have the chance to organized Olympic Games in the history because of some reasons such as Security, Economic, 5. Infrastructure, Sponsorship and Political stability since its independence. (Interview of Gen. Retired Arif Hassan President of POA Pakistan Olympic Association) 18-05-2013

Worldwide protection of rights and Legislation of proprieties

In some countries, like in USA, and other developed countries, the Olympic properties are protected by law. In Asia and also In Pakistan there are no such laws to protect the Olympic properties. For those countries that have hosted an Olympic Games, they have passed laws to protect the Olympic properties, at least during the period of the Games. Pakistan is under developed country in the world and there is lot of problems in the Government sector related to the sports policies and marketing policies.

(POA Pakistan Olympic Association Pakistan)

Ambush marketing is a big problem every where in the world specially during the mega sport events including the Olympic games where different companies try to established their business through ambush marketing and all the countries must have legislation to the protection of those companies who paid a lot to the event organizers for the development of their business during any sporting event

or any other social event in the world especially in the Olympic Games. Ambusher are trying to established their business in Pakistan in different International events such as Cricket which is very popular in our country but all other games are not popular especially Ambusher try to established their business during the Olympic games locally. (POA) EX Pakistan Olympic Association President Mr Muhammad Sahi. 2013

Protecting the rights to a brand is an essential part of building a brand's value. One of the main reasons sponsors and broadcasters are prepared to invest highly to associate themselves with the Olympic brand is the brand's great value throughout the world; hence protecting the Olympic brand and the Olympic symbols is of major strategic importance. In the words of IOC President Jacques Rogge: "We want the Olympic rings to keep their symbolism and their value" (IOC, 2010a: 140). The IOC, working in conjunction with OCOGs and NOCs, has introduced a number of strategies and initiatives as part of a wide-reaching brand protection programme aimed at preserving the value of the Olympic rings, maintaining the integrity of the Olympic brand and protecting the exclusive marketing rights of the official Olympic partners. These initiatives include persuading governments to pass legislation to protect Olympic properties. For example, prior to Vancouver 2010, the Canadian government passed the Olympic and Paralympic Marks Act to protect the Olympic brand and its corporate partners from ambush marketing activities.

Ambushing Marketing and Examples

The practice of ambush marketing by certain corporations is now recognized as common practice in the sport industry as it has become an alternate strategy to purchasing the rights to official sponsorship status (Séguin et al., 2005b). 6.

. First Ambushing Example In 1984, Fuji Film won the sponsorship rights for the Los Angeles Olympic games. Kodak responsed to it by "ambushing" Fuji with a well planned campaign. Fuji took revenge on Kodak, which won the sponsorship rights for the 1988 games. . You won't need a "VISA" Visa was the official sponsor of the Winter Olympics at Lillehammer (Norway) in 1994 and aired TV commercials were they claimed that American Express cards were not accepted at the Olympic Villa. However, American Express aired ads which stated that American travelers did not need any visa to travel to Norway. " The Spirit of Australia" At the 2000 Sydney Olympics ; Qantas Airlines' slogan "The Spirit of Australia" sounds strikingly similar to the games' slogan "Share the Spirit." Qantas claims it's just a coincidence. In 2006 Football World Cup, Dutch brewer, Bavaria, gave away garish orange lederhosen displaying its name to hundreds of Dutch supporters who were attending the match against the Ivory Coast. It was the official beer. Stewards at the match ordered the fans to remove the garments before letting them in. Pringles Ambushing at Wimbledon At outside of Wimbledon All England Club, almost 24.000 cans of Pringles were distributed to spectators. The packaging, which was similar to can of tennis ball, allowed making product noticable. To reinforce the campaign, similar models to well known tennis players Roger Federer and Bjorn Borg are used.

The Olympic brand and ambush marketing in Pakistan

The Olympic properties, as listed in the Olympic Charter, are the Five Olympic Rings, the words 'Olympic', 'Olympic Games', the Olympic Flag, Anthem, Moto (Citius – Altius – Fortius), Flame. Torch, etc. Some countries have passed laws protecting the Olympic properties. Unfortunately, in Pakistan, it is not possible There are very few ambush marketing of the Olympic properties in Pakistan and Most of the cases are the use of the word 'Olympic' and 'Olympics", eg. Olympic Cables, Olympus Football, Olympia Sports garments etc. It is difficult to protect the Olympic properties from being ambushed, because POA Pakistan Olympic Association does not have the capacity or the resources to check and monitoring for the ambush marketing. (From POA Spokes person Mr Khalid Chaudry Secretary of POA Pakistan) dated 13-04-2014).

Ambush Techniques.

With respect to the Olympic Games, Michael Payne argues that ambushing could destroy its sponsorship: "if sport organizations and their corporate sponsors do not learn how to effectively protect the exclusivity of sponsorship, they will lose this source of revenu" (IOC, 1993, p.2). Meenaghan (1998) demonstrates

That major events are able to offer a large variety of promotional opportunities, The Olympic brand, ambush marketing and clutter 67 in turn providing an ideal environment for ambush marketing. Crompton (2004).

Identifies seven potential ambush opportunities which include:

1 sponsorship of the broadcast of an event

2 purchasing of advertising time in and around event broadcasts

3 sponsoring entities other than organizing body
4 purchasing advertising space at locations that are in close proximity of the event.
5 thematic advertising and implied illusion
6 creation of a counter attraction
7 Accidental Ambushing
Impacts of ambush marketing
Threat to corporate sponsorship
Transgression on the intellectual property rights
Confusion as who is the real sponsor
Back door entry and unethical but not illegal
Riding upon the competitors back
Nurturing unfair trade practices
It spoils traditional marketing
(Kshitij Parashar)
Ways for Ambush.
Two Ways of Ambush Marketing
1. Direct Ambush Marketing:
In 1994 football world cup, MasterCard received exclusive rights for using world cup logo, but a rival Sprints Communication used the logo without permission. This is direct attack but can be defended by laws.
2. Indirect Ambush Marketing: Several ways indirect ambush marketing can take place like sponsoring the broadcast of the event, sponsoring subcategories of the major event etc.

Types of companies using Ambush Marketing in Olympic Games.

1.Kodak Vs Fuji
According to Professor of marketing at Bath University, Mike Beverland, "Ambush marketing really began with Kodak in the 1984 Olympics when they ran a series of campaigns suggesting they were the official sponsors when in fact they weren't."
Kodak ambushed Fuji again tried to established their business in 1996 Atlanta Olympics. 'As soon as Atlanta was awarded the rights for the 1996 summer games, Kodak bought 50 major poster sites in the city for the next four years, at an estimated $28,000 per month,' said Richard Busby, chief executive of Strategic Sponsorship, a leading UK consultancy.

2. Bavaria Beer Vs Budweiser
One of the highlights of this year's World Cup in South Africa occurred during the match between Holland and Denmark. 36 female Dutch fans arrived wearing very cute little orange mini-dresses, which soon caught the attention of the world's media.
Unfortunately, these ladies were evicted from the stadium and arrested by police, as it was claimed the dresses were provided by a Dutch brewery, called Bavaria Beer. FIFA officials intervened to stop the media coverage, in order to protect their official sponsor Budweiser.
Peer Swinkels, from Bavaria Beer, said people "should have the right to wear what they want. The Dutch people are a little crazy about orange and we wear it on public holidays and events like the World Cup," he said. "This time we put no branding on the dress. And Fifa don't have a monopoly over orange."
Fifa World Cup 2006.
3. Coca-Cola Vs Pepsi
Coca-Cola spent a total of $400 million on marketing in Beijing in 2008, including $85 million to be an Olympic sponsor, yet up to 60% of consumers believed Pepsi was the official sponsor.
PepsiCo's highly successful marketing campaign included an online competition, in which 160 million voters from mainland China ranked mug shots sent in by fans. The winning entries were printed on cans cheering on Team China. Pepsi also replaced it's traditional blue cans in China with red ones "to show our respect to the year of China," says Harry Hui, Pepsi's marketing chief in China.
4. Li Ning Vs Adidas
This has been called the greatest marketing ambush in sports history. Adidas, had spent nearly $200 million to become the official sportswear brand at the Beijing Olympic Games in 2008 – only to be ambushed quite spectacularly by the Chinese sportswear brand Li Ling. The problem occurred when Li Ning, a former gymnast and founder of the sportswear company, was chosen to light the Olympic cauldron at the opening ceremony. Li Ning was China's most decorated Olympian and a

national hero. He was the first Chinese gymnast to win a medal in the Olympics, winning three golds, two silvers, and a bronze in the 1984 Los Angeles Games. The media exposure effectively gave his company a free ten-minute advert across China and the world. Li Ning was shrewd enough to realize that his starring role would lead Chinese consumers to automatically believe he was wearing his own apparel – when in fact he was legitimately bedecked in Adidas' official Olympic clothing. To add to the confusion, Li Ning's corporate logo resembles the famous Nike 'swoosh', while the company slogan, 'Anything is Possible', is similar to the Adidas tag line 'Impossible is Nothing'.

lack of marketing in Pakistan

Promoting sports brands in the low level sports competitions
Trying to promote the marketing without signing the contract officially.
Advertisement with out media,Advertisement without news papers,Advertisement without prominent sports person,Long-term contract,Prominent sport event,Improper Sports Policies

Some challenges in Pakistan.
1.Security
2.Public awareness
3.Finance
4.Government interest and Language problem
5.Price
6.Terrorism
7.Political instability
8.Democracy
9.Sports Infrastructure
Recommendations to stop Ambush Marketing
1. The event organizer must have control to sale the tickets related to the games or matches.
2. Organizer must buy all advertising space that is close to the venues where the sporting events will take place and sell that space only to official sponsors.
3. Organizing Committee and Sponsored companies should organized education campaign to give awareness to the public that emphasizes that sponsorship fees are used to help athletes train for events and an aggressive strategy of publicly identifying ambush marketers (although some ambush marketers will welcome this exposure).
4. The event organizer can emphasize what it can offer official sponsors, such as VIP passes and special events that only official sponsors can invite fans to attend.
5. The event organizer can assemble "teams" to monitor the areas near the venues for ambush marketing activity and have a command center ready to deal with ambush marketing activities.
6. Anticipating that ambush marketing will occur, the event organizer can have a legal team in place and be prepared to seek an injunction immediately upon learning of ambush marketing that violates trademark or unfair competition laws.
7. All the International Federations and NOC,s must make the strict Law for the protection of Brand and also protection of the official partners of the games or any International event.
8. IOC need to review their Law related to Ambush Marketing and protection of the Brand so that the ambusher could be discouraged.
9. IOC needs to be educate the Administration and giving them training to discourage the Ambushers during the Olympic Games so that the value of the brand could be stable.
10. The Ministry of Sports must make strict policies with the cooperation of IOC, NOC, and If's for the protection of Brand.

Conclusion

Ambush marketing is not a new phenomenon but lately due to increase in sports events at the world level, ambush marketing has been making headlines. In order to avoid ambush marketing, organizers are making an effort to make such rules or guidelines, which gives them the power to take action against the wrongdoer. Government needs to make specific legislation to prevent ambush marketing or provide opportunity to co sponsor the event for a lesser payment sponsorship in a limited manner so that ambushers could be discouraged. IOC need to declare the new strict laws with the Cooperation of all IFs, NOC, s, and Governments of all Affiliated National Olympic Committees for the protection of Official Sponsors.

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A comparative study of Intelligent Quotient of the women players In Kho-Kho and other games

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Abstract
The purpose of the study is to compare the Intelligent Quotient of the women players in Kho-Kho and other games like Cricket, Handball and Badminton. There has been random selection done of colleges affiliated to Devi Ahilya University, Indore for this study. The selection of the women players of kho-kho, Cricket, Handball and Badminton is done on the basis of their feasibility. 180 subjects of the present study were selected, 50 each from Kho-Kho, Cricket and Handball and 30 from Badminton. Intelligent Quotient (I.Q.) was measured- "Test of general Intelligence" Questionnaire by Dr. S.K. Pal and Dr. K.S. Mishra. One way analysis of variance was used and level of significance was tested on 0.05% level.Result shows that no significant differences were found among the groups.
Key words:- I.Q., Kho-Kho, Cricket, Handball, Badminton Sports Psychology.

Introduction
Sports psychology is an interdisciplinary science that draws on knowledge from many related fields. Sports psychology is the study of how psychology influences sports, athletic performance, exercise and physical activity. Some sports psychologists work with professional athletes and coaches to improve performance and increase motivation. Sports psychologists are interested in two main areas –to help athletes use psychological principles to achieve optimal mental health and to improve performance and understand how to participate in sports.The vast majority of elite athletes recognize the importance of psychological training for competition sports performance are 90% mental, and many great athletes also credit the mental side of the game as crucially important in determining the outcome.Intelligence Quotient in general, is an assessment of your ability to think and reason.
I.Q. is a score derived from one of several standardized tests designed to assess human intelligence. The abbreviation IQ was coined by the psychologist William Stern for the German term Intelligenz-Quotient, is term for a scoring method for intelligence tests he advocated in 1912 book.
Intelligence refers to intellectual functioning. IQ test compare your performance with other people.The nature and origins of hominid intelligence is a much studied and much debated topic, of natural interest to humans as the most successful and intelligent hominid species.There is no universally accepted definition of intelligence, although one definition is – "The ability to reason, plan, solve problems, think abstractly, comprehend ideas and language,and learn". The evolution of hominid intelligence can be traced over its course for the past 10 million years, and attributed to specific environmental challenges.I.Q. has a very close relationship with physical activities. Getmen said— "Learning requires movement--- thoughts which do not get into muscles, never fully process the mind".
It is generally observed that a healthy and fit child has more grasping capacity than an unhealthy one. Comenius has also said that mind development at every step is connected to physical development and power. Intelligence and mental internships curriculum should be prepared along with physical exercise to get the best results.

Methodology
There has been random selection done of colleges affiliated to Devi Ahilya University, Indore for this study. The selection of the women players of kho-kho, Cricket, Handball and Badminton is done on the basis of their feasibility 180 subjects of the present study were selected. 50 each from Kho-kho, Cricket, and Handball and 30 from Badminton. I.Q. was measured – " Test of general intelligence" Questionnaire by Dr.S.K.Pal and Dr.K.S.Mishra.

Statistical Procedure
To calculate the level of significant difference among the groups of Kho-Kho, Cricket, Handball and Badminton, one way analysis of variance was used and level of significance was tested on 0.05% reliability level.

Results and discussion

The analysis of variance on the data concluded is presented in the table.

Table -1:Analysis of variance of I.Q. among groups of women players of Badminton, Handball, Cricket and Kho-Kho

Source of variance	D. F.	S.S.	M.S.S.	F. Ratio
Between groups	3	158.343	52.781	1.409
Within groups	176	6592.607	37.458	
Total	179	6750.950		

*Significant at .05 level

'F' Needed for significant at .05 level with

D.F. 3:176 = 2.66

It is observed from table 1 that there was no significant difference in I.Q. level among the groups because F.Ratio amounts to 1.409. However, the needed value of level of significance which is .05 comes to 2.66.

Comparative mean scores of I.Q. in Badminton, Handball, cricket and Kho-Kho are presented in the graph.

GRAPH

I.Q.

Comparative Mean Score Of I. Q. In Bad, Hb, Cri,And KkBad Hb Cri Kk Badminton Handball Cricket Kho-KhoMean Scores 31.06 30.92 32.98 32.72

Discussion of Findings

The results of I.Q. shows that there is no significance difference among Kho-Kho, Cricket, Handball and Badminton groups, which means that all of them have same level of I.Q.

Sport is not just a physical activity but also a mental activity. Training program for players is set up in such a way that they develop mutual understanding, helpful attitude, reaction time, analysis capacity etc. in them. Probably all the players had almost same level of intelligence because they had the capacity to grasp all these qualities.

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Study Of Indian Traditional Indoor Games Knowledge Of Urban Industrial Area Female Studentes Of Palavancha.Khammam.

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Introduction;

One striking difference between the modern children's childhood that the previous generation had and the one that this generation is having is the lack of traditional games knowledge. In our generation before 1980s we used to play a variety of indoor and out door games that were the games of this soil. Now a day's almost all kids play games in computerized ones and individual games. India's ancient culture is the traditional games and martial arts. According to Edgardo civallero (2006)'' a people intangible heritage is composed by the non-material part of its culture, Tales and narratives, games and songs, music all the knowledge usually transmittted by oral or sound means in traditional societies as well as in urban westernized ones.' these games are intensely enmeshed in the culture of the region and are aimed towards physical and mental excellence. Some of the traditional Indian indoor games like the Dhaayakattam,Paramapadham, Pallanguzhi,Paandi or Aadu puli aattam. These games have a rich culture and heritage value and were tools of passing on some ancestral knowledge. They were designed in such a way that one can develop lot of skills like logical thinking, building strategy (while playing like to learn to win and lose) improve motor skills, identify color, concentration, basic mathematics, aiming concentration, mastery. they also sharpens our observational level and math's skills that uni-dimensional, strengthening hand –eye coordination, enhances guessing power, face reading, lot more and finally to have fun along with avoiding rung thoughts. Now a days we develop these skills' by playing money to centers that conduct personal development sources.The values that we achieve by playing these indoor games are more when compared to the games that we play now a days in computer and other electronic gab rage. Some of the values that we gain are that they are environment friendly and good for health .we get a chance to learn about our culture and history and an important thing is it is suitable for all ages. So they increase the interactions between generations.

Methodology;

The subjects of this study were the students of different socio-economic conditions of industrial aria schools of palavancha Khammam district of Telangana state. This was sampled thru total enumeration with 60 female respondents in 8th standard students. The questioner method was adopted since the present study is concerned with the present to know the traditional indoor games knowledge. One is private institution and another of government. The researcher used the questionnaire as the main tool of study. The statistical tool percentages were used in making the interpretation of the data clear and understandable so that the problem will be answered.

Results;

70%subjectes know the deference between the indoor and outdoor games. Only 20%has theknowledge of the indoor traditional games. 90% are making their own rules.15%are playing in classroom. Majority of the students know only 6 games.

Conclusion;

The Indian traditional indoor games are become a source of moderate exercise to physical and mental for children and are essential for their health development. On the other hand they constitute a source that develops group and family sense necessary for their social well being. Economic and eco-friendly, poverty does not deter the children from playing games and enjoying their leisure time.

Recommendation;

Playing games is a common characterstic of children. The rising income level due to the redevelopment of industrializes radial city diverse social values have resulted indifferent leisure options for different social classes. This strengthens the family bonds and develops a sense of family.

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The impact of the application of the curriculum theoretical vocabulary accompanying to learn and mastering some basic skills in handball for the students of the second stage Physical Education College, University Baghdad

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Researcher: amin Thanon Ahmed Al-Haddad
Researcher: Salam Nther Abbas
Researcher: Saja shukr Yas

Introduction and significant of research

The sporting activities, including the game handball depends on the basic skills important as a base for progress so as to make (the teaching staff and coaches) spend most of their time in training to perform these skills and apply them and give greater its share in the programs (teaching and training), 'but a long time in physical training is not a method only to learn basic motor skills, there are a lot of ways and methods that help to speed learning and acquisition of motor skills, including the use of theoretical learning to reach the highest levels of performance and the achievement of skill required by the player or the student level, Terms this learning works to ease the burden on students, through the exchange of action between physical and motor side and the side of theoretical learning, Learning theory standardized process that involves mental and physical sides and access for the optimal performance skills.

The importance of research is to go to the field of beginners students teaching the correct beginning to learn the game handball skills, and to try to facilitate the educational mission 'as well as introduce them to the game laws and apply them well with an emphasis on theoretical learning link in the operations control and control the ideas and movements physical and regulate motor behaviour and exploitation phrases and ideas of positive and appropriate models to assist in the ability to mental training and regular process compatibility between mental training and learning skills practice.

Research problem

The teaching of practical applications performed by professors teaching staff to learn basic skills for sports, including handball in physical education colleges curriculum throughout the country, are not sufficient to learn and master the full Terms The educational and teaching process in the field of physical education depends mainly on the mental correlation mental and physical and motor skills to achieve desired objective To learn and master the basic skills to be learned and mastered to be among the skills that can graduate student teaching her to schoolchildren as they are part of the Platform for Physical Education in the (middle and secondary) throughout the country, and that process put vocabulary theory associated with the practical side and diversification in the use of methods in proportion to the level of students by teachers qualified field their specialty and who use modern technologies in the delivery of theoretical material scheduled as an approach required for the stage as an approach for material Handball second stage of the academic year - 2 013 \ 2014. In addition to the use of theoretical learning as a means associated with the learning skills and upgrade them appropriately, so that the student and the educational process of access to the best, and that mental practice a strategy of knowledge more effective than the lack of practice and should be used complementary to manner with the kinetic practice and physical to give the best results in learning all stages.

Research objectives

1- Identify the application vocabulary the curriculum in handball to learn the theoretical accompanying learn practical skills for students of the second stage prepared by the difference games branch - in the Physical Education College - Baghdad University for the academic year 2013 2014.

2- Know the impact vocabulary the curriculum in handball to learn the theoretical associated with learning practical skills to learn some basic skills in handball with the students the second stage of the research sample individuals.

3- Identify the differences between the tests (pre and post) members of the group (experimental and control) in the study under consideration variables.

Research hypotheses

1- to apply the vocabulary of the curriculum in handball to learn the theoretical associated with learning practical skills positive impact on learning some basic skills in handball with the students the second stage the physical Education College - Baghdad University - for the academic year -2013 \ 2014.

2- There are significant differences were statistically significant between the (pre & post-tests) and for the benefit (post-test) with the experimental group individuals the research sample in the study under consideration variables.

Delimitation's and Limitations

The research sample was taken from the second stage students - Department of (collective games) / Physical Education College - Baghdad University / for the academic year 2013 \ 2014.

The period from 01.02.2014 until 05.20.2014 - in the second semester 2014

In sports halls and classrooms (theoretical learning) - Physical Education College - Baghdad University – Jadriyah

The study did not include the dietary habits and style of student life outside the college of physical education.

Research Methodology

The researcher used the experimental method design (equal groups with and taught by the pre-test) as it suits the nature of the problem and achieve the objectives of the research.

Sample of Research community

Community included research on (44) female students from the Physical Education College - Baghdad University, which represents the percentage (32.59%) of the total adult Research community (135 students) in the second stage for the academic year 2014, were excluded (4) students They did not attend became the number (40) students, were divided randomly into a group for the purpose of performing exploratory experiment consisted of (10) the amount of the proportion of the sample (25%) students and to the two groups (control group and experimental).

(Research sample consisted from the one age group do not have the expertise in handball beginners category so They are are homogeneous groups).

Adoption of the researchers on the set of tools and equipment used in the search

It was chosen as the basic skills and skill tests for the study under discussion

The researchers chose the main skills that are within the curriculum second stage in handball and these skills are (passing and receipt, clapotement two types, Shooting from the stability and jumping forward). As for the tests researchers have chosen tests that appeared in more than one message (MS or PhD), and that are relevant to the subject of this research, and appropriate to Sample of his research available in the scientific transactions (honesty consistency, objectivity) as it was investigating the educational requirements set by the researcher in teaching skills basic tests that have been selected are:

1 - Speed Test (scrolling and receiving) on the wall from the distance (3 meters). Within 30 seconds.

2 - Test (clapotement ball) in a zigzag distance (3 meters) and calculate the time it takes.

3-Test (Shooting from the stability) to the two goals hanging onto in the range of Handball (60 × 60 cm - from a distance 21:00)

4-Test (Shooting of jumping forward) two goals hanging onto in the range of Handball (60 × 60 cm - from a distance of 9 meters)

Exploratory experiment

Has been conducting reconnaissance is dated 02/25/2014 experiment, on the (10) students has already been appointed at random.

Pre tests

The researchers conducted (pre-test) on the day (14 15/2/2014) of the skill tests for the control group firstly, and the next day at the same time conducted (pre-test) of the skill tests experimental group.

Education curriculum

It has been applied to Special vocabulary curriculum in the second stage Handball the second semester.

Post test

After completing the units (educational skill and theory), was conducted (post-test) is dated (5-6 / 5/2014) and under the same conditions that conducted the (Pre-tests), where he held (post-test) for the tests skill and test theoretical learning (control group) and in the next day and at the same time conducted the tests.

It has been dependence on statistical methods in the program (spss), to achieve the objectives and the research hypotheses

Display, analyse and discuss the results:

After that was completed special procedures (Post-test) in the period that have been identified by the subject teacher and with the help of assistant staff and researchers were manipulate search results statistically and so to get for these results values so that we can discuss these results in order to achieve the objectives and hypotheses of this research.

Conclusions

1- that the moral differences in the results for most of the emergence of the tests under discussion, this shows that the approach was a positive impact in the overall vocabulary adopted by the teacher in charge of handball that.

2- That the use of (feedback) associated with the performance played a prominent role in the mastery of most of the second semester skills, enhanced the skills of the first semester, which is the basis for her.

3- To learn the theoretical accompanying the performance is very necessary for beginners in operations (the initial learning) the basic to the game of handball skills, and this contributed to master the skills that have been learned by the students for the second stage of the research sample in the second semester.

4- to display motor performance by a player mastered the skill and by the teacher in charge of the performance of skills as well as viewing the visible direct process contributed to raising the viability of the students by watching self-correction and by colleagues and the teacher, all operations have contributed to raising the level of (mental ability) to them and reflected on the mastery of skills educated.

5- to increase frequencies during the implementation of skills and learning theoretical associated, had a role in strengthening the mastery of skill and stability among female students in the overall learning processes that have been implemented by the teacher in charge.

Recommendations

1- Need for attention to the theoretical learning associated with the skill of being a contributing information linking theory with practical application of the skill of the process and contributes to the mastery.

2- Display Model attention during the explanation the details during learned skill with a focus on (the need for repetition) by Model of hard skills and complex to enable the learner to think of movement and their parts and performed for the purpose of Mastery.

3- The work to give (external feedback) by the coach at the right time during the performance of and skill during learned, because of their role by the results of which appeared in the search under consideration.

4- some of the skills that are granulocyte for students during the initial learning them, because they are based on some of the capabilities possessed by female students which enhances the process of mastering these skills dissuade learned, so the teacher must reinforce these skills and contribute to encouraging female students to mastery.

5- Need moral support to female students during the learning aptitudes weak mainly because from the high schools, the level of capacity and improved through programs developed by college professors and specialists, each according to its competence to learn the basic skills of sports including handball.

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Growth Pattern Of Ten To Twelve Years Old Children In Respect Of Locality

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Abstract:
The studies were conducted to compare the growth pattern according to subjects residence at urban and rural localities in the state of west Bengal. The sample consist of 600 (six hundred) school children were taken for the study where 300 urban and 300 rural school children. The measurements like height(cm.), weight(kg.)and BMI(kg/m^2) were taken. There were three age groups i. e 10 yrs. 11 yrs. and 12 yrs. where each age group 50 boys and 50 girls included. A systematic random sampling procedure was followed. Among the three growth variables weight(kg) and BMI were significant at 0.05 level but not in height. In height, the researcher revealed that urban boys and girls were taller than their rural counterparts. According to data the researcher were drawn that the weight and BMI, but not height ,did differ between urban and rural children.
Keywords:Growth pattern,Anthropometry(ht.,wt., bmi),urban&rural children.

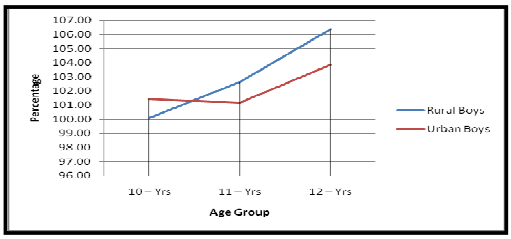
Introduction:

All youngsters follow a general growth pattern and although extreme deviations were always present among children, the most still may be considered as normal.(Gallahue,2003). Eiben et al. (2005) conducted a study in Hungary of growth pattern of urban and rural boys and girls. A sample of 40 school age boys and girls from selected schools were included in the study. Internationally standardized tools were used to compare the anthropometric measurements of urban and rural children. Study analysis identified that the urban boys and girls were taller and heavier compared with the rural boys and girls. Cameron et al. (1992) conducted a study to compare the growth of urban and rural school children (n=307) in South Africa). They revealed that significantly urban children were taller than the rural children . Pena et al. (2003) conducted a study on growth pattern of 6-13 years school children having resident in an urban colonia and in a rural indigenous community in southern Mexico that revealed Urban children were taller and heavier than rural children.
Materials and Method: A total of 600 six hundred children age category of ten, eleven and twelve years were selected for the study. Equal numbers of subjects were selected from rural and urban areas. The Subjects were selected from different district such as Nadia, South 24 Parganas, Kolkata and Howrah of West Bengal in India. In selecting a subject for the study, systematic random sampling procedure was followed. The willing students of the schools having roll no. 1, 6, 11, 16, 21, ….. were considered as a subject, if they did fulfill the age criteria of the study. The date of birth of the subjects were collected from their school admission resistered and it considered in completed years. The measurement of growth variables were as height(cm),weight(kg) and BMI.

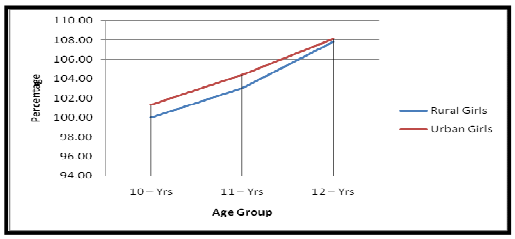
Results and Discussion:
The comparative statistics in the form of mean and standard deviation (SD) were stated in the table-1.

Table – 1: Comparative Statistics of Growth patterns Variables according to Locality

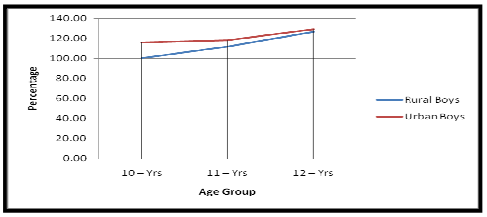
Variables	Age & Locality	10 – Yrs Gr. Mean±SD	11 – Yrs Gr. Mean±SD	12 – Yrs Gr. Mean±SD
Height(cm)	Rural Boys	136.04±6.85	139.48±7.38	144.56±6.29
	Urban Boys	137.86±10.07	137.54±8.19	141.16±7.62
	Rural Girls	135.92±8.35	140.08±8.77	146.52±6.56
	Urban Girls	137.72±8.05	141.90±7.46	146.94±6.56
Weight(kg)	Rural Boys	27.54±4.99	30.72±6.21	34.72±7.09
	Urban Boys	31.78±9.47	32.34±7.16	35.40±8.77
	Rural Girls	27.38±6.65	31.25±7.58	37.84±9.07
	Urban Girls	32.05±8.51	34.58±8.12	38.63±9.35
BMI	Rural Boys	14.80±1.93	15.66±2.03	16.53±2.71
	Urban Boys	16.52±3.70	16.97±2.79	17.62±3.50
	Rural Girls	14.71±2.61	15.73±2.45	17.50±3.42
	Urban Girls	16.72±3.42	17.64±4.13	17.80±3.76



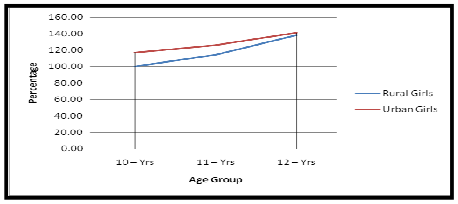
Graph 1a (Height)



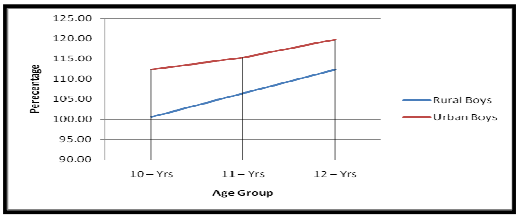
Graph 1b (Height)



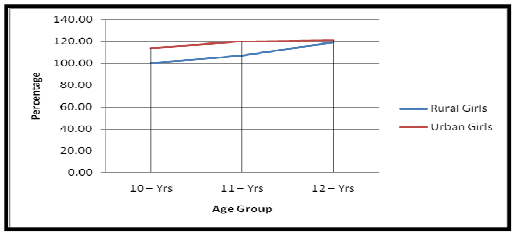
Graph 2a (Weight)



Graph 2b (Weight)



Graph 3a (BMI)



Graph 3b (BMI)

Graphical presentation of Growth variables (1a – 3b)

1. Height:

In present study there was no significant difference in height according to the locality of the subjects. However, researchers revealed that urban boys and girls were taller than their rural counterparts.The researchers were observed that the height of urban boys and girls were higher than the rural boys and girls. Similar findings with the study were Phaleke (1968), ICMR (1982), Sahoo et al. (2011) and Kolekar et al. (2013) those observed that the urban boys and girls were taller than the rural boys and girls. Opposite findings were also reported by Indirabai (1979), Bhandari et al. (1972), Barabas and Nemeth (2005), who observed that the rural children were comparatively slightly higher than the urban children. This is not a surprise as human stature varies among different populations that are at different stages as the secular trend. In Mexico, the children lived in urban colonies were significantly taller than the rural Zapotec communities reported by Buschang et al. (1981). In Hungary, the 3-18 years of old urban boys and girls were taller than the rural counterparts.

2. Weight:

Inter-group comparison (t-test) of Weight (kg) according to locality were Significant at 0.05 level($t_{0.05}$ 598 = 1.96). It is revealed from the findings of the study that the weight of the urban subjects found to be higher than the rural group. Increase in weight was observed in urban boys than rural counterparts in 7-11 years (Dana et al., 2011). The urban boys were heavier than the rural counterpart of 6-13 years old (Malina, 2003). But a few investigators observed opposite trend to the present study such as, Wollard and Corlett (1988) in Canada, Stepick et al.(2005) in Mexico.

3. Body Mass Index (BMI):

Inter group comparison (t - test) of BMI (kg/m^2) according to locality were Significant at 0.05 level($t_{0.05}$ 598 = 1.96) **.**Differences in BMI according to locality in children were observed. Urban subjects were having higher BMI than rural subjects. The investigators observed the urban boys were heavier than the rural counterparts as reported by Tan et al. (2003), Kellis et al. (2005); but the researchers like Hodgkin et al. (2010) observed a different view in change of BMI in the 7-11 years old children. Difference in growth pattern observed to be existed between boys and girls (Khazaei, 2012).

Conclusion:

The study was confined to the growth pattern variables of rural and urban children of 10-12 years of age. The study concluded that Weight and BMI, but not height, did differ between rural and urban children. However, the urban children were superior to their rural counterpart in height and BMI.

Recommendation:

A longitudinal study with proper supervision is needed to obtain more result for this kind of study. Similar study may be conducted on other age groups. Similar study may be conducted with locality classification like hill, plane and other geographical variations.Similar study would have been conducted on the children of different population.

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Emerging of women professional sports and Sports as a professional activity among women

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Introduction

Professional athletes are distinguished from amateur athletes by virtue of being paid. Throughout the world, most top female athletes are not paid, and work full-time or part-time jobs in addition to their training, practice and competition schedules. Women's professional sports organizations defy this trend. Such organizations are relatively new, and are most common in very economically developed countries, where investors are available to buy teams, and businesses can afford to sponsor them in exchange for publicity and promotion of their products. Very few governments support professional sports, male or female. Beginning in the late 1960s, a few women gained enough recognition for their athletic talent and social acceptance as role models to earn living playing sports. Most of these were in the United States. Among them was Joan Weston, a roller derby star who was once the highest paid female in sports, but she was the exception rather than the rule.Things began to change in 1973 when Billie Jean King won "the Battle of the Sexes" and cracked the glass ceiling on pay for female athletes. Other players, like Martina Navratilova, broke through that ceiling, decreasing the gap between women and men athlete's pay on a regular basis rather than occasionally. Even now, in the 21st century, most professional women athletes around the world receive very little notoriety or pay compared to men. Life acknowledged the importance of King's achievement in 1990 by naming her one of the "100 Most Important Americans of the 20th Century."

USA

Though women have been pro athletes in the United States, since the early 1900s, paid teams, leagues and athletes are still uncommon and, as of 2013, paid far less than their male counterparts. For instance, the WNBA had its first season in 1997, 51 years after inception of the men's NBA. The WNBA (under the NBA Board of Governors) pays the top women players 60 times less than the top men.

Absence of a Women's professional football (soccer) league in the United States made it difficult for the Soccer women's national football team to find new players until Women's Professional Soccer was founded. A 2004 effort to revive the WUSA was launched. On September 4, 2007, a new North American women's professional football league, tentatively named Women's Soccer LLC, was announced and ultimately launched in 2009 as Women's. As of 2013, the only sports that men but not women play professionally in the United States are football, baseball, ice hockey, and Ultimate Frisbee.

Baseball

Since many men were on the battlefield during the Second World War, the All-American Girls Professional Baseball League (AAGPBL), in place of Major League Baseball, was created in 1943 to provide entertainment of people exhausted by the war. It was such a success that the number of people who attended women's baseball games reached almost 1 million in 1948. Yet, when the war ended and Major League Baseball players came back home, female baseball players were obliged to fill the role of housewife at home. AAGBL lost its audience, struggled with finances, and ceased to exist in 1954.

Basketball

There are many countries where women's professional basketball league exists besides the United States, such as Italy, Germany, Spain, and Brazil. Many Americans players went overseas and some WNBA players play basketball in foreign countries during WNBA's off-season.

The Women's Professional Basketball League (WBL) was a professional women's basketball league in the United States. The league played three seasons from the fall of 1978 to the spring of 1981. The

league is generally considered to be the first American professional women's basketball league to be founded.

Golf

The LPGA (Ladies Professional Golf Association) was founded in 1950 and is the longest running women's professional sports association.

Horse Racing

In 1906 Lula Olive Gill became the first female jockey to win a horse race in California; later that same year, Ada Evans Dean rode her own horse to victory after her jockey had become ill. Indeed, Dean won twice — in spite of never having raced before. Kathy Kushner mounted a successful legal case in 1968 to become the first licensed female jockey in the United States. Since the age of 16, she had been regularly winning unrecognized flat and timber races. As a licensed jockey, she rode races up and down the eastern seaboard and Canada and became the first licensed female jockey to ride races in Mexico, Germany, Colombia, Chile, Peru, Panama, South Africa, and what was then Rhodesia. She was also the first woman to ride in the Maryland Hunt Cup, the toughest timber race in the world. ABC Television filmed an award-winning documentary in Saratoga about her being the first woman in modern times to ride in a steeplechase at the racetrack.

Softball

The first women's professional softball league was established in 1976, but it only lasted for four years because of its financial reasons and failure in marketing. In 1994, the National Pro Fast pitch emerged to prepare a rebirth of the professional league, which came into existence with 6 teams in 1997. As of 2012, the league has 4 teams that play 44 games each and then participate in the Championship Series. The league is expected to expand "due to on-going expansion efforts".

Tennis

The Women's Tennis Association (WTA) was founded in 1973 with Billie Jean King at the forefront. It is widely considered the most successful and popular of any organization in women's professional sports. The league has over 2,500 players from 92 nations, and it has over $100 million in prize money for 54 tournaments and 4 Grand Slams in 33 countries.

Volleyball

The Women's Professional Volleyball Association was established in 1986. The association organized professional 6-player indoor volleyball leagues and beach volleyball leagues, such as Bud light Pro Beach Volleyball League in 1997, in which 4 teams participated. It dissolved in 1997.

Motorsport

Eight women qualified to the Indianapolis 500 formula race: Janet Guthrie (9th in 1978), Lyn St. James (11th in 1992), Sarah Fisher, Danica Patrick (3rd in 2009 y 4th in 2005), Simona de Silvestro, Pippa Mann, Milka Duno and Ana Beatriz Figueiredo. They also raced at American open wheel racing (USAC National Championship, Cahmp Car and Indy Car Series. The only one to win a race was Patrick at the 2008 Indy Japan 300; she scored several podiums and finished 5th in the 2009 Indy Car Series season, 6th in 2008 and 7th in 2007. Guthrie finished 5th in a USAC race in 1979. Fisher scored two podiums.

The most successful NASCAR female drivers were Sara Christian, who finished 5th in a NASCAR Cup Series race in 1949; Guthrie, who finished 6th in a 1977 round; and Patrick, who resulted 4th in a NASCAR Nationwide Series race. Shirley Mulroney was the first woman drag racer to compete in Top Fuel, the main class of the National Hot Rod Association, and won the 1977, 1980 y 1982 championships. Patrick has been receiving substantial mass media coverage since her first Indy Car season, starring national advertising campaigns and earning among the top 10 sportswomen. In Australia, the Australian Institute of Sport has started many programs to help women's golf.

Ice hockeyAt the turn of the 20th century, the first organized women’s ice hockey leagues started in Canada, as did the first-ever attempt at launching a pro league in the 1990s. The Canadian Women's Hockey League (CWHL) has a historic legacy, but the current incarnation of the League began operations in 2007. Over the decades, the League has had many names: In the late 90s and early 2000s, it was the National Women's Hockey League (NWHL). Many of the current stars were culled from that league after its demise in 2007.

At the time, owners were losing money and unable to forge a cohesive plan for how to move the league forward. The prospect of having no professional league for women left the world’s top players with nowhere to play. In the summer of 2007, a groundbreaking initiative launches a player-run league with a new vision. Along with fellow players Kathleen Kauth, Kim McCullough, Sami Jo Small, Jennifer Botterill, Lisa-Marie Breton and a group of keen business people, they formed the Canadian Women's Hockey League (CWHL), following the example of the National Lacrosse League.

Top earning sports women

According to Forbes Magazine, the top ten earning female athletes are:

2011 rank	Name	Earnings (USD)	Sport
1	Maria Sharapova	$25.0 million	Tennis
2	Caroline Wozniacki	$12.5 million	Tennis
3	Danica Patrick	$12.0 million	Motorsport
4	Venus Williams	$11.5 million	Tennis
5	Kim Clijsters	$11.0 million	Tennis
6	Serena Williams	$10.5 million	Tennis
7	Kim Yun-Na	$10.0 million	Figure skating
8	Li Na	$8.0 million	Tennis
9	Ana Ivanovic	$6.0 million	Tennis
10	Paula Creamer	$5.5 million	Golf

Forbes list: 2011.

Women Professional Sports competition.

Women's sport at the Olympics.

Cycling

UCI Women's Road World Cup.

Football (soccer)

Women's World Cup.Algarve Cup.Four Nations Tournament.CONCACAF Women's Gold Cup. Copa do Brasil de Futebol Feminino.CONMEBOL Sudamericano Femenino.FA Women's Cup. FA Women's Premier League Cup.FA Women's Community Shield.U-20 World Cup. U-17 World Cup.OFC Women's Championship.UEFA Women's Championship.

Ice hockey

Alpine Cup.Asian Winter Games.Canadian Interuniversity Sport women's ice hockey championship. Clarkson Cup.Coupe Dodge.Elite Women's Hockey League.Esso women's hockey nationals. 4 Nations Cup.MLP Nations Cup.NCAA Women's Frozen Four.IIHF World Women's U18 Championships.Women's hockey Tournament at the Olympic Games. Women's Pacific Rim Championship.

Golf

The LET (Ladies European Tour) is Europe’s leading women’s professional golf tour and formed as the WPGA in 1978. Over the last 33 years, the tour has developed into a truly international organisation and in 2011 will operate 28 golf tournaments in 19 different countries worldwide.

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A Study On Anxiety Of Sports And Non-Sports Personnel

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Abstract
Background: Anxiety is one of the most interesting and important areas of focus in sports psychology and has continued to attract great research interest (Weiss & Gill, 2005). This research attempted to determine the state and trait anxiety of sports and non-sports personnel. Method: To investigate the state and trait anxiety of athletes and non-athletes, we comprised 200 adolescents and divide according to sports and non-sports personnel (100 from each group) and 50 girls and 50 boys were selected from each sports and non-sports groups. Spielberger, Gorsuch, Lushane, Vagg and Jacobs (1983) State-Trait Anxiety Inventory (STAI) was administered on them. Results/Conclusion: Mainly three conclusions were drawn from the study: 1. The Sports personnel possessed less state and trait anxiety than non-sports personnel. 2. Trait anxiety of sports girls was low as compared to non-sports girls. 3. Sports girls showed less trait anxiety than sports boys.
Keywords: Sports Psychology, State Anxiety, Trait Anxiety, Sports Personnel, Non-sports Personnel.

Introduction

Sports bring out the best qualities in every individual. Every faculty of the human body, whether physical or mental, is stretched to its limits while playing a competitive game. In today's world, the standard of all games has increased considerably. Elite sportspersons are finding it increasingly difficult to sustain their dominance in their respective sports. The mental state of a sportsperson plays a vital role in his or her performance. Anxiety sets in when an individual begins to doubt his or her capacity to deal with the situation which builds stress. Quite often it is not the talent that decides your performance. It simply depends on the way you deal with the ups and downs of the game. Anxiety is a natural reaction to threats in the environment and part of the preparation for the 'fight or flight' response. This is our body's primitive and automatic response that prepares it to 'fight' or 'flee' from perceived harm or attack. It is a 'hardwired' response that ensures survival of the human species. Sporting competition promotes similar psychological and bodily responses because there is often a threat posed towards the ego; our sense of self-esteem. Essentially, when the demands of training or competition exceed one's perceived ability, anxiety is the inevitable outcome. Anxiety is one of the most interesting and important areas of focus in sport psychology and has continued to attract great research interest (Weiss & Gill, 2005). The concepts of stress, anxiety, and psychological pressure are increasingly recognized as being of key importance and a large number of studies had shown the influence of these concepts on athletes' performance, regardless of sex, age or competitive level (Cruz, 1997).Anxiety which is seen as an important determinant of performance in sports environments has been defined in many different ways by authors. As to Cox (1985), anxiety is "an increased physiological stimulation and distress". As to Anshel (1997) anxiety is "perceived threat". It is seen in two forms: The first one is trait anxiety which is a part of behavioural patterns of individuals. The latter is state anxiety. Trait anxiety is composed of feelings of distress and tension and it is relatively seen as a self-consistent character trait (Spielberger, 1972). Spielberger argued that individuals having high trait anxiety levels perceive many situations as threats (Woods, 1998). Barnes, Harp and Jung defines state anxiety (2002, p.604) as "a state fluctuating and a function of the stressors on an individual. It is argued that state anxiety has a multi-dimensional structure (Craft, Magyar, Becker, & Felt, 2003; Martens, Burton, Vealey, Bump, & Smith, 1990). This structure containing cognitive state anxiety, somatic state anxiety and self-confidence dimensions is argued by Martens, Vealey and Burton (1990) in order to make an evaluation on competition anxiety in sports environments. Cognitive anxiety was defined as 'negative expectations and cognitive concerns about oneself, the situation at hand, and potential consequences' (Morris et al., 1981, p. 541).

Somatic anxiety refers the physiological and affective components of anxiety experience. Self-confidence is characterized by the individual's belief to perform well (Martens et al., 1990). As it is understood from these definitions, cognitive anxiety and perceived self-confidence is related to performance and competence expectations (Gould et al., 1984).In sports, individuals who are state anxious and low on the trait anxiety in tough situations, often deliver good performances consistently. Whereas, athletes who have higher levels of trait anxiety, added with the state anxiety, tend to perform below expectations.Woodman and Hardy (2001) stated that anxiety is generally accepted as being an unpleasant emotion. Additionally, anxiety is seen as an emotion characterized by negative affect that can have a debilitating impact on performance (Eysenck, 1997). Spielberger (1966) defined anxiety in terms of state and trait anxiety, with state anxiety being referred to as "subjective consciously perceived feelings of tension and apprehension, associated with…arousal of the autonomic nervous system" (p. 17). State anxiety therefore refers to the thoughts and feelings that are specific to that moment in time and are subject to fluctuation, essentially more of a "right now" feeling of tension and apprehension in a specific situation (Gould, Greenleaf & Krane, 2002). In contrast, trait anxiety refers to a predisposition to view and interpret situations to be threatening that is more general and not situation specific (Hardy, Jones & Gould, 1996). In extreme cases, anxiety is believed to lead to "choking", a decrement in performance that can occur under conditions where the incentive to perform is heightened (Baumeister, 1984).

The aim of this study is to promote sports among adolescents. Adolescence is a sensitive state for adapting and growing emotions and giving shape of personality. Sports is a key for opening door to discover both physical and psychological strengths and weaknesses and promotes responsible behaviour, forms character and identity and enhance overall wellbeing of adolescents. From a purely behavioural perspective, sport and play is a highly functional activity that can teach us how to adapt and survive in the real world. This includes the development of leadership skills, respect for authority, competitiveness, cooperativeness, sportsmanship, self-confidence and reducing anxiety.

For this study we took two groups, sports personnel as experimental group and non-sports personnel were the comparison group. For understanding the true effect of sports on emotional competence of adolescents, we included the variables: sports and non-sports and gender of participants. The goal of the current study is to learn more to reduce anxiety through sports and encourage students for participation in sports.

The present study is an attempt to examine the difference between sports and non-sports personnel of Uttarakhand state with respect to anxiety of adolescent girls and boys.

Objectives

There are two main objectives studied in this paper:

To measure the anxiety of sports and non-sports personnel.

To compare anxiety of sports and non-sports personnel in terms of gender.

Hypothesis

The above aims enable us to formulate following hypothesis:-

Sports and non-sports personnel will differ significantly on Anxiety.

Gender of sports and non-sports personnel will affect significantly on anxiety.

Methodology

Design

A survey research design was used for the study to assess the anxiety of sports and non-sports personnel in Uttrakhand state in India.

Sample

Total sample comprised 200 subjects, 100 were sports personnel and 100 non-sports personnel subjects were included in the sample. Further, sample bifurcated according to gender (50 girls and 50 boys). We assigned only team players studying in 11^{th} and 12^{th} standard and represented their institution at least at district level. Data were collected during competition time from different districts of Uttrakhand state in India.

Tool Used:

The State-Trait Anxiety Inventory (STAI) was used as research tool. This inventory was designed by Spielberger, Gorsuch, Lushane, Vagg and Jacobs (1983) not only for the assessment of the anxiety loading of the individual but also for the distinction of two aspects of anxiety viz. state anxiety and trait anxiety. "State Anxiety" is conceptualised as a transitory level of anxiety, which is often situationally determined, and fluctuates with time and circumstances, whereas, "Trait Anxiety" is regarded as a latent predisposition, which is relatively stable and can be triggered by appropriate stimuli. This is considered as basic anxiety level.

STAI is a self-evaluation questionnaire. Both of the two parts of the inventory contains 20 items each. Items of this scale have been constructed in reverse- and non-reverse-keyed format, and instructions are given asking participants to rate their agreement with a statement on 4-point "Likert type scale".

Statistical Analysis

The collected data were classified and tabulated in accordance with the objectives to arrive at the meaningful and relevant inferences by using arithmetic mean, standard deviation, t-test and ANOVA.

Results and Interpretation

To examine the significance of difference between sports and non-sports personnel on their anxiety (state and trait anxiety), obtained data was treated with the help of t-test and analysis of variance (2x2) statistical techniques. The outcomes of the analysis are presented in the tables (table 1, 2, 3, 4 and 5).

Table 1 indicates, significant difference between sports and non sports personnel on state anxiety ($t=2.25$, $p<0.05$) and trait anxiety ($t=2.71$, $p<0.01$). Mean value indicates that sports personnel (state anxiety =37.07 and trait anxiety=39.33) are less anxious in comparison to non-sports personnel (state anxiety =39.95 and trait anxiety=42.38).

Examination of table 2 reveals significant difference between sports and non-sports girls on trait anxiety ($t=3.37$, $p<0.01$). Non-sports girls show comparatively higher trait anxiety (M=41.74) than sports girls (M=36.48). While comparing sports and non-sports boys no significant difference found between the mean scores of anxiety level.

It is evident from Table-3 that girls and boys of sports personnel differs significantly from each other on trait anxiety ($t=3.68$, $p<0.01$). Mean values show that sports boys (M= 42.1800) are having more trait anxiety as compared to sports girls (M= 36.48). Remaining 't' values not found significant on state and trait anxiety.

Analysis of the table 4 clearly revealed that sports and non sports affect the state anxiety of subjects. The only significant difference was found for type (Sports and Non-sports). It was observed that the type having F value 5.02 is significant at 0.05 level of confidence. It indicates that difference in type (Sports and Non-Sports) affects the state anxiety. The interactional F value of type x gender (F=.41) is not found significant at any level of confidence.

The mean score of subjects (sports and non sports) with gender (boys and girls) was analysed by 2x2 factorial design (table 5). A significant difference was found for type (Sports and Non-Sports) and gender. It is observed that the type having F value 7.78 and gender (F=10.18) are significant at 0.01 level of confidence. It indicates that difference in type (Sports and Non-Sports) and gender affects the trait anxiety. The interactional F value (4.08 df 1 and 196) (type x gender) is significant at both level of confidence. Therefore, it is clear that impact of sports and non-sports on trait anxiety in participants is dependent on the gender.

Discussion

The purpose of this study was to examine the trait and state anxiety (somatic, cognitive, and self-confidence) of sports and non-sports personnel. Athlete who is conditioned to win and perform well faces a huge stress. Since competition is not a physical challenge, it is a psychological and social challenge too. So, sports which is the most effective and natural way to protect physical and psychological health deviates from its ultimate purpose and becomes a threat to psychological and physical health (Yavuz, 2002).The practice of a regular physical activity induces benefits for health. These benefits are not only physiological but are also psychological. In particular, physical training results in increased self esteem and perceived physical competence (Demarco et al., 1989; Sonstroem, 1984), especially when self-esteem is initially low (McAuley, 1994), and in reduced anxiety level (Landers and Petruzzello, 1994; Carmack et al., 1999; Katula et al., 1999). To define anxiety, a distinction between state and trait has become commonplace. State anxiety is defined by an unpleasant emotional arousal in face of threatening demands or dangers. On the other hand, trait anxiety is independent of specific situations and reflects the existence of individual differences in the tendency to respond with state anxiety in the anticipation of threatening situations (Spielberger, 1983). It is primarily through experiences that some individuals acquire low or high trait anxiety and persons who are high in trait anxiety tend to be anxious in many situations. In other words, does a regular physical activity practice help to limit problematic variations of self-esteem levels (decrease) and trait anxiety (increase)?

In the present study it is clearly observed from the table 1 that sports and non sports personnel differ significantly on state and trait anxiety. Results indicate that sports personnel possess less state and trait anxiety as compared to non-sports personnel.

In table 2, comparison of sports and non-sports personnel in respect of gender separately we found that sports and non-sports girls differs on trait anxiety and sports girls are lower on trait anxiety in contrast to non-sports girls. Furthermore, no significant difference exists between sports and non-sports boys on trait anxiety.

Analysis of table-3 showed that girls and boys of sports personnel differs significantly from each other on trait anxiety and sports girls possess less trait anxiety as compared to sports boys.

The findings are inconsistent with Costarelli and Stamou, 2009 results which showed no significant differences between athletes and non-athletes on state trait anxiety but anxiety levels (STAI) were significantly correlated with over 15 different constituents of EI (BarOn EQ-I), such as emotional self-awareness, self-actualization, reality testing and impulse control among others.

Dominikus et al (2009) revealed that there is a significant difference between male and female athletes in five subscales in OMSAT-2 i.e Goal setting with, fear control, activation, mental practice and competition planning. There is also no significant difference shown in the t-test between male and female athletes on self confidence, commitment, stress reactions, relaxation, imagery focus and refocus.

Rokka et al (2009) showed that male junior handball players reported lower scores of cognitive anxiety, which was facilitative to performance. On the other hand, females displayed a higher score in cognitive anxiety, which was rather debilitative to performance.

Carter, M.M and Weissbrod, C.S (2011) explored the relationship between gender and enjoyment of competition and various indicators of mental health and adjustment in a sample of college students who report that they highly value athletics. One hundred and thirty-seven students completed the Sports Anxiety Scale, Multi-perfectionism Scale, State-Trait Anxiety Inventory (Trait), Beck Depression Inventory, and Perception of Competition Scale. Results indicated that among women, enjoyment of competition was associated with decreased levels of athletic anxiety and a positive correlation between positive self-perception when winning and self-and socially oriented perfectionism, and between negative perception when losing and self-and socially oriented perfectionism. Among males, enjoyment of competition was related to decreased levels of general anxiety and depression, but not athletic anxiety. Furthermore, among men there was a positive correlation between enjoying competition and self-oriented perfectionism and between negative self-perception when losing and socially-oriented perfectionism. These data indicate gender differentially impacts the benefit of valuing athletics on measures of athletic anxiety and general measures of psychological well being. The above findings seem to support the existing theories on intensity (Mellalieu, Neil & Hanton, 2006; Parfitt & Pates, 1999; Stavrou, Psychoudaki, Zervaç, 2006; Woodman & Hardy, 2003; Wilson, & Raglin, 1997) which demonstrates that the more experienced player will show lower levels of cognitive and somatic anxiety than the less experienced player.

Conclusion

Following conclusions can be drawn from the present study:

The Sports personnel possess less state and trait anxiety than non-sports personnel.

Trait anxiety of sports girls is low as compared to non-sports girls.

Sports girls show less trait anxiety than sports boys.

Table 1: Mean, SDs and 't' values for anxiety of sports and non-sports personnel.

Anxiety	Type	N	Mean	S.D	t
State Anxiety	Sports	100	37.07	8.56	
	Non-Sports	100	39.95	9.54	2.25*
Trait Anxiety	Sports	100	39.33	8.21	
	Non-Sports	100	42.38	7.72	2.71**

Table 2: Comparison of gender between sports and non-sports personnel on anxiety.

Gender	Anxiety	Type	N	Mean	S.D	t
Girls	State Anxiety	Sports	50	36.28	8.96	
		Non-Sports	50	39.98	10.32	1.91
	Trait Anxiety	Sports	50	36.48	7.62	
		Non-Sports	50	41.74	7.97	3.37**
Boys	State Anxiety	Sports	50	37.86	8.15	
		Non-Sports	50	39.92	8.78	1.22
	Trait Anxiety	Sports	50	42.18	7.86	
		Non-Sports	50	43.02	7.48	.55

Table 3: Comparison between girls and boys of sports and non-sports personnel on anxiety.

Type	Anxiety	Gender	N	Mean	S.D	t
Sports	State Anxiety	Girls	50	36.28	8.96	.92
		Boys	50	37.86	8.15	
	Trait Anxiety	Girls	50	36.48	7.62	3.68**
		Boys	50	42.18	7.86	
Non-Sports	State Anxiety	Girls	50	39.98	10.32	0.31
		Boys	50	39.92	8.78	
	Trait Anxiety	Girls	50	41.74	7.97	0.83
		Boys	50	43.02	7.48	

Table 4: 2x2 ANOVA on state anxiety of sports and non-sports personnel.

Source of Variation	Sum of Squares	df	Mean Square	F
Type (Sports and Non-Sports)	414.72	1	414.72	5.02*
Gender (Girls and Boys)	28.88	1	28.88	.35
Type x Gender	33.62	1	33.62	.41
Residual	16190.76	196	82.61	
Total		199		

Table 5: 2x2 ANOVA on trait anxiety of sports and non-sports personnel.

Source of Variation	Sum of Squares	df	Mean Square	F
Type (Sports and Non-Sports)	465.12	1	465.12	7.78**
Gender (Girls and Boys)	609.01	1	609.01	10.18**
Type x Gender	244.21	1	244.21	4.08*
Residual	11724.46	196	59.82	
Total				

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Efficiency of Attacking Techniques in Junior and Senior Players across the Taekwondo Match

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Abstract
Numerous studies have been attempted recently involving notational analysis, in order to add value to the players' game efficiency during their competition performance. The present research endeavored to investigate into the efficiency of the attacking actions in junior and senior taekwondo players across a competitive match. A total of 38 matches of the 11 seniors and 10 juniors in a national level taekwondo competitions were recorded and analyzed through notational analysis for the frequency and efficiency of the techniques used across the three rounds of an officialcompetitive match.
Seniors had significantly higher overall techniques efficiency ($P<0.05$) than juniors. Across rounds of a match, seniors had significantly ($P<0.05$) better techniques efficiency than juniors in rounds two and three of the match. Juniors' techniques efficiency declined across rounds whereas seniors managed to achieve the best techniques efficiency in the final round of the match, although the efficiencyhas been deteriorating from roundone to round two.Coaches are encouraged to plan training programmes to improve both ATP-CP pathway necessary for high-intensity techniques and aerobic capacity required for sustaining high match pace and technique efficiency of the fighters so that they could perform equally effective in all three rounds of a competitive match.
Keywords:taekwondo, efficiency of attacking actions, juniors, seniors.

Introduction

Taekwondo is a Korean traditional martial arts and its component known as *kyorugi* (sparring) has obtained an official status at 2000 Sydney Olympics, and remains in the Olympic programme ever since. Taekwondo *kyorugi* has its particular scoring system, according to which: one (1) point is awarded to the player for the attack to the trunk protector, either by kicks or punches; two (2) points are awarded for a valid body-turning kick to the trunk protector; while three (3) points are awarded for a successful attack to the head (WTF, 2010); an additional 4-point reward was added for a valid body-turning kick to the head (WTF, 2010a).Although Taekwondo performance analysis allows real-time feedback during competitions and caters for the techniques development of the athletes (Lee, 2009), video/notational analysis allowing playback of the matches and 'objectifying' of the data is one of the best known ways to analyse the taekwondo athletes' technical and tactical performances (Hughes & Barlett, 2008).Salvatore et al. (2007), Giovanni et al. (2007)and Huang &Gao (2009) recorded the numbers of the kicks, most used techniques, performed and effective tactics used by taekwondo players. Some(Zen, 1999)also took into account the offensive and defensive movements (strategies) used by the athletes throughout the competitions. Matsushigue et al. (2009) studied the time structure and physiological responses during the taekwondo competition while analyzing the number of used techniques in the taekwondo matches. Wąsik&Ślęzak (2004) and Yao &Gao (2009) conducted their research to analyze the efficiency of taekwondo techniques in the taekwondo matches; they also studied the postures of the athletes during competition.

Most of the reviewed studies of taekwondo were conducted to compare the technical and tactical skills of the winners and non-winners regardless the weight categories of the athletes (Kazemi et al. 2006 and 2009, Salvatore et al. 2007, Matsushigue et al. 2009).The recent approach (Kwok, 2012) includes examining the fighting strategies used by medalists and non-medalists in the same competitions, which actually widens the scope of the research.

Only few studies, however (Huang &Gao, 2009) were looking into the kicks and strikes performed by the athletes round-wise. Some physiological and performance variables were examined across the rounds of a taekwondo match among women players (Markovic, Vucetic&Cardinale, 2008).Kazemi (2006) reported that, in both male winners and non-winners, Round 1 had the highest percentage of scoring; while in females, winners scored the least in Round 1 in contrast to female non winners whereas female winners scored more than half of their total points in Round 2. To the best of our knowledge, no studies were so far initiatedto analyse the within the match distribution and efficiency of the attacking actions in junior taekwondo players and to compare the same with senior players.

Methods

Research Design

A quantitative, cross-sectional study was conducted during the national status championship held in Kota Bharu (Malaysia). The championship was staged as per the World Taekwondo Federation rules, whereby the competition duration was adjusted by the organisers from 2 minutes x 3 rounds x 1 minute rest interval between rounds to 1.5 minutes x 3 rounds x 30 seconds rest interval between rounds.

Participants

Male contestants from the feather weight category (51-55 kg) from the division of WTF juniors aged 14 -17 years (n=10), and fin weight category (under 54 kg) from the senior division (n=11), in the 2nd*Kelantan-UniversitiSains Malaysia* (MTA/WTF) Open Taekwondo Championship (2nd KUSMOTC) running in accordance to the WTF competition rules and interpretation, were recruited for this study. Participants were given an explanation regarding the nature of the experimental procedures.Informed consent form and athlete profile forms were then given to the participants to be filled in.

Data Collection Procedures

All the competition matches of the male junior (n=10) and senior (n=11) players were video recorded (SONY®, model HDR XR350E) on competition site by the researchers. Video recordings were subsequently analysed by one of the researchers (Taekwondo Black belt holder) and a State Level Taekwondo coach for the purpose of notational analysis with an objective to quantify the frequency and variety of taekwondo techniques used in junior and senior players' matches. All attacking actions resulted as well as not resulted in scoring were marked by hand notational system through the replay of the video recording of the matches. Knock-out (KO) round was treated as incomplete data and sudden-death round was treated as outlier. They were then not taken into account for statistical analysis. Ethical clearance was obtained from the Human Ethics Commission of University Sains Malaysia.

Statistical procedure and data analysis

SPSS 21.0 package was used to analyse the data. Frequency analysis through cross-tabulation was used to determine the taekwondo techniques' variety of juniors and seniors; and chi-square test was used to determine the statistically significant differences.

Results

Demographic data and characteristics of the taekwondo players

According to Table 1, taekwondo seniors in this study were significantly elder, more experienced, but shorter in height than juniors. Frequency of training was not significantly different.

Table 1 Descriptive statistics of demographic data of the taekwondo players

Demographic variables	Seniors	Juniors	t-statistics value	*P*-value
Age (years)	20.5 ± 1.1	15.4 ± 0.4	4.330	0.001*
Height (cm)	166.3 ± 2.0	172.1 ± 1.1	-2.458	0.024*
Experience in taekwondo (years)	9.2 ± 1.1	4.70 ± 0.8	3.246	0.004*
Training Frequency (sessions/week)	2.8 ± 0.4	3.20 ± 0.3	-.704	0.490

* Mean differences of demographic variables between seniors and juniors are significant, $P<0.05$.

Qualification wise, all of seniors in this study were black belt holders, while only 30.00% of juniors were the black belt holders as shown in Table 2. Most of juniors (40.00%) were red belt holders; while 20.00% and 10.00% were holding green and yellow belts, respectively. Chi-square test showed significant differences between juniors and seniors in terms of their belt level (*P*=0.009). Seniors were no different from juniors in the highest competitions participation levels.

Table 2Distribution (%) of a belt level for the taekwondo players involved in the study

Belt Level	Seniors	Juniors	Chi-square test value	*P*-value
Black	100	30	11.550	0.009*
Red	0	40		
Green	0	20		
Yellow	0	10		

* Differences in distribution (expressed in %) of the belt colour level between seniors and juniors are significant, *P*<0.05.There was a significant difference between the seniors and juniors on the overall techniques efficiency from independent t-test (Table 3) where seniors were having higher overall techniques efficiency than juniors (*P*<0.001).

Table 3 Overall attacking techniques efficiency (ratio of scores to attempts of techniques used) between taekwondo players

Group	Overall Techniques efficiency (mean ± standard deviation)	t-statistics value	*P*-value
Seniors	0.29 ± 0.13	9.080	< 0.001*
Juniors	0.20 ± 0.16		

* Mean difference of techniques efficiency between juniors and seniors is significant, *P*<0.05.

The two-way ANOVA test results of the techniques' efficiency of seniors and juniors across the 3 rounds of the taekwondo matches are presented in Table 4. Significant interactions were found between the 3 rounds and the 2 groups (*P*<0.001). Besides, significant main effects (ME) were also found for the repeated measure 'round' i.e. the 3 rounds of a taekwondo match and the 'group' i.e. junior and senior groups (*P*<0.001). The locations of the main effect for 'round' are at the pairs of rounds 1 and 2, as well as rounds 1 and 3 (*P*<0.001) but not the pair of rounds 2 and 3 (*P*=0.158), which indicated that the significant differences of techniques efficiency were only found between round 1 and 2 as well as rounds 1 and 3 but not between rounds 2 and 3. Then, locations of the simple main effect of the groups on the rounds of match were found in round 2 and round 3 (*P*<0.001) but not in round 1 (*P*=0.158) which indicated that juniors and seniors techniques efficiencies were significantly different only in round 2 and 3 but not in round 1.

Table 4 Attacking techniques' efficiency (ratio of scores to attempts of techniques used) between taekwondo players according to rounds

Round	Techniques efficiency (mean ± standard deviation)			ANOVA test p-value		
	Seniors	Juniors	Overall	ME for the repeated measure 'round'	Interaction between round & group	ME for the 'group'
1	0.29 ± 0.13	0.28 ± 0.22	0.29 ± 0.18∞,£	*P*<0.001*	*P*<0.001*	*P*<0.001*
2	0.27 ± 0.12#	0.16 ± 0.19#	0.25 ± 0.17∞			
3	0.30 ± 0.17¥	0.15 ± 0.13¥	0.23 ± 0.17£			

* There are significant main effects for the 3 rounds and the 2 groups, and significant interactions between the round and group, $P<0.05$.

∞ & £ Locations of the main effect for 'round', namely pairs of rounds 1 & 2, and rounds 1 & 3, $P<0.001$ ($P<0.05$); but not the pair of rounds 2 & 3, $P=0.158$ ($P>0.05$).

& ¥ Locations of the simple main effect of the groups on the rounds of match, namely round 2 and round 3, $P<0.001$ ($P<0.05$); but there is no simple main effect in round 1, $P=0.920$ ($P>0.05$).

Overall frequency of techniques used by both the juniors and seniors in this study were 261, 315, and 299 in the first, second, and third rounds, respectively. Seniors' frequencies of techniques application were 142, 160, and 147 in the first, second, and third rounds, respectively. On the other hand, juniors' frequencies of techniques application were 119, 155, and 152 in the rounds 1, 2 and 3, respectively (Figure 1). As an overall, both of the junior and senior groups used the least techniques in round 1, the most in the second round and moderate in the final round which can be seen. The trend was the same even when we look at the techniques frequency of the 2 groups across rounds separately.

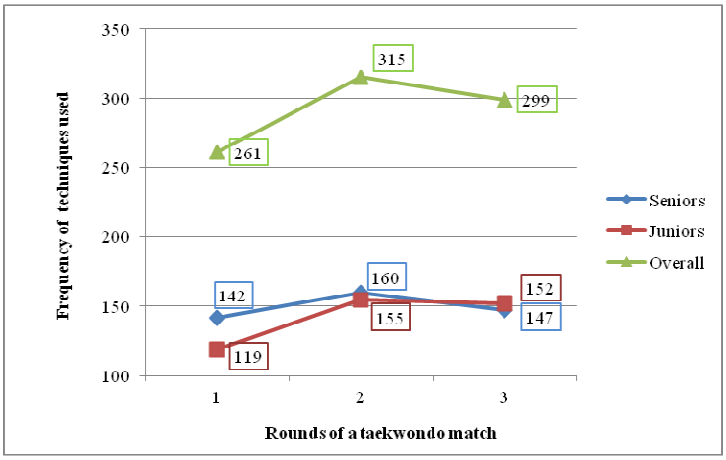

Figure 1 Techniques frequency group wise and combined across the 3 rounds of the match

They both applied the least numbers of techniques in the first round yet having high techniques efficiency in that round. Nevertheless, seniors had higher techniques efficiency than the juniors in the final round (in fact the highest techniques efficiency found in the match) as shown in Figure 2.

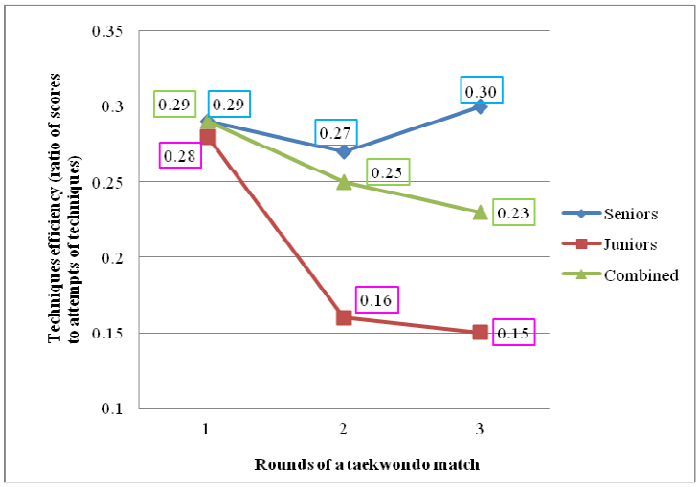

Figure 2 Techniques efficiency group wise and combined across the 3 rounds of the match

Discussion

As an overall, the combined techniques efficiency of the 2 groups of the taekwondo athletes in this study was reducing from the first round to the third round of a match. However, significant mean techniques efficiency difference occurred only between the pairs of rounds 1 and 2, as well as round 1 and 3.

Despite there was small difference on the techniques efficiency between the pair of rounds 2 and 3, the difference was not significant. Athletes should not be extremely fatigued across the rounds and techniques efficiency should not deteriorate a lot. This trend could be seen in the seniors in this study who scored well in the first round though the techniques efficiency dropped in the second round but they managed to score the best among the 3 rounds in the final round. Besides, techniques efficiency across the 3 rounds was quite stable and without drastic change. However, this could not be seen in juniors whose techniques efficiency kept reducing across the rounds. This may be due to the poor fitness when compared to the seniors. This may subsequently cause muscular fatigue and could impair their performance by reducing their techniques efficiency.Further, although both groups were having the highest frequency of techniques in the second round, they both actually ended up scoring the least in that round. In the third round when fatigue was more prominent, they both used fewer techniques than in the second round but still, it was higher than the first round. This finding is similar to the study of Huang and Gao (2009) that reported that both male and female taekwondo athletes have the fewest kick strikes in the first round and the most in the third round of match, and the study of Salvatore et al. (2007) who reported that the winners perform more kicks for attacking actions, during the second and third rounds with respect to the first one.

Conclusions

Fatigue pattern wise, the seniors were better handling themselves across rounds. Their techniques efficiency was not decreasing like the juniors' but they manage to achieve the highest techniques efficiency in the final round. Nevertheless, both groups were weak in the second round of the match where they attacked most but ended up scoring low. Coaches have to plan a training program that will improve both ATP-CP (which is important while performing the short high-intensity techniques) and aerobic energy systems (which is important in between the high-intensity techniques and in sustaining high match pace and efficiency) of the athletes so that they could perform equally efficient in the 3 rounds. This is especially important for the juniors who might soon transit to the senior group yet having significantly poorer techniques efficiency than the seniors as well as experiencing decrease performance efficiency across rounds.

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Fitness Ability Comparison between Sprinters and Throwers

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Abstract:
The aim of present study was to find out a comparative assessment of the motor fitness components between elite sprinters and throwers. The research was conducted on national level 30 sprinters and 30 throwers of their age ranges 17-28 years. Seven motor fitness components from AAHPER youth fitness test (1966) battery were evaluated of each subject. SPSS (11.5) computer software was used to analyze the data and it explored that the mean values of motor fitness components i.e. 50Yard Dash, Standing Broad Jump, Straight Knee Sit-ups, Shuttle Run, Softball throw for distance and 600-Yard Run & Walk have been found highly significant difference between sprinters and throwers at one percent level.
Key words: comparison, fitness ability, sprinters and throwers.

Introduction:
Fitness ability is not only an important aspect but also the foundation of healthy life style. Fitness cannot be sacrificed in favor of skill and technique. In modern days, an athlete has to be physically "extra fit" so as to withstand the tough competition. Regarding different systems of physical culture, physical education, yogic asana, the Athenians and Scandinavians all believed in one ideal 'fitness'.

Fitness ability is an important component of total fitness. The term motor fitness means more than muscular strength and stamina. It implies efficient performance in exercise or work at a reasonable measure of skill in the performance of selected physical activity.

The developed countries have invented new means and methods on the basis of research. They have created an authentic system and environment for the sports so as to achieve those targets which seemed almost impossible or difficult in the recent past for the human body and are still making diligent efforts for the betterment.

Borso and McGee (1971) described the term `physical fitness as a broader concept which included motor fitness. Devris (1974) also supported the view of Barrow and McGee (1971) and advocated that physical fitness includes both motor fitness and physical working capacity. Three components of physical fitness i.e. muscular strength, muscular endurance and cardio-respiratory endurance were described as commonly accepted elements of fitness, other components which are often identified as elements of physical fitness are muscular power, agility, speed, flexibility and balance.

To the physical educator, coach and sportsman an understanding of physical characteristic and the dynamic of motor fitness are becoming increasingly important because motor fitness is the capacity to do prolonged hard work and recover to the same state of health in the minimum possible short duration of time. This is the reason of the degree of strength, speed, endurance, agility, power and flexibility one possesses. More recently several studies conducted on Olympic athletes have revealed that various sports events differ from one & another not only in their skill patterns, organization and equipment requirements but also in the requirement of an anatomical structure (Body- build) of the athletes participating in it. For example Basketball players are generally tall, the weightlifters are stocky while the throwers are more bulky. De Gary et .al (1974). Contents that sports events are classified on the basis of the dominant characteristics of each type of event required or developed. Therefore, participants in different games and sports activities possess or require different characteristics to be successful in that particular event. These researchers, Sharma sand Shukla(1988), Battinelli (2000), Chauhan, M.S. (2003), Pritam, et al.(2009), Sodhi (1991) and Ragad, Al (2010) etc. also have given the characteristics of various sports person for specific games and also shown similar results.

Material and methods:

Selection of Subjects: For the purpose of the present study, Sixty (N=60), Male National level (Sprinters and Throwers) between the age group of 17-28 years were selected as subject in the present study. The subjects were purposively assigned into two groups: Group-A: Sprinters (n=30) and Group-B: Throwers (n=30).
Selection of Variables:
AAHPER youth fitness test (1966) battery i.e. 50Yard Dash, Standing Broad Jump, Straight Knee Sit-ups, Pull-ups, Shuttle Run, Softball throw for distance and 600-Yard Run & Walk test were used to measure speed, Dynamic Balance, flexibility, Muscular Endurance, agility, Muscular Strength and Endurance respectively.
Statistical Technique Employed:
The data were analyzed by applying't' test to find out significant mean difference between sprinters and throwers with the help of SPSS (11.5) computer software.

Results & Discussion:

Table: I Significant difference between sprinters and Throwers fitness ability.

Sr. No	Variables	Sprinters		Throwers		T Test Values for Equality of Means			
		Mean	S.D.	Mean	S.D.	't' Ratio	Df	Sig. Value	CI
1	50Yard Dash (Seconds)	62.000	2.378	98.767	7.573	25.3689**	58	0.0000	-33.8656
2	Standing Broad Jump (inches)	105.600	6.382	96.000	3.332	7.3034**	58	0.0000	12.2312
3	Straight Knee Sit-ups	33.867	6.776	39.567	5.270	3.6370**	58	0.0006	-2.5629
4	Pull-ups	13.933	1.780	12.433	4.248	1.7837	58	0.0797	3.1833
5	Shuttle Run(10X4 yards) (Seconds)	93.300	1.466	107.833	5.540	13.8899**	58	0.0000	-12.4389
6	Softball throw for distance (inches)	2155.467	73.627	3045.667	138.681	31.0536**	58	0.0000	-832.8176
7	600-Yard Run & Walk (Seconds)	205.900	35.331	228.667	13.830	3.2866**	58	0.0017	-8.9005

**Significant at 0.01 level & * Significant at 0.05 level N = 60 d.f. = 58
Required value for being significant at .01 Level of significance= 2.66 and significant at .05 Level of significance= 2.00 ; CI= Confidence Interval
As Table I shows, Mean, S.D. and 't' ratio of sprinters and throwers fitness ability. Results indicates that the 't' ratio of 50Yard Dash, Standing Broad Jump, Straight Knee Sit-ups, Shuttle Run, Softball throw for distance and 600-Yard Run & Walk are significant at 0.01 level of significance. It clear, that these variables of fitness ability vary between the sprinters and throwers. Further the mean values of sit-ups and softball throw of throwers are more than that of sprinters, whereas 50Yard Dash, Shuttle Run and 600-Yard Run & Walk are time variables, Since time is inversely related to performance hence decrease in time indicates higher the performance and vice-versa. Due to this, these times related variable and standing broad jump mean values of sprinters are more than that of throwers.

It implies that mean score of sit-ups and softball throw of throwers are more than that of sprinters. It indicates that throwers have more body strength which helps him to throw for more distance, on the other hand mean score of all running test of sprinters are better than that of jumpers, which indicates that sprinters have more ability to run fast or run more duration without fatigue as compare to throwers.

Conclusion:

While observing results presented in table-I, it can be summarized that throwers were better in Straight Knee Sit-ups and Softball throw for distance as compare to sprinters, whereas sprinters were better in 50Yard Dash, Standing Broad Jump, Pull-ups, Shuttle Run and 600-Yard Run & Walk test as compare to throwers. Similar result reported by Beunen, G. (1981) on female gymnasts, Cureton, T.K. (1947) on athletes and Chauhan, (2003) on endurance runners.

Performance of an athlete in sports does not depend only upon the motor fitness components but several other factors also contribute to his success, such as, scientific good quality equipment, clothing, training schedule, competition frequency, psychological preparation, and balanced diet. All these factors together prepare the athlete for the competition. Apart from those all, he must develop the motor fitness. Research findings show that high level of technique perfection alone can't produce success in competitive sports. Most of the games demand a higher level of fitness of the athletes.

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A Comparative Study of Power among Boxers and Taekowondo Players of Hyderabad

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Abstract:
The purpose of the present study to find out the power among Boxers and Taekwondo Players of Hyderabad. The sample for the present study consists of 20 Male boxers and 20 Male Taekwondo Players of Hyderabad District Between the age group of 16-20 Years. group. To assess the Power Test Shotput back throw were given to Boxers and Taekwondo Players . This study shows that Boxers are having more Power than the Taekwondo Players.

Introduction:
Boxing is a martial art and combat sport in which two people engage in a contest of strength, speed, reflexes, endurance and will, by throwing punches at each other, usually with gloved hands. Historically, the goals have been to weaken and knock down the opponent.Amateur boxing is both an Olympic and Commonwealth sport and is a common fixture in most international games—it also has its own World Championships. Boxing is supervised by a referee over a series of one- to three-minute intervals called rounds. The result is decided when an opponent is deemed incapable to continue by a referee, is disqualified for breaking a rule, resigns by throwing, or is pronounced the winner or loser based on the judges' scorecards at the end of the contest. In the event that both fighters gain equal scores from the judges, the fight is considered a draw.While people have fought in hand-to-hand combat since before the dawn of history, the origin of boxing as an organized sport may be its acceptance by the ancient Greeks as an Olympic game in BC 688. Boxing evolved from 16th- and 18th-century prizefights, largely in Great Britain, to the forerunner of modern boxing in the mid-19th century, again initially in Great Britain and later in the United States.There are four basic punches in boxing: the jab, cross, hook and uppercut. Any punch other than a jab is considered a power punch. If a boxer is right-handed (orthodox), his left hand is the lead hand and his right hand is the rear hand. For a left-handed boxer or southpaw, the hand positions are reversed.

Taekwondo also transcribed as **Taekwon-Do** or **Tae Kwon Do** is a Korean martial art with a heavy emphasis on kicks. Taekwondo was developed during the 1940s and 1950s by various Korean martial artists, as a combination of Shotokan karate, Shūdōkan karate, Shitō-ryū karate, Chinese martial arts, and the indigenous traditions of taekkyeon, gwonbeop, and subak.

The oldest governing body for Taekwondo is the Korea Taekwondo Association (KTA) which was formed in 1959 by a collaborate effort by representatives from the nine original kwans, or martial arts schools, in Korea. The main international organizational bodies for Taekwondo today are the International Taekwon-Do Federation (ITF), founded by General Choi Hong Hi in 1966, and the World Taekwondo Federation (WTF), founded in 1973 by the KTA. *Gyeorugi* a type of sparring, has been an Olympic eventsince 1992. The body known for Taekwondo in the Olympics is the World Taekwondo Federation.

Methodology:
The sample for the present study consists of 20 Male boxers and 20 Male Taekwondo Players between the age group of 16-20 Years .To assess the Power the Shot-put back throw were conducted among boxers and taekwondo players.

Shot Put Back Throw:
This test involves throwing an 8 pound shot put for maximum distance. The Back Throw Test is one of the tests used in the International Physical Fitness Test.
aim: This test measures core body strength and total body power and strength.
equipment required: 8 lb shot put, tape measure, clear open area for testing.
procedure: The athlete starts with his back to the throwing area, with their heels at the start line, and the shot cradled in both hands between the knees. The subject bends forward and downward before throwing the shot backwards over their head in a two-handed throwing action (optimally at about 45 degrees). Several practices may be required to get the best trajectory for maximum distance.
Scoring: Measurement is made from the starting line to the point of impact of the shot put with the ground. The measurement is recorded in meters and centimetres. The best result of two trials is recorded
.

Results and Discussion:
This study shows that Boxers are having better Power compare to the Taekwondo Players

Table-I
Mean values and Independent Samples Test of shot put back throw between Boxers and Taekwondo Players.

Variables	Group	Mean	SD	t	P - Value
Shot Put Back Throw	Boxers	13.24	1.26	1.22	0.231
	Taekwondo Players	13.16	1.22		

*Significant at 0.05 level
In Table –I the Mean Values of boxers in Shotput Back Throw is 13.24 and Taekwondo Players is 13.16 The Standard Deviation boxers is 1.26 and Taekwondo Players are is 1.22 and t is 1.22 and P-Value is 0.231.

Conclusion:
1.It is concluded that Boxers are having better Power than Taekwondo Players.
2.It is concluded that there will be Boxers are having better upper body strength because they used more upper body in punching whereas Taekwondo Players are using the more legs for kicking.
2.Weight training exercises plays a major role for improvement of physical fitness and performance in boxers and taekwondo players
Recommendations:
1. Similar studies can be conducted on other sports and games.
2.This study also helps the physical educators and coaches to improve their training regime to excel in sports and games.
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A Comparative Study of Flexibility and Jumping Ability among Net Ball Players and Soccer Players Of Osmania University In India

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Abstract:
Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. Unqualified, the word football is understood to refer to whichever form of football is the most popular in the regional context in which the word is soccer. Netball is a ball sport played by two teams of seven players. Its development, derived from early versions of basketball, began in England in the 1890s. By 1960, international playing rules had been standardised for the game, and the International Federation of Netball and Women's Basketball (later renamed the International Netball Federation (INF)) was formed. As of 2011, the INF comprises more than 60 national teams organized into five global regions.The Objective of this study was to compare soccer and net ball players' physical condition at the ages of 17 until 21 years old. Flexibility (sit & reach test) and jumping ability tests (squat jump, counter movement jump, counter movement jump with arm swing using the force platform by Bosco, were made in a total sample of 50 athletes (25 soccer players and 25 net ball players). Comparisons between these two sports took place, in each of the groups based on age (17, 18, 19, 20, 21 years old). Statistical analysis showed significant differences between soccer and net ball players at flexibility and jumping ability, mostly at the age of 17. In all tests, mean values were in favor of soccer players.The present study supports the conclusion that at the ages of 17 to 21, soccer players seem to have much better physical condition compared to net ball players at parameters such as flexibility and lower limb muscle strength. Further research should be made taking into consideration the type and load of training, as well as the level of growth of the athletes at these ages.
Key words: soccer, net ball, flexibility, jumping ability, age.

Introduction

Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. Unqualified, the word football is understood to refer to whichever form of football is the most popular in the regional context in which the word is soccer. Various forms of football can be identified in history, often as popular peasant games. Contemporary codes of football can be traced back to the codification of these games at English public schools in the eighteenth and nineteenth centuries. The influence and power of the British Empire allowed these rules of football to spread to areas of British influence outside of the directly controlled Empire, though by the end of the nineteenth century, distinct regional codes were already developing: Gaelic Football, for example, deliberately incorporated the rules of local traditional football games in order to maintain their heritage. In 1888, The Football League was founded in England, becoming the first of many professional football competitions. During the twentieth century, several of the various kinds of football grew to become among the most popular team sports in the world. Netball is a ball sport played by two teams of seven players. Its development, derived from early versions of basketball, began in England in the 1890s. By 1960, international playing rules had been standardized for the game, and the International Federation of Netball and Women's Basketball (later renamed the International Netball Federation (INF)) was formed. As of 2011, the INF comprises more than 60 national teams organized into five global regions Netball is most popular in Commonwealth nations, specifically in schools, and is predominantly played by women. According to the INF, netball is played by more than 20 million people in more than 80 countries.

Major transnational competitions take place, including the Netball Superleague in Great Britain and the ANZ Championship in Australia and New Zealand. Three major competitions take place internationally: the quadrennial World Netball Championships, the Commonwealth Games, and the yearly World. In 1995, netball became an International Olympic Committee recognized sport, but it has not been played at the Olympics.

Significance of the Study:

The significance of this study is to find out flexibility and jumping ability among Foot Ball and Net Players of the Osmania University. This Study will bring true facts of sports training to develop the flexibility and jumping ability among foot ball and net ball players.

Objectives of the Study:

The objective of the study is to determine the flexibility and jumping ability among Foot Ball and Net Players of the Osmania University.

METHODOLOGY

Sample: The sample of this study consisted of 25 soccer and 25 Net ball players, members of very well organized and highly competitive teams of Osmania University Hyderabad A.P., India, in the age group of 17 to 21 years old. From these players, 25 were soccer players (17 years old: **5** players, 18 years old: **5** Players, 19 years old: **5** players, 20 years old: **5** players and finally 21 years old: 5 players), and 25 Net Ball Players at (17 years old: **5** players, 18 years old: **5** Players, 19 years old: **5** Players, 20 years old: **5** Players and finally 21 years old: 5 Players),

RESULTS

The results of this study showed that differences existed between soccer and net ball players in flexibility and lower limbs power-speed values.
Statistical analysis for flexibility showed significant differences between soccer and net ball players in the ages of 20 (sig=.530, p<.004), 19 (sig=.318, p<.002), 18 (sig=.219, p<.000) and 17 years old (sig=.828, p<.001). In all cases, mean values were in favour of soccer players.

Regarding the lower limbs power-speed ability level based on the force platform of Bosco, statistical analysis illustrated that significant differences existed for: a. The squat jump in the age of 19 (sig=.029, p<.003), b. The counter movement jump in the ages of 19 (sig=.034, p<.001) and 18 (sig=.168, p<.010) and finally c. the counter movement jump with arm swing in the age of 19 (sig=.467, p<.001). Again in all cases the mean values were in favour of soccer players.

Table.1. Mean values for flexibility and jumping ability tests for football and Net ball players and all ages.

	Squat jump	Counter movement jump	Counter movement jump with arm swing	Sit and reach
Football 17old	26.27	28.63	32.77	-3.45*
Net ball 17old	26.29	27.43	32.66	2.96
Football 18old	32.85	31.22*	36.83	7.83*
Net ball 18old	27,54	27.82	34.83	-0.96
Football 19old	32.79*	35.41*	41.87*	-8.59*
Netball 19old	29.78	31.94	37.95	-3.02
Football 20old	34.29	36.46	43.08	-11.57*
Net ball 20old	34.04	36.01	42.03	-3.56
Football 21old	33.29	36.06	42.15	-10.25*
Netball 21old	33.12	36.06	42.13	-3.17

Significant difference (p<.05)

Furthermore, it appeared that in all cases and at all ages the values registered, presented to be higher for soccer players, especially in the age of 19 years old, where the differences appeared to be higher. This phenomenon was even more evident for flexibility .

Discussion

Despite the fact that netball and soccer seem to have several similarities during competition in parameters such as jumping, starting, sprinting for small distances and conditioning, demands in athletic abilities such as speed, power, agility and coordination, present differences in training. For flexibility alone, the greatest differences that were observed in the present study between soccer and net ball players, may lead to the conclusion that little concern is given for flexibility improvement through practice in young net ball players. Even though the test values present some improvement as the athletes become older, the mean values for net ball players performing the sit and reach test are considered to be generally low. The results of this study on flexibility seem to agree with aforementioned statement, since significant differences appeared also for jumping ability values between net ball and foot ball players, mainly at the age group of 19 year olds.

In the present study, it is evident that training may affect lower limb muscle strength in these two sports, especially, in the ages of 18 and 19, where the values of the jumping ability were in favour of soccer players.

Conclusion

A conclusion supported by the evidence of the present study is that at the ages of 17 to 20, soccer players seem to have a much better physical condition compared to net ball players at parameters such as flexibility and lower limb muscle strength.
Furthermore, it should be stressed that an examination of the somatomorphic characteristic changes on the subjects during these ages could also affect the results. Hence, only if these variables that significantly affect flexibility and lower limb strength are thoroughly examined the results would be more meticulous.

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Comparison of Self Confidence among Judokas and Wrestlers of Hyderabad

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Abstract:
Judo is a modern martial art, combat and Olympic sport created in Japan in 1882 by Jigoro Kano .It is a Japanese Martial Art.Wrestling is a form of combat sport involving grappling type techniques such as clinch fighting, throws and takedowns, joint locks, pins and othergrappling holds. A wrestling bout is a physical competition, between two (occasionally more) competitors or sparring partners, who attempt to gain and maintain a superior position. Self confidence in sports relies primarily on the athletes ability to believe he can win and that can be successful in his efforts. The Purpose of the study is to find out the self confidence among Judokas and Wrestlers of Hyderabad. The sample for the present study consists of 20 Male Boxers and 20 Judokas of Hyderabad between the age group of 18- 20 Years. Dr.S.J.Quadri Self Confidence Inventory is used to asses the Self Confidence.The Results of the Study shows that Wrestlers are having more confidence than Judokas. It is concluded that Wrestlers are having more self confidence than Judokas. 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.
Key Words: Self confidence, wrestlers, judokas, Psychological Training etc.

Introduction:
Judo is a modern martial art, combat and Olympic sport created in Japan in 1882 by Jigoro Kano Its most prominent feature is its competitive element, where the objective is to either throw or takedown an opponent to the ground, immobilize or otherwise subdue an opponent with a pin, or force an opponent to submit with a joint lock or achoke. Strikes and thrusts by hands and feet as well as weapons defenses are a part of judo, but only in pre-arranged forms and are not allowed in judo competition or free practice .A judo practitioner is called a judoka.

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

Wrestling techniques have been incorporated into other martial arts as well as military hand-to-hand combat systems.The term *wrestling* is attested in late Old English, as *wræstlunge* .Greco-Roman wrestling and modern freestyle wrestling were soon regulated in formal competitions, in part resulting from the riseof gymnasiums and athletic clubs.
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 Purpose of the study is to find out the self confidence among Judokas and Wrestlers of Hyderabad.The sample for the present study consists of 20 Male Judokas and 50 Male Wrestlers of Hyderabad between the age group of 18-20 Years. Dr.S.J.Quadri Self Confidence Inventory is used to asses the Self Confidence. This scale was constructed and standardize by Dr. Quadri Syed Javeed. That test consists of 30 items, each item 'YES' 'NO' type alternatives. This Questionnaire were given Judokas and Wrestlers to write separately in different groups.

Results and Discussion:

The Results of the Study shows that Wrestlers are having more confidence than Judokas . Wrestlers can improve your self confidence not only in ring, but in other aspects of your life as well. It's an extremely challenging Sport that tests your limitations and to overcome physical and mental obstacles compare to the Judokas.

Table I:Self confidence inventory mean values of Judokas and Wrestlers

Variables	Group	Number of subjects	Mean	Standard deviation	Standard error
Self Confidence Inventory	Wrestlers	20	24.6	0.88	0.12
	Judokas	20	18.32	1.1	0.16

In Table No.1 the Mean of Boxers is 24.6 and Wrestlers 18.32 there is a difference 6.26 between the Judokas and Wrestlers. Wrestlers are having more confidence than the Judokas.

Conclusion:

It is concluded that Wrestlers are having more self confidence than Judokas. 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,Judo and Wrestling

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The Relationship Between Physical Activity And Health Status Of Students At The University Of Danang In Vietnam

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Abstract
Colleges and universities in Vietnam over the years have paid more attention to physical training with an aim to enhance health status among students. The present study sought to explore the relationship between physical activity (PA) level and health status among college students and determine whether PA level has a positive effect on students' health status as measured by self-reported questionnaire. A random sample of 604 students from four different colleges under the University of Danang in Central Vietnam were assessed using the International Physical Activity Questionnaire (IPAQ) Short Form and categorized according to their physical activity levels (low, medium and high PA levels) and the association between the PA levels and self-reported health status variables were investigated. For statistical analysis, the data were analyzed using basic statistical characteristics, one-way ANOVA, and the correlation (Spearman and Kendall) conducted on SPSS, Version 18. The studied sample showed that physical activity levels had significant effects on health status as reported by students ($p<0.05$). Significant differences were found between the high and low PA level groups and between the high and medium PA level groups ($p<0.05$). However, no statistically significant differences were found between the low and medium PA level groups ($p<0.05$). Our findings suggest that PA levels are positively associated with improvements in health status but these improvements take place when a certain PA level is acquired. Implications for educational policy makers, educational administrators and physical training instructors have been discussed for the betterment of physical education in the collegiate context.
Keywords: physical activity, health status, IPAQ, student, Vietnam

Introduction:
The value of physical activities has been realized since the earliest times of man existence. Human considered it indispensable to the development of a good personality and character. In several aspects One of most striking features of the present century is the progress or science and its effects on almost every aspect of social life. Modern inventions have made life more comfortable than that it was before. However, people in modern life tend to use technology and ignore the roles of some physical activities which are good for health. So there are being more and more tendency towards fatness because lack of physical activities . Obesity continues to become a problem in the almost countries in the world, and it is an issue that must be addressed as a society as a whole. The biggest effect is on the individual. First of all, being overweight has health risks. Obesity can lead to heart disease, diabetes, and other conditions. The quality of life suffers, as it is difficult to enjoy exercise or move. Another result is lack of self-esteem. This can lead to depression, eating disorders and crash diets.
Physical education develops the muscles of the body scientifically and increases muscular activity and physical strength. All it makes the body active and efficient. To day, in all the schools and universities in the world, a great deal emphasis is being placed on physical education as means of producing citizens of good character and personality. However, Vietnam has applied physical activity scarcely with extension and efficiency for every age, especially for students. There are few published researches about the relationship between physical activity and health condition of Vietnamese young people. Moreover, the available documents also assume that there has not any systematic research on Vietnamese students' fitness analysis. This lack of study appears due to many reasons. First of all, Vietnam was taken apart from the rest of the world because of the intimal war; without accessing to the information from international source, Vietnam could not develop study in the physical activity.

Secondly, finance was supposed to be a big problem for such a developed country like Vietnam to carry out study in diversified fields. Moreover, the insufficiency of qualified specialists who were good at both English/French and science prevented Vietnam from catching up with the development of physical activity from public and educational points of view. These reasons have limited the publishing of international inventions from Vietnam. Fortunately, recent improvements and policies in Vietnamese government bring Vietnam closer to the world. Physical trainers in particular and national physical organizations in general now focus more on the physical activity and health conditions of Vietnamese youth. Last but not least, many documents and studies from Western specialists could not apply to the Vietnam circumstance with 100% success (Binh, 2003). Therefore researching into PA and health status on collegiate students in Vietnam is necessary to assist the professionals involved in the development of PA program and the promotion of health status.This study aimed to investigate the relationship between physical activity and health status on collegiate students at the University of Danang, Vietnam.

Methods:

Sample size

The participants of this study were recruited from cooperation of Vietnamese students in the University of Danang. Totally, 625 copies of questionnaire were given to students; however, 21 students did not fully complete the questionnaire. So, the answers from 604 respondents from 18 to 25 years old were processed. The respondents did the questionnaire voluntarily, which made their responses clear and objective.

Instrumentation

According to the development of an international assessment for physical activity, launched in Geneva 1998, was obeyed by a large-scale of reliability and validity examination over 12 countries (14 locations) during 2000 : “these assessments' properties are useful in various settings and languages as well as for national population-based popularity research of physical activity's attendance. The International Physical Activity Questionnaire (IPAQ) was established to be a means of physical activity and inactivity's cross-national monitoring. Using IPAQ throughout the world is encouraged in English translation.

IPAQ assesses physical activity undertaken across a comprehensive set of domains including: leisure time physical activity; domestic and gardening (yard) activities; work-related physical activity; transport-related physical activity. The IPAQ short form asks about three specific types of activity undertaken in the four domains introduced above. The specific types of activity that are assessed are walking, moderate-intensity activities and vigorous-intensity activities. The items in the short IPAQ form were structured to provide separate scores on walking, moderate-intensity and vigorous-intensity activity. Computation of the total score for the short form requires summation of the duration (in minutes) and frequency (days) of walking, moderate-intensity and vigorous-intensity activities. Domain specific estimates cannot be estimated.”

3. Experimental design

The survey process was implemented at the University of Danang from February 1 to March 5, 2014. This survey took place in the classes of physical education, languages, economics, engineering, and many other theoretical classes. Before making the survey, the IPAQ was introduced to the students, which helped them with the basic knowledge to do the survey.

4. Statistical design

Statistical analyses were used in the study including percentage, frequency distribution, mean value, standard deviation, one-way ANOVA, post-hoc test, Spearman’s and Kendall's correlationprocedure.

The significant level α was set at .05.

Results And Discussion

There were 604 students attending this research. They came from different colleges under the University of Danang: College of Technology, College of Economics, College of Education, College of Foreign Languages, and College of Information Technology. These students participated in answering the IPAQ.

1.Relationship between physical activity categories and health status levelsSpearman’s and Kendall's correlation procedure was used to test whether physical activity is in general correlated with health status. The findings as measured by the rho and tau coefficients (.136 and .148, respectively) (see Table 1) here support the central hypothesis that there is a positive correlation between physical activity level and health status improvements (at 95% confidence interval) in the Vietnamese collegiate context.

Table 1. *Spearman and Kendall correlation output (n =604)*

	Correlation coefficient	p-Value
Kendall's tau_b	.136**	.000
Spearman's rho	.148**	.000

** p<.01 (2-tailed

Health status

Figure 1 displays the frequency distribution of the PA variable. There are 145 cases of low PA, accounting for 23.9% of the sample. The number of cases and percentage are 289 and 47.6% for medium PA and 170 and 28.0% for high PA, respectively. So nearly half of the students doing the survey report taking physical activity at the medium level (47.6%) followed by those at the high level (28.0%) and those at the low level (23.9%).

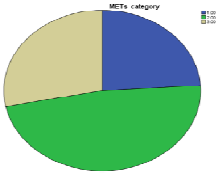


Figure 1. Frequency distribution of physical activity variable (n = 604)

1.00 = low PA;
2.00 = medium PA;
3.00 = high PA.

3. Description of health status by PA categories

Table 2 shows the mean value of health status (expressed on the 5 point Likert Scale with 1 meaning very poor, 2 poor, 3 same, 4 better, and 5 excellent) corresponding to each category (low, medium, high) of physical activity. Specifically, the low, medium and high PA groups recorded a mean health status level of 3.01, 3.09 and 3.23 with corresponding standard deviation of .54, .51 and .62, respectively (Table 2).

Table 2. Mean of health status variable corresponding to PA categories

METs category	N	Mean	SD
Low	145	3.01	.54
medium	289	3.09	.51
high	170	3.23	.62
Total	604	3.11	.56

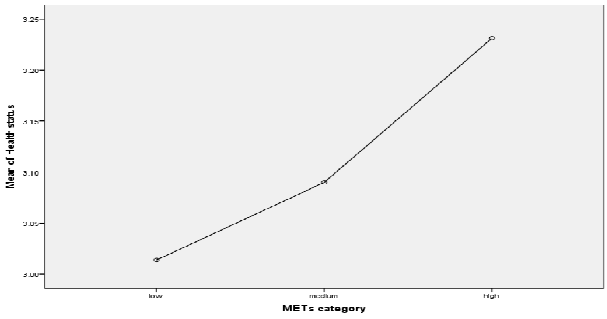
4. Health status means among low PA, medium PA and high PA

To determine whether the groups (the low, medium and high PA groups) differ significantly in relation with the mean levels of health status, the one-way ANOVA test of significance was conducted. The null hypothesis is assumed that the mean levels of health status associated with the three groups are equal. Table 3 and the Figure 2 show that the average level of health status recorded by low PA group is 3.01; it is 3.09 by the medium PA group and 3.23 by the high PA group. The level of health status for each group is calculated in a 95% confidence interval for each of the means.

As indicated in the ANOVA table (Table 3), the P-Value corresponding to the F-ratio of 6.491 with 2 and 601 degrees of freedom is less than .05 (p = .002). Therefore, the null hypothesis that the mean levels of health status associated with the three groups are equal is rejected. Thus, it is conclude that there are differences among the three groups (the low, medium and high PA groups) in the mean levels of health status based on the information set.

Table 3. *One-way ANOVA output of health status means*

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	3.882	2	1.941	6.491*	.002
Within Groups	179.686	601	.299		
Total	183.568	603			



**p <.05*

Figure 2. The means plot of one-way ANOVA procedure of health status means

5. Comparisons of health status mean differences

We used the Bonferroni correction procedure to compute the tests of significance for pairwise comparisons among the three PA level (METscategory) sets. Table 4 shows that the difference for low PA level minus high PA level is –.21, which is statistically significant at the .05 level (P = .002). Also, the difference between medium PA level minus high PA level is –.13, which is significant at the .05 level (P = .026). However, the difference for low PA level minus medium PA level (Mean Difference = –.08) is not statistically significant at the .05 level (P = .515). Thus, the high PA level set appears superior for physical activity to both the low PA and the medium PA level sets, but there is no difference between the low PA level and medium PA level sets.

Table 4. Pairwise comparisons among the three PA level sets

(I) METs category	(J) METs category	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
low	medium	-.08	.06	.515	-.2098	.0574
	high	-.21*	.06	.002	-.3640	-.0672
medium	low	.08	.06	.515	-.0574	.2098

	high	-.13*	.05	.026	-.2663	-.0126
high	low	.21*	.06	.002	.0672	.3640
	medium	.13*	.05	.026	.0126	.2663

* p < .05

Discussion

According to research results the association between PA of three different intensities and health status of five scale levels was investigated with 604 students from different colleges under the University of Danang in Central Vietnam , we found a evidence of the PA-health status relationship; specifically, to clarify the picture of this relationship.

1.*The relationship between physical activities and health status*

Based on the results of Table 1 We found that those students who were engaged in physical activity reported having a slight improvement in health status. This weak correlation between PA and health status may be explained by a rather small proportion (28%) of students who classified themselves as vigorous physical activity practitioners and is found in coincidence with part of the previous literature which has associated only vigorous physical activity with benefits to health (Dąbrowska-Galas et al., 2013). In additions, It is now also realized that there is a close connection between the body and the mind. Therefore, if the body is active, the mind too is active. An active and efficient body is a healthy body. When the body is heathly, the mind too is and therefore happy. So, physical activities contributes greatly to the heath and happiness of an individual. Thus, the evidence proposed by the findings supports the hypothesis that there is a positive correlation between physical activity level and health status improvements in the Vietnamese collegiate context.

2.The differences between PA intensities in terms of health status leves

Furthermore, the findings also suggest that different intensities of PA are differently associated with health status. Specifically, the students who were engaged in PA of high intensities reported having better health status than those engaged in PA of high and low intensities. Then, those students who were engaged in medium PA level reported a better health condition than those doing low PA level. On the one hand, the results seem to confirm a number of previous research findings that more PA leads to higher improvements in health status (Dąbrowska-Galas et al., 2013). The findings also seem to be in agreement with (Kull, 2002) statement on the association between leisure time physical activity and health status on women that physically active women were more likely to have better perceived health status than physically inactive women.On the other hand, no statistically significant difference was found between the low PA group and the medium PA group concerning their self-reported health status. There may be some explanations for this. First, a reason might be that the load of their physical activity was not sufficient enough to make a difference. The result here may support Irwin's (2004), quoted in (Nguyen-Michel, Unger, Hamilton, & Spruijt-Metz, 2006) review of physical activity that over half of American and Canadian students were not practicing sufficient physical activity to improve their health. Second, the students of these two groups might have accumulated their physical activity through their daily life or part-time job activities and did not associate these activities with intended physical activity for fitness or health improvement purpose, so their perceived health status ratings were not much different between the two groups. Moreover, it is a reality that most of the students in these colleges come from rural areas in Central Vietnam, where living standards are still low. Therefore, they might not have favorable conditions to take part in leisure time physical activity, which is believed to bring about health improvements. This can be explained by (Kaleta et al., 2006) research results that leisure-time physical activity could have a positive influence on health. These findings seem to confirm the reviewing comment made by (Kaleta et al., 2006) that "not all studies confirm the positive influence of physical workload on health status of objectively examined subjects" and partly support the statement by (GilliS & Perry, 1991) that "participation in a program of physical activity did not appear to have a significant impact on the subjects' measures of … health status".However, there are certain limitations of this study. First, the design of the study was

cross-sectional concerning two variables – physical activity and health status. The research hypothesis is supported, which means that there is evidence for a positive association between physical activity and health status. Yet, the cause-effect relationship between the two varables is not determined. Second, the researcher did not use the strict probability sampling techniques to increase the representativeness of the sample. Third, although the use of self-reported measures are common in physical activity studies among college students, measures of this type might have biased the results. Fourth, although the students did the questionnaire voluntarily, some of them may not have done it in a relevant manner. And finally, the findings may then be representative of only a small proportion of the student population in Vietnam.

In sum, the findings in this research have evidenced a common sense belief and support other previous research results that physical activity level is positively correlated to health status improvements among university students in Vietnam.

Conclusion And Suggestion

The results obtained in the present study confirm that in general there is a positive association between physical activity level and self-reported health status. Although the design does not allow us to evaluate evidence for causality, the findings support the majority of previous research results on the same topic in a variety of contexts. This has emphasized the fact that engaging in regular physical activity is one of the best ways to improve overall health. The use of self-reported measure (in the form of questionnaire) facilitated researchers in collecting data from respondents; however, this method was likely to cause some bias, which weakened the validity of the research results. Consequently, the association between physical activity and health status was found to be not strong, and differences in health status ratings among the three PA groups seemed to be somewhat blurred. That is why no association was found between the low PA group and medium PA group.

The study findings have implications for policy makers in education to provide an improved environment and better resources for PA education in universities. Institutional educational administrators should be better aware of the effect of physical activity on students' physical health, not to mention mental health in renovating training curriculum in such a way to optimize students' performance during school time and facilitate better professional life in future through establishing good PA habits. Implications for physical training instructors should involve designing relevant quantified physical exercise and incorporation of recreational activity into PA activity so as to bring about the best outcome of PA training for students.

Suggestions for future researchAlthough various studies have been performed to understand the positive effect of physical activity on health status, the question of optimal level of physical activity needed for overall health is still under discussion. Future studies should therefore investigate the threshold intensity of PA which can allow for the best possible state of health. Because some previous research findings have indicated no effect of occupational physical activity on health status, there remains a need for studying what types of PA may benefit most what sorts of people under what physical conditions. There is an additional need to study the association between these two variables under specific controlling contexts by application of different control variables. Also, it is recommended that future research should utilize a multi-method procedure (i.e. incorporating quantitative and qualitative methods) to improve the reliability and validity of research results.

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An Analytical Study On Muscular Strength And Agility Components Of Basketball And Handball Teams Of Himachal Pradesh University

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Abstract
The purpose of the study was to compare the male basketball and handball players of Himachal Pradesh on the selected muscular strength and agility components. 26 male basketball and handball players who had represented Himachal Pradesh University in the inter-university Championships were taken as subjects. To achieve the objectives of the study five muscular strength components i.e. abdominal strength, arm and shoulder strength, explosive arm and shoulder strength, vertical explosive leg strength and horizontal explosive leg strength and agility component were measured using selected test items namely; sit-ups, pull-ups, medicine ball throw, vertical jump, standing broad jump and 6x10m shuttle run. It was hypothesised that there would be a significant difference in the muscular strength and agility components of basketball and handball players. The collected data was analysed applying 't' test and the level of significance was set at 0.05 level of confidence. The results showed that university team basketball and handball players had significant difference on the muscular strength components namely; arm and shoulder and explosive arm and shoulder strength while both the groups exhibited almost similar abdominal, vertical and horizontal explosive leg strength characteristics. Moreover, no significant difference was found between the two groups on the agility component. Hence, the directional hypothesis was partially rejected and partially accepted.
Key Words: Muscular Strength, Agility, University Team, Basketball and Handball.

Introduction

Fitness had always been a concern of man from pre-historic times. Harry et al. (1965) concluded that "People were not agreed as to what constitute physical fitness though it is important to everyone". The expression "Physically fit" is very much common (vague). *Percival and Taylor (1982)* concluded that every individual has different level of fitness. Which may change from time to time, it may also change from place to place and sometimes it may changes with work or situation also. Physical fitness is defined as the ability to carry out daily tasks with vigour and alertness, without undue fatigue, and with ample energy to enjoy leisure pursuits and to meet unforeseen emergencies. Physical fitness can best be understood in terms of their components, each of which have a distinctive feature and contribute an essential element to the individual. The most important measurable components of physical fitness are muscular strength, cardiovascular endurance, speed, flexibility and agility. Sports play an important role in the development of physical, mental and emotional health. Strength is the ability of a muscle to generate force against resistance.

Agility can be defined by the ability to explosively start, decelerate, change the direction and accelerate again quickly while maintaining body control and minimizing or reduction in speed. Some people in sports may believe that agility is primarily determined by genetics and it is therefore, difficult to improve or enhance it to any significant level. However, in reality such is not the case and it can be improved significantly by planned and scientific training. Different sports place different degrees of demands on the athlete's muscular capacity and it was found that sprinters, soccer players and cyclists were stronger than inactive males**.**

Methodology

For the present study, investigator adopted selective sampling procedure. A sample of 26 males comprising of 12 basketball and 14 handball players who represented the Himachal Pradesh University in the inter-university basketball and handball championships during the academic session 2013-14 selected for the study.

Prior to the collection of data, the researcher assembled all the subjects in the hassle free place within the premises of the institution where the handball and basketball championships were held. The investigator then, explained them about the various physical fitness tests to be administered to them and their purpose. Importantly, after proper explanation, researcher also gave the practical demonstration of various tests before the subjects. Questions on the parts of the subject were allowed and their doubts and apprehensions were cleared. The subjects were allowed a single chance to practice the prescribed tests, so that they might become familiar with tests and know exactly what was to be done by them. Statistical tools mean, standard deviation and t-test were used to analyse the data statistically. The level of significance was set at 0.05 level of confidence.

Results and Discussion

Tables 4.1 and 4.2 present the obtained mean values, standard deviations, mean difference, degrees of freedom, t-value and its level of significance w.r.t. muscular strength components namely; abdominal strength, arm and shoulder strength, explosive arm and shoulder strength, vertical explosive leg strength and horizontal explosive leg strength and agility component of Himachal Pradesh University's basketball and handball team players.

Table 4.1

Comparison of Muscular Strength Components of Himachal Pradesh University's Basketball and Handball Team Players

Sr. No.	Variables	Groups	N	Mean	SD	MD	df	't' Value
1.	Abdominal Strength	B.B. U.T.	12	15.25	5.413	.39	24	.201
		H.B.U.T.	14	14.86	4.418			
2.	Arm and shoulder Strength	B.B. U.T.	12	8.58	2.999	2.44	24	2.670*
		H.B.U.T.	14	6.14	1.099			
3.	Explosive arm and shoulder strength	B.B. U.T.	12	567.33	51.583	80.47	24	3.297**
		H.B.U.T.	14	486.86	72.375			
4.	Vertical explosive leg strength	B.B. U.T.	12	42.08	6.585	.56	24	.245
		H.B.U.T.	14	42.64	4.717			
5.	Horizontal explosive leg strength	B.B. U.T.	12	203.67	9.633	2.12	24	.463
		H.B.U.T.	14	205.79	13.622			

*Significant at 0.05 level of confidence

**Significant at 0.01 level of confidence

Table 4.1 presents the mean values of abdominal strength component of Himachal Pradesh University's basketball and handball team players to be 15.25 and 14.86 and mean difference as .39. The standard deviation for the basketball and handball players came out to be 5.413 and 4.418. The obtained "t" value at 24 df is .201 which is lesser than the "t" table value at 0.05 level of significance. Hence, it is interpreted that the two groups have no significant difference.

Table 4.1 exhibits that the mean values of arm and shoulder strength component of Himachal Pradesh University's basketball and handball team players are 8.58 and 6.14 and mean difference is 2.44. The standard deviation for the basketball and handball players came out to be 2.999 and 1.099. The obtained "t" value at 24 df is 2.670 which is higher than the "t" table value at 0.05 level of significance. Hence, it is interpreted that the two groups have significant difference.

Table 4.1 reveals that the mean values of explosive arm and shoulder strength component of Himachal Pradesh University's basketball and handball team players are 567.33 and 486.86 and mean difference is 80.47. The standard deviation for the basketball and handball players came out to be 51.583 and 72.375. The obtained "t" value at 24 df is 3.297 which is higher than the "t" table value at 0.01 level of significance. Hence, it is interpreted that the two groups have significant difference.

Table 4.1 illustrates that the mean values of vertical explosive leg strength component of Himachal Pradesh University's basketball and handball team players are 42.08 and 42.64 and mean difference is .56. The standard deviation for the basketball and handball players came out to be 6.585 and 4.717. The obtained "t" value at 24 df is .245 which is lesser than the "t" table value at 0.05 level of significance. Hence, it is interpreted that the two groups have no significant difference.

Table 4.1 shows that the mean values of horizontal explosive leg strength component of Himachal Pradesh University's basketball and handball team players to be 203.67 and 205.79 and mean difference as 2.12. The standard deviation for the basketball and handball players came out to be 9.633 and 13.622. The obtained "t" value at 24 df is .463 which is lesser than the "t" table value at 0.05 level of significance. Hence, it is interpreted that the two groups have no significant difference.

Table 4.2

Comparison of Agility Component of Himachal Pradesh University's Basketball and Handball Team Players

Sr. No.	Variable	Groups	N	Mean	SD	MD	df	't' Value
1.	Agility	B.B. U.T.	12	15.1742	.34265	.2401	24	1.498
		H.B. U.T.	14	15.4143	.47193			

Not significant at 0.05 level of confidence

Table 4.2 presents the mean values of agility component of Himachal Pradesh University's basketball and handball team players to be 15.1742 and 15.4143 and mean difference as .2401. The standard deviation for the basketball and handball players came out to be .34265 and .47193. The obtained "t" value at 24 df is 1.498 which is lesser than the "t" table value at 0.05 level of significance. Hence, it is interpreted that the two groups have no significant difference.

Conclusion

University team basketball and handball players differ significantly on the basis of muscular strength components namely; arm and shoulder and explosive arm and shoulder strength while both the groups are having almost similar abdominal, vertical and horizontal explosive leg strength characteristics.

University team basketball and handball players have no significant difference w.r.t agility component.

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The Level of Intrinsic Motivation among 13, 14 And 16 Years Old School Students in Physical Education Lessons

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Abstract:
The Aim Of The Study *was to investigate the level of intrinsic motivation among 13, 14 and 16 years old students in a physical education lessons. A school was randomly selected in a district and all classes of 13, 14 and 16 years old students undergoing physical education classes were selected as sample for the study. There were a total of 569 students (295 boys; 274 girls) ages of 13 years old (100 boys, 110 girls,), 14 years old (102 boys, 83 girls) and 16 years old (93 boys, 81 girls). Intrinsic Motivation Inventory (IMI) was administered to collect data on their intrinsic motivation. Descriptive data indicated that the overall measure of 13 years old studentsfor the Interest/enjoyment domain was M=4.52, SD=0.34; Perceived competency was M=3.98, SD=0.33; Effort was M=4.31, SD=0.36; and Pressure/tension was M=2.92, SD=0.28 , 14 years old students forthe Interest/enjoyment domain was M=4.38, SD=0.37; Perceived competency was M=4.15, SD=0.36; Effort was M=4.10, SD=0.32; and Pressure/tension was M=3.37, SD=0.35 and 16 years old students for the Interest/enjoyment domain was M=4.06, SD=0.27; Perceived competency was M=3.91, SD=0.24; Effort was M=4.20, SD=0.32; and Pressure/tension was M=3.67, SD=0.36. The results revealed that the overall measure for all the four domains for intrinsic motivation was moderate (2.34-4.66) among 13, 14 and 16 years old students towards physical activities carried out in a physical education lessons. The results indicate that steps should be undertaken by school physical education teachers to improve the teaching of physical education to improve the students' intrinsic motivation level.*
Keywords: The Level of Intrinsic Motivation Domain, School Students, Physical Education

Introduction

Intrinsic motivation is refers to behavior students engage in for pleasure and the satisfaction one derives from direct participation (Deci & Ryan, 1985; Weinberg & Gould, 1999). It is important to make sure students are actively involved in the learning process ofPhysical Education (PE) and having fun while undergoing PE lessons. Activities in PE need to be planned to make it attractive and varied so that students can have fun and contribute to continuous involvement from the students (Bailey, 2006; Tsigilis, 2005; Viira & Koka, 2012). Awareness on the intrinsic motivation among students in PE lesson is very important to encourage students to be more active in the teaching and learning process of PE lessons (Solmon, 2006). Voluntary and sincere involvement can lead to active teaching process and give an impact on the students' health (Blanchfield & Jennifer Lisa, 2002; Guzman & Kingston, 2012). Efforts are being put in by researches to observe intrinsic motivation in individual involvement in sport and recreation activities (Cremades, Flournoy, & Gomez, 2012; Goose & Winter, 2012; Guzman & Kingston, 2012; Martin-Albo, Nunez, Dominguez, Leon, & Tomas, 2012; Moen & Verburg, 2012; Park, Jeon, & Kim, 2012; Tsitskari & Kouli, 2010). However, research on the intrinsic motivation of students involvement in PE lessons is still limited (Kouli, Rokka, Mavridis, & Derri, 2009; Spittle & Byrne, 2009; Viira & Koka, 2012).Previous research found out that majority of the students' have intrinsic motivation in the interest/enjoyment domain (Alderman, Beighle, & Pangrazi, 2006; Bailey, 2006; McAuley, Duncan, & Tammen, 1989; McGee, Strasser, McKenzie, & Stoll, 2005; Prochaska, Sallis, Slymen, & McKenzie, 2003; Tsitskari & Kouli, 2010) compared to the perceived competency domain (Ferrer-Caja & Weiss, 2000; Jaakola, 2002; McGee et al., 2005; Tsigilis, 2005; Tsitskari & Kouli, 2010; Weiss, 2001), effort domain (Ferrer-Caja & Weiss, 2000; Tsitskari & Kouli, 2010) and pressure/tension domain are at the lowest level (Tsitskari & Kouli, 2010). Additionally, it is found that

there are differences in intrinsic motivation from the gender aspect (Cremades et al., 2012; Tsitskari & Kouli, 2010; Weinberg, Tenenbaum, Mckenzie, Jackson, Anshel, Grove, & Forgaty, 2000). Whereby male students prefer perceived competency domain more than effort domain, interest/enjoyment domain and pressure/tension domain. Meanwhile, female students prefer to be in the interest/enjoyment domain compared to perceived competency domain, effort domain and pressure/tension domain (Weinberg et al., 2000). Overall, female students are more intrinsically motivated than male students (Etnier, Sidman, & Hancoc, 2004; Petheric & Weigand, 2002; Weinberg et al., 2000). However, there are also research that shows that male students have more intrinsic motivation compare to female students in PE lessons and sports (I-Wei, 1998; McKiddie & Maynard, 1997; Newton, 1994; Tsitskari & Kouli, 2010; Xiang, McBride, & Guan, 2004; Zahariadis, Tsorbatzoudis, & Grouios, 2005). Inconsistency of these findings requires further research. Apart from that, research also shows that the level of motivation and students interest among school students towards PE lessons after the age of 14 has declined especially among female students (Newton, 1994).

Cognitive Evaluation Theory in PE lessons should be emphasized to overcome the dwindling of interest among students in PE lessons. This theory highlights four main factors, namely choice and control, competency perception and optimum challenges, translating external factors in a control form or information and factors for emphasis on the importance aspect of differences in individual to help identify and understand students' intrinsic motivation (Deci & Ryan, 1985). The four main factors will affect the students' intrinsic motivation in the interest/enjoyment domain, perceived competency domain, effort domain and pressure/tension domain (McAuley et al., 1989).

There is a lack of empirical study on intrinsic motivation in PE classes especially for 13, 14 and 16 years old students. Hence, this research was carried out to observe the level of intrinsic motivation among 13, 14 and 16 years old students in PE lessons in one of the schools in Malaysia. This research is essential as it could provide information to PE teachers regarding the level of intrinsic motivation among 13, 14 and 16 years oldstudents in PE lessons. The reason for choosing 13, 14 and 16 years old students to be the subject of this research is because these students are matured to give accurate responses (White, 1999).

Methodology

A survey was used in this research as the questionnaire could be administered to as many respondents as possible (Robert, Spink, & Pemberton, 1999). Survey was carried out to gather information on the level of intrinsic motivation of 13-16 years old students in PE lessons in a school in Malaysia. The state and district in Malaysia was randomly chosen and one of the 23 schools in the district of was selected to be the respondent in this research. 569 students of the 13, 14 and 16 years old in the school were chosen to be the respondents.

The instrument used in this research is the Intrinsic Motivation Inventory (McAuley et al., 1989) which consists of 18 items. Each item is measured in likert scale from one to seven. The Intrinsic Motivation Inventory measures four intrinsic motivation domain, namely interest/enjoyment domain (five items), perceived competency domain (five items), effort domain (four items) and pressure/tension domain (four items). Validity and the reliability of this inventory is between .75 to .90 (McAuley et al., 1989; Park et al., 2012; Tsigilis, 2005; Vlachopoulos & Michailidou, 2006). Categorization of score range of this instrument is low (1.00-2.33), moderate (2.34-4.66) and high (4.67-7.00).

Before the questionnaire was distributed to the respondents, researcher has given it to two experts in language and two experts in PE from the Faculty of Education in University of Malaya to be verified the usage and validity as the questionnaire was translate into Malay Language via back to back translation (Brislin, Lonner, & Thorndike, 1973). Pilot test was carried out on 35 respondents who fulfilled the same criteria has shown Cronbach Alpha value of .90 and could be accepted (Nunally, 1978).

An approval letter of the research was granted by the Planning and Research Division of Ministry of Education and it was sent to the State and District Educational Department for approval to carry out the research. Individual participation in this research is voluntary and letter of consent from parents were collected as these respondents were under age. Respondents were given 25-30 minutes to complete the questionnaire. The researcher has cooperation from the school administrators to gather all the respondents in the school canteen and make sure the respondents answered all the items in the questionnaire individually without any interaction. This was to avoid any bias in the responses from the respondents. The researchers also explained to the respondents that all their responses must be based on the teaching and learning process of PE lessons. All the answers must reflect respondents true feeling related to the teaching and learning process they underwent in PE lessons.

Results

Table 1*Intrinsic Motivation Data Among 13, 14 and 16 Years Old Students in A School.*

Variable		Intrinsic Motivation Domain			
School Students		Interest/ Enjoyment	Perceived Competency	Effort	Pressure/ Tension
13 Years Old Students(N=210)					
Boys(100)	Mean	4.65	4.17	4.31	2.88
	SD	0.34	0.35	0.42	0.30
Girls(110)	Mean	4.39	3.81	4.32	2.97
	SD	0.30	0.22	0.30	0.26
14 Years Old Students (N=185)					
Boys(102)	Mean	4.50	4.28	4.05	3.46
	SD	0.37	0.37	0.33	0.36
Girls(83)	Mean	4.22	3.98	4.15	3.26
	SD	0.32	0.26	0.30	0.29
16 Years Old Students (N=174)					
Boys (93)	Mean	4.13	3.94	4.15	3.66
	SD	0.24	0.24	0.34	0.35
Girls(81)	Mean	3.98	3.87	4.24	3.69
	SD	0.29	0.23	0.29	0.39

Table 1 shows the data on the intrinsic motivation among 13, 14 and 16 years old students in PE lessons in a school. Result showed the mean score for 13 years old school boys is 4.65, SD=0.34 for the interest/enjoyment domain, 4.17, SD=0.35 for the perceived competency domain, 4.31, SD=0.42for the effort domain, and 2.88, SD=0.30 for the pressure/tension domain. Meanwhile, the 13 years old school girls has a mean score of 4.39, SD=0.30 in the interest/enjoyment domain, 3.81, SD=0.22in the perceived competency domain, 4.32, SD=0.30in the effort domain, and 2.97,SD=0.26 in the pressure/tension domain.

The mean score for 14 years old school boys is 4.50, SD=0.37 for the interest/enjoyment domain, 4.28, SD=0.37 for the perceived competency domain, 4.05, SD=0.33 for the effort domain, and 3.46, SD=0.36 for the pressure/tension domain. Meanwhile, the 14 years old school girls has a mean score of 4.22, SD=0.32 in the interest/enjoyment domain, 3.98, SD=0.26 in the perceived competency domain, 4.15, SD=0.34 in the effort domain, and 3.26,SD=0.29 in the pressure/tension domain.

The mean score for 16 years old school boysis 4.13, SD=0.24 for the interest/enjoyment domain, 3.94, SD=0.24 for the perceived competency domain, 4.15, SD=0.34 for the effort domain, and 3.66, SD=0.35 for the pressure/tension domain. Meanwhile, the 16 years old school girls has a mean score of 3.98, SD=0.29 in the interest/enjoyment domain, 3.87, SD=0.23 in the perceived competency domain, 4.24, SD=0.29 in the effort domain, and 3.69,SD=0.39 in the pressure/tension domain.

Table 2 Level of Intrinsic Motivation Among 13, 14 and 16 Years Old Students In A School.

Intrinsic Motivation Domain	Boy	Level	Girl	Level
13 Years Old Students				
Interest/Enjoyment	4.65	Moderate	4.39	Moderate
Perceived Competency	4.17	Moderate	3.81	Moderate
Effort	4.31	Moderate	4.32	Moderate
Pressure/Tension	2.88	Moderate	2.97	Moderate
14 Years Old Students				
Interest/Enjoyment	4.50	Moderate	4.22	Moderate
Perceived Competency	4.28	Moderate	3.98	Moderate
Effort	4.05	Moderate	4.15	Moderate
Pressure/Tension	3.46	Moderate	3.26	Moderate
16 Years Old Students				
Interest/Enjoyment	4.13	Moderate	3.98	Moderate
Perceived Competency	3.94	Moderate	3.87	Moderate
Effort	4.15	Moderate	4.24	Moderate
Pressure/Tension	3.66	Moderate	3.69	Moderate

Table 2 shows the level of intrinsic motivation among 13, 14 and 16 years old students in a school. From the categorization of score range of the instrument of research namely low (1.00-2.33), moderate (2.34-4.66) and high (4.66-7.00), the result shows that all the domains of intrinsic motivation among 13, 14 and 16 years old students in a school are at the moderate level. Overall, it can be deduced that the motivation among 13, 14 and 16 years old students in a school is at a moderate level when participating in PE lessons.

Discussion

The intrinsic motivation and all domains of intrinsic motivations among 13, 14 and 16 years old students a school in Malaysia are still at a moderate level. The outcome of this result indicates that teachers should plan their daily lesson plans more effectively by including every domain in the Cognitive Evaluation Theory so that students are more competitive and have interest/enjoyment in the activities designed by the teachers (Deci & Ryan, 1985). This is important to increase the level of intrinsic motivation among 13, 14 and 16 years old students to be more active in PE lessons. If this situation is not taken seriously, there is a possibility that the intrinsic motivation among the students will gradually reduce and students will not be active and reluctant to get involved in the PE lessons. As a result, students will try to skip or give excuses to avoid being involved in the PE lessons. This will affect the discipline of students and indirectly their level of fitness will be reduced and be exposed to sedentary illnesses.

The results also shows that the level of motivation among 13, 14 and 16 school students towards PE lessons after the age of 14 has declined especially for the interest/enjoyment domain. This anomaly could be caused by several factors such as the PE curriculum and teacher's teaching experience. In this study, the perception of the students is based on PE lessons. The finding of this research shows that the interest/enjoyment domain, perspective competency, effort and pressure/tension domain should be given priority so that intrinsic motivation among students who follow PE classes could be increased. This is important to maintain students' active involvement in PE classes.If seen in the 16 years old students'curriculum perspective, the games taught are hockey, *sepaktakraw* and tennis. There is a possibility that these games are quite challenging for the students and the challenges cause the students to feel less enjoyment compared to 13 years old students (football, netball and table tennis) and 14 (handball and badminton). Apart from that, teacher's role and characteristics could also contribute to students' enjoyment during PE lessons.

Conclusion

The findings of the study found that the level of intrinsic motivation of 13, 14 and 16 years old students of one school in PE lessons is still at a moderate level. The research gives us the latest information about the level of intrinsic motivation of 13, 14 and 16 years old students in one school in PE lessons. This study can provide an input to PE teachers, Curriculum Development Centre and Ministry of Education that a new transformation is needed to increase students' level of intrinsic motivation. Application of the Cognitive Evaluation Theory should be appreciated as it is important to improve intrinsic motivation and students to continue to get involved actively in PE lessons.

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Comparison of Abdominal Strength among Basket Ball and Hand Ball Players of Hyderabad

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Abstract:
The Purpose of the study is to find out the Abdominal Strength among Basket Ball and Hand Ball Players of Hyderabad. The sample for the present study consists of 20 Male Basket Ball Players and 20 Male Hand Ball Players of Hyderabad between the age group of 16- 20 Years. Situps Endurance Test are used to assess the abdominal Strength. The Results of the Study shows that Hand ball Players are having more abdominal Strength than Basket Ball Players It is recommended that the motor abilities training must be given to the Basket ball and hand ball players.
Key Words: Abdominal Strength, Sit-ups, motor abilities etc

Introduction:
Basketball is a sport played by two teams of five players on a rectangular court. The objective is to shoot a ball through a hoop 18 inches (46 cm) in diameter and 10 feet (3.0 m) high mounted to a backboard at each end. Basketball is one of the world's most popular and widely viewed sports.
A team can score a field goal by shooting the ball through the basket during regular play. A field goal scores three points for the shooting team if the player shoots from behind the three-point line, and two points if shot from in front of the line. The team with the most points at the end of the game wins, but additional time (overtime) is issued when the game ends in a draw. The ball can be advanced on the court by bouncing it while walking or running or throwing it to a team mate. It is a violation to lift or drag one's pivot foot without dribbling the ball, to carry it, or to hold the ball with both hands then resume dribbling.As well as many techniques for shooting, passing, dribbling and rebounding, basketball teams generally have player positions and offensive and defensive structures (player positioning). Traditionally, the tallest and strongest members of a team are called a Centerior power forward, while slightly shorter and more agile players are called small forward, and the shortest players or those who possess the best ball handling skills are called a point guard or shooting guard.

Handball also known as team handball, Olympic handball, European team handball, European handball, or Borden ball is a team sport in which two teams of seven players each (six outfield players and a goalkeeper) pass a ball to throw it into the goal of the other team. A standard match consists of two periods of 30 minutes, and the team that scores more goals wins.
Modern handball is played on a court 40 by 20 meters (131 by 66 ft), with a goal in the center of each end. The goals are surrounded by a 6-meter zone where only the defending goalkeeper is allowed; the goals must be scored by throwing the ball from outside the zone or while "jumping" into it. The sport is usually played indoors, but outdoor variants exist in the forms offield handball and Czech handball (which were more common in the past) and beach handball (also called sandball). The game is quite fast and includes body contact, as the defenders try to stop the attackers from approaching the goal. Goals are scored quite frequently; usually both teams score at least 20 goals each, and it is not uncommon for both teams to score more than 30 goals.
The game was codified at the end of the 19th century in northern Europe, chiefly in Scandinavia and Germany. The modern set of rules was published in 1917 in Germany, and had several revisions since. The first international games were played under these rules for men in 1925 and for women in 1930. Men's handball was first played at the 1936 Summer Olympics in Berlin as outdoors, and the next time at the 1972 Summer Olympics in Munich as indoors, and has been an Olympics sport since. Women's team handball was added at the 1976 Summer Olympics.
The Purpose of the Study is to find out the speed among basket ball and hand ball players of Osmania university.

Methodology:

The sample for the present study consists of 20 Male Basket Ball Players and 20 Male Hand Ball between the age group of 16-20 Years those of Hyderabad District.To assess the abdominal Strength Sit Up Endurance Test were conducted among Basket Ball Players and Hand Ball Players by the well qualified technical officials of athletics.

Sit Up endurance test:
This Test are usually conducted over a one minute period, and measure the maximum number of correctly performed situps in that time

Discussion:
This study shows that hand ball players are having the better Abdominal Strength compare to basket ball players. The Mean Values in Sit Up Test of Hand Ball Players is 20.20 and Compare to Basket Ball Players is 1864 .Hand ball game. The Present study assessed that the Abdominal Strength of hand ball players are better than the basket ball players.

Comparsion Of Data On Situps Of Basket Ball Players And Hand Ball Players

GROUPS	Mean	Mean Difference	SD	T-Ratio
Hand Ball Players	20.20		4.16	
		1.56		-1.411
Basket Ball Players	18.64		3.63	

Conclusion:

It is concluded that hand Ball players are having better Abdominal Strength than basket ball players. This study also helps the physical educators and coaches to improve their training regime to excel in Basket Ball and Handball.

Recommendations:
It is recommended that Motor qualities development coaching must be given by Coaches to promote speed, endurance, strength, agility etc. among the basket ball and hand ball players.
imilar studies can be conducted among female players and in other sports and games. This study also useful to develop the speed among basket ball and hand ball players.

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Wikipaedia Basket ball and hand ball.

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Comparison of Explosive Strength among Kabbadi and Kho Kho Players

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Introduction:

Kabaddi) is a contact sport that originated in Ancient India International Kabaddi.National Kabaddi recognised by the Amateur Kabadi Federation of India: National style (which resembles the Sanjeevani style), Circle style (the Punjab style), Indoor and national games, Beach Kabaddi and National professional league Kabaddi.The three national styles recognised by the International Kabaddi Federation:Sanjeevani, Gaminee and Amar; Punjab Circle style governed by the Amateur Circle Kabaddi Federation of India. A number of similar contact sports which are peculiar to various

Kho kho is a tag sport played by teams of twelve players who try to avoid being touched by members of the opposing team, only 9 players of the team enter the field. It is one of the two most popular traditional tag games of the Indian subcontinent, the other being kabbadi. Apart from the Subcontinent, it is also played in South Africa.Asian Kho Kho Federation (A.K.K.F.) was established in the year 1987 during 3rd SAF Games, held at Kolkota, India. The member country was India, Bangladesh, Pakistan, Sri Lanka, Nepal and MaldivesKho Kho made its entry Into INTERNATIONAL SPORTS Arena Via 1st ASIAN KHO KHO CHAMPIONSHIP Held At Kolkata, India In 1996, Organized By West Bengal Kho Kho Association Under The Auspices Of Kho Kho Federation Of India And SIAN Kho Kho Federation On "Tera Flex" Court at Netaji Subhash Indoor Stadium, Kolkota, West Bengal, India in a most beautiful manner. India and Bangladesh were Winner and Runner-up respectively. The participants were Bangladesh, Pakistan, Sri Lanka, Nepal and host India.2nd Asian KhoKho Championship was held in Bangladesh in the year 2000 at Mirapur Indoor regions such as *hadudu* in Bangladesh, *baibalaa* in Maldives, *chedugudu* in Andhra Pradesh, *sadugudu* in Tamil Nadu and Hututu in Maharashtra.Kabaddi initially became famous in Punjab Region as it was part of their per martial tradition, and is popular throughout South Asia, and has spread to Southeast Asia, Japan and Iran.

Pro Kabaddi League was introduced in 2014 in India based on Indian Premier League. The first edition of the tournament had begun at 26 July 2014 with eight franchises based at eight different cities in India consisting of players from all over the world. Jaipur Pink Panthers won the inaugural edition. The other teams in the competition were U Mumba based at Mumbai, Bengaluru Bulls based at Bengaluru, Delhi Dabbangs based at Delhi, Puneri Paltans based at Pune, Telugu Titans based at Vizag\Visakhapatnam, Bengal Warriors based at Kolkata and Patna Pirates based at Patna. The broadcast rights were purchased by the star sports network. The Pro Kabaddi League uses the National Kabaddi style.

Significance of the Study:

This study will determing the Explosive Strength among Kho and Kabbadi Players and also useful to Coaches to give scientific training to develop the strength.

Methodology:

AIM:

To find out the Explosive Strength between Male Kabbadi Players and Male Kho Kho Players of Haji Ghouse Peeran Memorial College of Physical Education.

Sample:
The sample for present study consists of 20 Male Kabbadi Players and 20 Male Kho Kho Players studying in the Haji Ghouse Peeran Memorial College of Physical Education.
This Study is limited to the Students of Haji Ghouse Peeran Memorial College of Physical Education, Shamirpet, Telangana.

Standing Broad Jump:
The Standing long jump, also called the Broad Jump, is a common and easy to administer test of explosive leg power. It is one of the fitness tests in the NFL Combine. The standing long jump was also once an event at the Olympic Games, and is also an event in Sports Hall competitions in the UK.
purpose: to measure the explosive power of the legs
equipment required: tape measure to measure distance jumped, non-slip floor for takeoff, and soft landing area preferred. Commercial Long Jump Landing Mats are also available. The take off line should be clearly marked.
procedure: The athlete stands behind a line marked on the ground with feet slightly apart. A two foot take-off and landing is used, with swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed.
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. The table below gives a rating scale for the standing long jump test for adults, based on personal experiences. See some athlete results for the long jump test. You can also use this calculator to convert cm to feet and inches.

Results and Discussion:
The results of the Study shows that Kabbadi Players are having good Explosive Strength Compare to Kho Kho Players.

Table: 1 Showing the Performance of Kabbadi Players and Kho Kho Players in Standing Broad Jump

Group	N	Mean	Std. Deviation	t	P-Value
Kabbadi	20	2.42	0.185	3.55	0.001
Kho Kho	20	2.30	0.157		

In Table –I the Mean Values of Kabbadi Players is 2.42 and Kho Kho Players is 2.30. The Standard Deviation of Kabbadi Players is 0.185 and Kho Kho Players is 0.157 and t is 3.55. The Mean average shows that Kabbadi Players are good Compare to Kho Kho Players.

Conclusions:
It is concluded that Kabbadi Players are having better explosive strength compare to kho kho players

Recommendations:
Similar Studies can be conducted among females and in other sports and games. This type of studies is useful for preparing the coaching and condition program for improvement of motor qualities among the sports Persons.

References:
Wikipaedia, Kabbadi and Kho Kho

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Sports Tourism

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Introduction:

Sports Tourism, once an alien concept, has been rapidly evolving over the past five years. Although a niche segment, it has an immense potential with an expected growth rate of 10-20 per cent per annum.Sports tourism means to travel for the sake of either viewing or participating in sports event staying a part from their usual environment.Sports tourism in India has scored a high place for its self in Indian tourism industry. Sports tourism is broadly define by the adventure sports and game in India. There are indeed several destination in India offering sports tourism. There are varied sports activity that you can indulge during your vacation.A holiday with friends or family to witness a mega sporting event is no longer an alien concept for Indian travellers. The number of travellers keen on a ring side seat to cheer for the 'men in blue' at the upcoming ICC Cricket World Cup 2011 in India, Sri Lanka and Bangladesh or their favourite team during T20 tournament or driver in a formula one race is rapidly growing. And these sporting enthusiasts are willing to spend 'top dollar' to jet set across the globe to experience the thrill of watching their favourite game live. These fans also like to 'live it up' exploring and enjoying the destinationsimultaneously. Correspondingly, there has also been a marked rise in the number of tour operators and agents specializing in servicing the requirements of this particular segment. It's not only niche specialists, but also big mainstream tour operators who set up a separate division to tap the potential of Sports Tourism. An alien concept in India about a decade ago, Sports Tourism, though a niche segment has evolved rapidly over the past five years. A large number of agents and tour operators are introducing interesting packages surrounding major sporting events. Sports Tourism is a well organised sector and major revenue churner in several nations around the world like UK, Germany, Singapore, South Africa, Malaysia etc. Several National Tourist Offices (NTOs) are aggressively working towards promoting their destinations for Sport Tourism in India to tap the corporate, as well as fast growing upper middle class and the youth.

Types of adventure sports:

Distinguished adventure sports: mountaineering, rock-climbing, scuba diving, water rafting, kayaking, canoeing, sailing, surfing, water scooting. Aero sports like: ballooning, paragliding, hand gliding.
These sports offers scope for sports lover and enthusiasts from all of the world.

Adventure hot sports in India:

Goa, Andaman and Nicobar, Kerala, Uttranchal, Rajasthan, Andhra Pradesh, Tamil Nadu, Jammu and Kashmir, Assam, Sikkim, Lakshadweep.

Business and leisure Business tour combined with active sports are becoming highly popular where business meets leisure and such kind of sports tourism on business tour is global cooperate strategy for employee entertainment and well being. Moreover sports tourism is nurture by professional sports person they have to travel extensively for there carrier to participate in national and international championship like Cricket World Cup, Soccer World Cup, Wimbledon so on and forth. Commonwealth Games 2010, Delhi is the best example of sports tourism.

Future of sports tourism Scope and future of sports tourism is endless in India because of its diverse topography and climatic condition. You can enjoy on land and water, under water and in air whatsoever form of adventure sports in India. Future of sports tourism and adventure sports in India is very bright.

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http://www.travelbizmonitor.com/Coverstory/sports-tourism-