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Editorial

This is the foundation year for India. Indian Politics, our sports, Government Policies are going through landscape changes which will have a bearing effect on many years to come. In recent times, we saw this Union Budget presented to build an entrepreneur in an Agricultural Sector as well as Rural as well as Urban. The idea of creating and chasing your dream is catching up and more so because the average Indian is a 25-30 year old youth. This Union Budget is the most balanced budget in recent times looking at laying foundation for the Indian Growth Story in the years to come. Higher allocation of spending on the Agricultural sector, Rural Sector, Infrastructure, etc will be an ideal beginning. Electrification of Villages is other big thing happening in muted voice which according to the concerned Minister , Electrification of all Villages will be done by March 2017. This along with other aspects, will surely create an ideal business environment in India. Some more tax norms are expected to be made liberal. The other big thing that is happening in India is the Cricket World Cup. It is the first time we are hosting T20 World Cup and with the form the Team is in , We can expect a 2011 encore by Dhoni and Co.

Every story happening around gives only one moral - That is Believe in your dreams, Chase it until it becomes Reality.

The writing of Indian Growth story has already begun. And as it is seen, the youth of India have plenty of things to look forward to. It is time to build on your ideas and back it till it is executed. Team work , Planning, Execution of are some of the important aspects of Entrepreneurship that will be honed in today's youth.

We are living in a vibrant society where Debate is an important aspect of our society. And even though there are many good things happening Some Problems keep Haunting the growth story of India. Drought, Unemployment, etc are still hovering over India's growth story.

Debating is not just placing your ideas but listening to new ones too. It is an exchange of different ideas moulding into one great Vision. We, as researchers should place our research on such current affairs , judge the recurring impact on our future and exchange ideas to form an impactful solution to impending problems. Innovation is the key to every problem, and for every problem , Research is where we began.

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Cardio Respiratory Endurance and Vo_2 Max among Aerobic and Bharathanatyam Dancers

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Abstract

The purpose of this study was to compare Cardiorespiratory Endurance (CRE) and VO_2 max between Professional and Amateur Bharathanatyam dancers. To achieve the purpose of this study thirty (n=30) women aerobic and thirty (n=30) bharathanatyam dance students from Kalabavanam bharathanatyam academy, Jaffna, Sri lanka were selected and their mean age were 17 ± 1.3 years. Aerobic (AD) and Bharathanatyam (BD) dancers had been dancing 90 to 120 min per day; 3 days per wk over a period of minimum 3 yr. Data were collected on cardiorespiratory endurance using Harvard Step Test. [Brouha et al. (1943)] and VO_2 max by Queen's step test [McArdle et al. (1972)]. Each test conducted on one day after another day. The collected data were subjected to statistical treatment using independent ''t'' test. In all the cases 0.05 level of confidence was fixed to test the significance, which was considered as appropriate. The result shows that Aerobic Dancers were better than Bharathanatyam Dancers on CRE and VO_2 max. Hence it was concluded that, aerobic dancers developed better CRE and VO_2 max than bharathanatyam dancers.

Key words: CRE, VO_2 max, Professional Dancers, Amateur Dancers, Bharathanatyam

Introduction

Dance is a unique form of movement one that inspires creativity, motivation, self-discipline, and self-awareness. It is more than a mere physical movement, dance is aesthetic. Through dance, movement is transformed into a purposeful phrase of action that encompasses physical, emotion, and cognition. Dance uses "the movement of the body in its reactions to the environment" (Vanleena et-al, 1996).

The urge to move appears to be genetic, beginning in and continuing throughout prenatal and neonatal development. At birth, patterns of movement are in the form of primitive reflexes that are designed to guarantee the infants' survival. (Piaget, 1972, 1990). Every dance, no matter what style, has something in common. It not only involves flexibility and body movement, but also physic. Dance are dependent on social, cultural, aesthetic, artistic and moral constraints and range from functional movement to virtuoso techniques such as Bharathanatyam, Ballet, Aerobic dance and Kandyan Dance .

Dancers are not just performing artists; their bodies are also the instruments through which the art is created. The quality of this art, therefore, necessarily depends on the physical qualities and skills that dancers possess. The stronger and more flexible a dancer's body, the more capable it is of a wide range of movement. Nearly all professional dancers start training at a young age in order to shape and develop their body correctly. Strength is built up in the right muscles, and the bone-connecting ligaments on which flexibility of the joints is so dependent are lengthened early before they begin to harden.

A good dancer must also possess great coordination, a highly developed kinesthetic awareness, control over weight and balance in motion, and endurance is essential to continued existence of prolonged dance performance to develop awareness of space, a strong sense of rhythm, and an appreciation of music. Particularly in theatrical dance, the dancer must be able

to project movement clearly and make its expressive qualities intelligible to the audience. Grace, fluidity, and harmony of body are also frequently desired in the dancer, as is physical beauty.

Aerobic dance: In the early 70's, Jacki Sorenson developed a fitness program now known as aerobic dance, which was designed to improve cardiovascular endurance (Sorenson, 1979). It involves choreographed routines made up from various dance steps and other movements including walking, running and skipping. It also involves muscle conditioning exercises for the abdominal, legs and arms (Blyth & Goslin,1985). Aerobic dance is appropriate for the general public since skill and technique are not emphasized (Perry et-al, 1988). Bharatanatyam: very popular dance form in South India. It is oldest of all classical dance forms in India. The general Etymology of Bharathanatyam is BHAva (expression) + RAga (music) + TAla(rhythm) + NATYAM(dance). The variety and style of the dance and musical accompaniment provide to the people tastes and performing them. Many learn as a hobby and few make it as a profession. Whether taken as a hobby or a profession it certainly needs lot of practice, concentration and dedication with physical fitness. Hence the purpose of the study was to compare cardio respiratory endurance and vo_2 max between aerobic and bharathanatyam dancers

Methods

To achieve the purpose of this study thirty (n=30) women aerobic and thirty (n=30) bharathanatyam dance students from Kalabavanam bharathanatyam academy, Jaffna, Sri lanka were selected and their mean age were 17 ± 1.3 years. Aerobic (AD) and Bharathanatyam (BD) dancers had been dancing 90 to 120 min per day; 3 days per wk over a period of minimum 3 yr. Data were collected on cardiorespiratory endurance using Harvard Step Test. [Brouha et al. (1943)] and VO_2 max by Queen's step test [McArdle et al. (1972)]. Each test conducted on one day after another day. The collected data were subjected to statistical treatment using independent ''t'' test. In all the cases 0.05 level of confidence was fixed to test the significance, which was considered as appropriate.

Results

Comparison of Cardio Respiratory Endurance and Vo_2 Max between Aerobic and Bharathanatyam Dancers.

Table – I

Variables Name	Group	Mean	SD	SE	t
CRE	Aerobic Dancer	56.57	6.54	1.19	5.97*
	Bharathanatyam Dancer	48.77	2.97	0.54	
VO_2 max	Aerobic Dancer	47.15	2.53	0.46	3.68*
	Bharathanatyam Dancer	45.12	1.64	0.30	

***Significant at .05 level of confidence. with df (1, 58) is 2.00**

The result shows that aerobic dancers (AD) were better than bharathanatyam dancers (BD) on cardiorespiratory endurance (CRE) and VO_2 max. Hence it was concluded that, aerobic dancers have better cardiorespiratory endurance (CRE) and VO_2 max than bharathanatyam dancers.

Discussions

The Dance movements may be without significance in themselves, such as in classic dance and folk dance. Bharathanatyam is a salient feature of the aesthetic, artistic and graceful form of dance, and sacred in Indian culture, codifies dance into a series of rules determining the gestures used to depict different themes and emotions. It may indicate the associated dance training out comes could be affected by such difference in duration, intensity and frequency of dance they undergone. Regular dance training essential for maintain and developing the dancer's technique and coordination. The energetic demands during these training sessions stand in rather sharp contrast to those which can exist during stage performance. The result also shows that the professional dancers have better CRE and VO_2 max compare to amateur dancers.

Dance is an art form that generally refers to movement of the body, usually rhythmic and to music, used as a form of expression, social interaction or presented in a spiritual or performance setting.

The literature indicates that changes in cardiorespiratory endurance, VO_2 max are directly related to the subject's initial fitness level and the frequency, intensity and duration of the training programme. Some aerobic type of activities, there is a close association with VO_2 max (Hemple and wells, 1985). It has been shown that arm work performed above the head produces a higher VO_2 max than the work performed bellow head level, due to an increased sympathetic tone (Parker et-al 1989). According to Hamilton et.al (1989) aerobic dance and circuit training can be intense enough to promote aerobic capacity. In another study, improvement in cardiovascular fitness is related to the mode, frequency, duration, intensity, and rate of progression of exercise (Kirkendall DT & Calabrese LH-1983). Previous research findings showed that dance as an activity for promoting fitness and will improve aerobic and physical working capacity. In the present investigation, the aerobic dancing group has higher cardiorespiratory endurance (CRE) and VO_2 max than the Bharathanatyam Dancing group.

Conclusions

From the results it was clear that, Aerobic Dancers were better than Bharathanatyam Dancers on cardiorespiratory endurance and VO_2 max. Hence it was concluded that Aerobic dance (AD) practice may have positive influence on health status in respect to cardiorespiratory endurance as well as VO_2 max in women dancers.

Implication

Aerobic dance will be recommended to improve and maintain good cardiorespiratory endurance and VO_2 max. Further the bharathanatyam dancers have to undergo some type of aerobic fitness programme for improving and / or maintaining there cardiorespiratory endurance and VO_2 max for excellent theatre performance.

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Cognition, Balance and Gait in Elderly with Dementia: A Motor Cognitive Approach to Reducing Risk of Falling

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Abstract

The purpose of this study was to evaluate the effectiveness of cognitive motor training on improvement of cognition, balance and gait which has already introduced as risk factors of falling.Three-month motor cognitive intervention with two month follow up was applied on 40 elderly divided into two groups: elderly with dementia (20) and cognitively healthy elderly (20). Half of this sample were males and the other half were females. Evaluations included fall risk factors (gait, balance and cognitive state), as well as falling parameters and functional indices.Subjects had significant improvement in different parameters of cognition, balance and gait after intervention which was maintained in 2 month follow up.These improvements were followed by decreased rate of fall, fear of fall and also enhanced performance in TUG and FR (P<0/05). There was also moderate correlation between a balance parameter (sway distance of COP in AP axis) and fall history in dementia group (r=0/75, p<0/05). Findings demonstrated significant decrease in fall risk among this vulnerable population due to improvement of fall risk factors after intervention. The improvements in these factors were along with less fall rates reported by both nurses and participants. This study can help to develop a new approach to prevention and coping with fall risk in elderly with cognitive impairment.

Key Words: Dementia, cognitive motor training, rehabilitation, falling

Introduction

One of the important goals of Gerontology is to reduce the gap between life expectancy and life expectancy without disabilities. A large part of this gap is due to the two most commonly occurring elderly syndromes: cognitive impairment and movement limitation, which ultimately appear in the form of dementia and falling (respectively). Unfortunately, these phenomena often occur simultaneously in the elderly. The falling syndrome affects about one third of the elderly each year, and dementia is reported to be 10% in the 65 year olds and 40% in the elderly over 85 (1). The normal functioning of the various brain systems is responsible for maintaining stability and mobility in the person, and as the age increases and the elements involved in these systems degenerate, rate of stature control deficiencies rises (2). The structural changes in the prefrontal area of the brain cause declines incognitive and attention systems in the elderly. These disorders affect the controlling of information obtained from the environment, and will limit the elderly in the performing two taskswith cognitive and motor nature (3).

Dementia is a functional disorder of the brain that is prevalent in elderly people. People with dementia have problems in detecting time, space, and people due to cognitive

impairment and memory loss (4). Dementia is associated with a decrease in levels of cognitive function associated with functional disabilities and psychological symptoms (4). Elderly people with cognitive problems have a higher risk of falling from about 60 to 80 percent of the reported annual incidence, which is at least twice as high as those with normal cognitive status (5). The consequences of falling are very dangerous in this population; people with a cognitive problem are almost five times more likely to be referred to treatment centers than their peerswho do not fall (6). These people are also at high risk of severe fall-related injuries, such as fractures and concussion that can lead to death. Falls are important causes of disability and dependence in the elderly, especially those with a cognitive impairment. In addition to indirect costs and maintenance problems, direct rehabilitation and long-term care costs are increasingly unbearable for the health system.

According to previous findings, including Tinneti et al. (2006), the main risk factors for falling injuries are cognitive impairment, imbalance, gait disorder and at least two chronic physical conditions (7). Marigoldand Patla (2008) identified kinematic changes in balance and gait components (such as gait length, gait speed, standing time and sway while walking) as the main risk factors for falling (8). On the other hand, Van Schoor et al. (2002) and Vassallo et al. (2009) postulated that cognitive deficits associated with falling (e.g., working memory disorder, transient and mental - verbal attention) (9, 10). Although the mechanisms of falling risk in the elderly are not fully understood, we know that impaired cognitive abilities can reduce the allocation of resources during walking (11) as the executive function of an important cognitive resource for walking naturally, the disturbance in this area is correlated with both dementia and fall (12). In addition to attention and executive function, other cognitive domains are also involved (such as memory loss).

Past studies on the elderly people with normal cognitive status have shown that multifactorial interventions (such as prescribing medication, balance and strength exercises, correcting visual and hearing problems and environmental modifications) as well as some single interventions (balance and resistance training) is effective in preventing falls (6). On the contrary, most studies that tested elderly people with cognitive impairments have been unable to prevent falling (13). Recently, in a systematic review and meta-analysis, it was demonstrated that the multifactorial and single interventions that have been used so far in the elderly study have special benefits for those with a normal cognitive status and their effects on demented patients cannot be generalized (5). Different infrastructure mechanisms are likely to be involved in people with dementia, so a different approach is needed to target falling in this group. Although there is a lot of information about the multifactorial nature of falling in healthy people, our knowledge about the nature of falling in people with dementia is limited, and as a result, the incidence and fall injuries in this population are increasing (14).

Recently, training methods based on cognitive and motor activities have attracted much attention due to the beneficial effects that prevent the aging process (15). These exercises consist of motor and cognition components, but they are most useful if they are in the form of activities that simultaneously affect the motor and cognitive aspects. Olazaran et al. (2004) showed that cognitive-motor exercises rely on a process called neuroplasticity, in which the brain can create new neuronal connections (16). Accordingly, the brain can modify its activity in response to specific stimuli (17). Viewing structural changes in the brain as a result of cognitive-motor exercises requires complex laboratory equipment and has many limitations in human research. But changes in brain function as a result of cognitive-motor exercises can be seen in the changes that have occurred in motor performance. The most

important of these changes are improving balance, increasing speed and magnitude of movement and reducing motor frigid (18).

Several studies that have applied cognitive-motor exercises with robust methodology and large sample size have reported different outcomes; from significant impact on risk of falling (19) to a lack of beneficial outcomes (20). In most of these studies, elderly people with dementia have not been distinguished from those with a normal cognitive status, which due to increase in the range of cognitive abilities among the participants. A review of these studies shows that cognitive function is a factor that has not always received enough attention in designing interventional designs. The effects of interventional programs on fall risk can be improved if cognitive failures are taken into account. Therefore, the design of exercises that are appropriate to the cognitive abilities of the elderly with dementia is a must which has so far been neglected. Two recent review studies have shown that cognitive-motor exercises can improve risk factors for falling and also fear of falling (21, 22). However, most of the researches reviewed in these review articles had some limitations, including some of the risk factors for falling. Also, despite the fact that the effectiveness of cognitive-motor exercises in elderly people with a normal cognitive status has already been investigated, the impact of these exercises on the risk factors of falling in elderly patients with dementia has not yet been done.

The effect of cognitive abilities on balance, gait and risk of falling is a subject that has been extensively investigated (23). Previous findings state that at least one of these tasks is damaged when the capacity of resources is limited and walking along with a secondary task requiring attention simultaneously. Previous studies have shown that elderly people with neurological diseases, such as Alzheimer's and Parkinson's, have a poorer performance in cognitive function and displacement (24). Elderly people with cognitive impairments, including dementia, also have a similar situation. Since cognitive impairment has a detrimental effect on mobility in people with dementia, providing interventions that help improve this conditionhave important applications in the designing prevention programs. Therefore, in this study, we examine the effectiveness of cognitive-motor exercises on cognitive status, balance and gait parameters as fall risk factors, and we examine the correlation of these factors with fall variables and functional indices in order to determine the effect of cognitive-motor exercises on fall risk reduction. Also, by comparing the effectiveness of these exercises between the elderly with dementia and whom with a normal cognitive status, we examine the effect of dementia on the effectiveness of cognitive-motor therapy interventions.

Methodology

Participants

A quasi-experimental study with pre-test and post-test and 2 months follow up was performed on 40 elderly people. The subjects were selected from the residents of Hamedan's elderly care centers randomly. Participants were divided into two groups: dementia (20 people) and subjects with normal cognitive status (20 people). The dementia group was trained for 12 weeks and 3 sessions per week, each training session lasted between 30 and 40 minutes.

All participants were 65 years of age or older. Achieving the score below 7 in the abbreviated mental test (AMTS) was the primary criterion for being in the dementia group (25). This test does not need the ability to read or write, it is not very dependent on the level of education and is validated in the community of people with dementia (26). Subjects of the

dementia group were then evaluated with a standard dementia protocol (DCM-3) (27). The DCM-3 criterion for detected dementia includes a significant impairment (lack of independence) in one or more of the following cognitive domains (28): memory (amnesia), language (aphasia), performing purposeful movements (apraxia), cognition (agnosia), Visual spatial function (topographical disorientation), personal management / control (executive functions impairment).

Participants were free of atrial fibrillation, middle ear infections and concussion. Other release criteria were the use of auxiliary devices, uncorrected hearing and vision impairments, amputation due to illness, wheelchair users and temporary problems affecting balance on the test day.

Intervention

Both groups participated in 36 sessions of cognitive-motor training during 12 weeks (3 sessions per week), each session lasting 30 to 40 minutes. This volume of training has been associated with optimal effectiveness in previous studies, including De Bruin et al. (2011) (29). Motion-based cognitive intervention was designed with the guidance of a rehab practitioner based on valid research evidence. In this regard, researchers in a review study examined various types of motor cognitive protocols, in order to confirm the combination of training, severity and extent of them, experimentally and theoretically. Reviewing the articles showed that motor cognitive interventions fall into three categories: imaging interventions, dual tasks, and computer interventions. The maximum effect size between these three categories was related to dual task interventions. Therefore, for designing the selected exercises in the present study, dual task interventions that had the most impact in previous researches were used. These studies were: Shigematsuet al. (2008), Silsupadolet al. (2006), Silsupadolet al. (2009), Vaillantet al. (2006) and You et al. (2009).

Finally, the selected exercises were submitted to five experts from the university research groups with a high level of research experience for a more detailed content-based validation. The Content Validity Ratio (CVR), which was formulated by Lawshe, and the Content Validity Index (CVI) was used by the Waltz and Bausell methods to quantify the results (30). In order to calculate the CVR, the training objectives were first explained to the experts, and the definitions related to the content of the exercises were presented to them. Then they were asked to rank each exercise based on the three-part Likert scale "necessary", "useful but not necessary" and "not necessary." Then, based on the formula, the content validity ratio was calculated to be 0.99. To assess the CVI, experts rated "relevance", "clarity" and "simplicity" of each exercise based on a 4-part Likert scale. Using the corresponding formula, 0.92 was obtained for CVI.

To perform these exercises, an occupation therapist, a clinical psychologist and a motor behavior specialist. The exercises have two categories of challenging needs: firstly, motor skills such as changing the location of the center of gravity, intermittent walking, controlling the center of gravity, and moving the limb in the full range of motion, and the second, are cognitive requirements Including attention, rapid response to visual stimuli, performance based on visual and auditory feedback, decision making and response inhibition. According to Schoene et al. (2013), each exercise was designed at a basic level and two levels of progression A and B (31). The cognitive load at the basic level was minimal and at moderate and high levels in progressive levels A and B. The choice of the level of exercise depends on individual differences. This means that all subjects started exercises from the basic level, but only if they succeeded in this level reached the progression A. Admission to

progress level B was also due to the success of the previous level exercises. The success interpretation was based on performingmotor and cognitive tasks simultaneously and without disturbing one or both of them.

Before practicing at a session, all exercises were described and displayed, and subjects were allowed to perform them once to get familiar with how to do the exercises. Sessionsstarted with 10 minutes warming, which included movements of general movement. Each session consisted of 6 exercises, which were done in terms of individual abilities of each exercise in 2 to 3 sets and 5 to 10 repetitions. Based on individual needs, subjects were allowed to have enough rest between exercises and / or between repetitions.

Research process

At baseline, after the intervention and 2 months after the intervention, evaluations were obtained from both groups, then the subjects underwent cognitive impairment. The evaluations included the analysis of falling risk factors (cognitive status, gait and equilibrium sway), along with the evaluation of falling variables (history and fear of falling) and performance indicators (timed rise and movement test and functional access). The research hypothesis is that cognitive-motor exercises help reduce the risk of falling in the elderly with dementia.

Evaluations

gait kinematic analysis system

The tools used for gait kinematic analysis in this study were a 3D motion analysis system with two 1000-Hz force plates(Kestler, Swiss)and four 1200-volt Falconcameras with Opto technology and infrared photocell system which was synchronized with force plates. Also, 1-in-1-cm scale markers were used, which the cameras could follow them. The marker images were recorded while walking by cameras at a frequency of 240 Hz and simultaneously transferred to the computer's memory. Then, using the EVA70 software, three-dimensional coordinates of the markers were reconstructed and the kinematic variables of stride, gait speed, standing time and sway during gait were calculated.

Force plate device

The force plate is a measuring instrument that can measure biomechanical indices related to balance and gait analysis by means of ground reaction forces that are created by the body in a standing or moving position. The force plate can be used to measure the center of pressure(COP)displacement. In order to evaluate the degree of posture sway, the subjects were placed in the semi-tandem (left heel at the level of the first metatarsal) on the surface of the plate. Through Excel software and entering the formulas related to this software, raw data analysis was performed to obtain the mean COP and COP sway on the two anterior -posterior (AP) and medial - lateral (ML) axes (On a millimeter scale). Also, the root mean square (rms) distance for both axes was calculated and reported in millimeters.

Abbreviated Cognitive Test Score(AMTs)

This tool, which contains 10 simple and short questions, is used to measure orientation, concentration / attention, short-term and long-term memory, and is used to screen for elderly patients with dementia. The short form consists of 10 questions with 10 points, which takes only 3 minutes. This test has been validated in Iran, and the cutting point of 8 or 7 of 10 (6 or 7 of 9) has been proposed as a distinguishing point of the normal cognitive status from the abnormal. The internal reliability of Farsi AMTs is acceptable (Cronbach's alpha coefficient = 0.76), and its external reliability is good for some good exams (inter-group correlation coefficient = 0.89) (32). As described in the participants' descriptions, in the

present study, in addition to the standard dementia protocol, AMTs were used to identify people with dementia.

Falls Efficacy Scale-International (FES-I)

This scale measures the fear of falling in elderly people while doing their daily activities in the two areas of indoor and outdoor activities. This tool, which was developed by the European Fall Prevention Association in 2005 and has been validated in several communities (33), has 16 questions in the form of a self-report questionnaire. The answers to the questions in this questionnaire are in the form of a four degree Likert scale (1 = I'm not at all worried, 2 = slightly worried, 3 = relatively worried, 4 = very worried). The minimum possible score is 16 (no worry of falling) and the maximum score is 64 (very severe worry of falling).

Falling

Falling is defined as an unwanted landfall on the ground, floor, or lower surface, which is not due to seizure or stroke (34). Because falls that do not result in damage are often forgotten very soon, a record of falls is necessary. A table, which was designed to record falls on a daily, weekly and monthly basis, was provided at the base to the elderly and their nurses and was regularly monitored and reviewed.

Timed Up and Go Test (TUG)

Modified timed up and go testis a simple method for assessing the static and dynamic balance of the elderly, as developed by Matthias and colleagues in 1986 as a quick way to determine the balance problems affecting the motor skills of everyday life in the elderly. This test consists of 3 steps from the chair, gait, turning and back, which is scored as follows: 1 = normal performance, 2 = very small disorder, 3 = mild disorder, 4 = high disorder, 5 = severe disorder. Subjects should perform this test in the least possible time. The method of doing this test is that the subject is placed on a standard seat (46 cm high and 63 cm handlebar high) and after hearing the Go command from the examiner stands and transforms a 3 metersdistance with normal speed, then rotates and returns to the chair and sit on the chair.

Functional Reach Test (FR)

Functional Reach Test is a single test that is used as a rapid screening tool for elderly balance problems. To perform this test, the subject must be able to stand independently for at least 30 seconds without support and can bend the arm from the shoulder joint at least 90 degrees. The required test device is a ruler (or paper meter) mounted on the wall at the shoulder height. How to do the test is that the subject stays in the predefined position near the ruler. The arm next to the wall is raised 90 degrees (hand-fisted) and measured by centimeter gradation, then the subject is asked to bend forwardwithout taking step and loosing balance as far as he/she can. After reaching the maximum possible displacement, the value of the individual bending is measured again. The difference between the first and second measurements indicates that the score that has been obtained.

Statistical analysis

To compare the distribution of the scores of variables measured with normal distribution, Kolmogorov-Smirnov test (KS) was used. Non-parametric tests were used in cases where the distribution of the variable was not normal. The central tendency indices (mean and standard deviation) and frequencies and percentiles were used to describe the data. For inter-groups comparison of demographic characteristics and pre-intervention variables, independent t-test for means and chi-square test for frequencies were used. In order to determine the effect of training and follow-up, intra-group differences in each of the

dependent variables were analyzed using repeated measure ANOVA. Pearson coefficient was used to determine the correlation between dependent variables. The change values for each subject were calculated by subtraction of pre-intervention data from post-intervention data and subtraction of pre-intervention data from follow-up data. Mean of differences and standard deviation differences for each variable was calculated. Multivariate variance analysis was used to determine the difference between mean changes in all dependent variables among the groups. The significance of $p < 0.05$ was considered at the level of two domains for statistical analyzes. All statistical calculations were performed using SPSS software (version 22).

Results

Describing subjects

Two subjects were discharged from the center during the intervention period and returned to their home, one of whom was a woman and the other was a man, and both were from non-dementia elderly people. Therefore, the final analysis of the findings was done on 38 participants. The mean and standard deviation of age and height of two groups were: 60/78 (7/79) and 60/80 (6/21) cm in the dementia group and 72/70 (5/85) and 160/260 76/7) cm in the non-dementia group. The BMI of the two groups was 24.53 (2.14) and 23.88 (1.90), respectively. By examining the medical records of the subjects, reported rate of three health condition of hypertension, diabetes and stroke in the elderly of the dementia group was 10, 6 and 8, respectively, while the incidence of these complications in the elderly of the non-dementia group was 7, 6 and 6 cases. Differences between two groups of dementia and non-dementia were meaningful in terms of education, but there was no significant difference in other individual and demographic characteristics.

Baseline findings

At the baseline, the two groups of dementia and non-dementia had a significant difference in some gait measures (gait length, speed variability, and cadence), balance (COP sway in the ML axis, COP speed in the axis AP, and COP speed in the ML axis)and cognitive status. In addition, the dementia group was afraid of falling higher and had weaker performance in the FR test than the non-dementia group. The results for these measures are shown in Table 1.

There was a weak correlation between the results of two balance parameters (COP sway and COP speed in the ML axis) at the baseline with a history of fall for the dementia group ($r = 0.48$, $r = 0.53$, $p<0.01$). Other correlations were not meaningful.

Table 1 Comparison of intra-group measurements

measures	Pre - post intervention			Pre intervention – follow up		
	Dementia	Normal	Sig	Dementia	Normal	Sig
Gait:						
Stride	6.3	0.73	0.01*	8.7	1.28	0.01*
Gait speed	0.07	0.08	0.89	0.12	0.14	0.68
Speed variability	0.44	0.32	0.23	0.47	0.37	0.20
Cadence	0.4	0.09	0.04*	0.35	0.08	0.05*
Dual support	2.24	0.39	0.01*	1.98	0.33	0.02*
Balance:						
Distance of COP in AP	0.1	0.09	0.57	0.25	0.34	0.62
axis	0.1	0.02	0.13	0.14	0.15	0.12
Distance of COP in ML	0.63	0.52	0.64	0.65	0.54	0.68

axis	0.17	0.04	0.03*	0.20	0.01	0.02*
RMS of COP in AP axis	1.77	0.37	0.46	1.70	0.23	0.42
RMS of COP in ML axis	0.88	0.23	0.01*	0.95	0.28	0.01*
Speed of COP in AP axis	1.05	0.46	0.01*	1.02	0.44	0.01*
Speed of COP in ML axis	0.36	0.22	0.03*	0.35	0.23	0.05*
	5.83	3.39	0.02*	5.43	3.12	0.02*
Cognitive Status:						
AMTS test	2.43	1.02	0.01*	2.57	1.24	0.02*
Falling indices:	2.63	1.26	0.03*	2.79	1.37	0.04*
Fall history						
Fear of falling						
Functional indices:						
TUG test						
FR test						

Changes from the baseline to the end of the intervention

The evaluations performed after the last exercise session showed improvements in both groups compared to baseline. After cognitive imaging, subjects in the dementia group had a significant improvement in cognitive status, gait length, gait speed, dual protection time, COP speed in the AP axis and COP speed in the ML axis in post-test. This group also had significant improvements in falling and functional indices. The non-dementia group showed significant improvement in cognitive dimensions, speed, speed variability, and COPsway RMS in the axis of AP. In addition, their improvement in terms of falling indices was significant (Table 2).

Improvement in cognitive status, three gait measures (gait length, cadence and dual support), and two balance measures (RMS COP sway in axis and COP speed in ML axis) were significantly different between the two groups of dementia and non-dementia. The difference was to the benefit of the dementia group. Improvement in fear of falling and functional indices (TUG and FR) in the dementia group was higher than the non-dementia group (Table 3).

In the elderly, the dementia group had a correlation between the history of falling with cognitive status and the COP sway distance in the AP axis ($r = 0.75$ and $r = -0.82$). Also, the fear of falling was correlated with cognitive status test ($r = -0.67$). But in the non-dementia group, the correlation between the fear of falling with speed and the COP sway distance in the AP axis was significant ($r = -0.78$, $r = 0.71$). Other correlations were not meaningful.

Changes in 2 months after intervention

In the dementia group, the result of cognitive status tests improved some gait parameters (gait length, speed, cadence and dual support) and balance (COP speed in both AP and ML axes) in the 2 months after intervention, compared to baseline. Meanwhile, the results of follow-up tests on the fall and functional indices were significantly different from the baseline. The difference between the results at the end of the intervention and 2 months later was significant for speed test and fear of falling, but was not significant for other variables. In the non-dementia group, improvement from baseline to follow-up test was significant incognitive test, gait speed, gait speed variability, and RMS swayin the AP axis. Improvement

from post-intervention test to follow-up test was significant in falling indices (Table 2).

By comparing the improvements in the two groups, it was found that the dementia group had better improvement in stride, Cadence, dual protection, RMS of COP sway in the ML axis, and COP speed in the ML axis compared to the non-dementia group. Additionally, improvement in fear of falling, and TUG and FR tests in the dementia group were more than the non-dementia group (Table 3).

In follow-up measurements, there were significant negative and significant correlations between fear of falling with cognitive status variables (r = -0.65), gait length (r = -0.74), cadence (r = -0.76), and the speed variability in the dementia group (r = 0.66). Also, the correlation between the fall history and the gait speed variability (r = 0.80) and COP speed in the AP axis (r = 0.76) were inversely significant. Other correlations were not meaningful.

Table 2 Comparison of measurement values from pre-test to post-intervention and follow-up

measures	Pre - post intervention			Pre intervention – follow up		
	Dementia	Normal	Sig	Dementia	Normal	Sig
Gait:						
Stride	6.3	0.73	0.01*	8.7	1.28	0.01*
Gait speed	0.07	0.08	0.89	0.12	0.14	0.68
Speed variability	0.44	0.32	0.23	0.47	0.37	0.20
Cadence	0.4	0.09	0.04*	0.35	0.08	0.05*
Dual support	2.24	0.39	0.01*	1.98	0.33	0.02*
Balance:						
Distance of COP in AP	0.1	0.09	0.57	0.25	0.34	0.62
axis	0.1	0.02	0.13	0.14	0.15	0.12
Distance of COP in ML	0.63	0.52	0.64	0.65	0.54	0.68
axis	0.17	0.04	0.03*	0.20	0.01	0.02*
RMS of COP in AP axis	1.77	0.37	0.46	1.70	0.23	0.42
RMS of COP in ML	0.88	0.23	0.01*	0.95	0.28	0.01*
axis						
Speed of COP in AP	1.05	0.46	0.03*	1.02	0.44	0.01*
axis						
Speed of COP in ML	0.36	0.22	0.03*	0.35	0.23	0.05*
axis	5.83	3.39	0.02*	5.43	3.12	0.02*
Cognitive Status:						
AMTS test	2.43	1.02	0.01*	2.57	1.24	0.02*
Falling indices:	2.63	1.26	0.03*	2.79	1.37	0.04*
Fall history						
Fear of falling						
Functional indices:						
TUG test						
FR test						

Discussion and conclusion

Elderly people with dementia are between the most vulnerable sectors of society with mental, social and physical conditions. In these people, the likelihood of falling and decreasing mobility is higher. Therefore, there is an urgent need for scientific evidence-based

interventions to reduce the risk of falling and its related harm in people with dementia. So far, no valid studies have evaluated the effect of cognitive-motor exercises on risk factors for falling in elderly people with dementia. Since falling is one of the main reasons for hospitalization or nursing home-based care for the elderly with cognitive impairment, it has a significant impact on the health system in the country.

The interpretation of the results shows the positive effect of cognitive-motor exercises on improving the risk factors for falling and reducing the risk of falling in the elderly with dementia. Subjects in this study had a significant improvement in the gait parameters, balance and gait after the intervention period, which was maintained in 2 months follow-up. As these improvements have been accompanied by reduced falls and fear of falling, as well as improved performance in the TUG and FR functional tests, it is possible to some extent ensure the effectiveness of the intervention provided to reduce the risk of falling. Also, there was a high correlation between falling indices with the risk factors studied in this study, which indicates that the positive effects of cognitive-motor exercises on these factors can be associated with preventing falling in the elderly. Comparison of the effect of these exercises among people with dementia and with a normal cognitive status also indicated that the dementia group had the greatest benefit from the intervention, which is the most obvious case for cognitive status. So that in dementia patients, cognition was much better than non-dementia.

Although it is not within the scope of this research to explain the physiological and psychosocial mechanisms of these improvements, review of the literature shows thatthere are three possible justifications for improving the risk factors for cognitive-motor activity in elderly patients with dementia: a) Stimulation ofbiological mechanisms including changes in brain metabolism (35) and an increase in the neurotrophic factor induced by the plasticity of the brain (36). B) Psychosocial benefits reduce symptoms of anxiety and depression (37). C) Social network hypothesis that acts with neurophysiological changes and improves physical, cognitive, and behavioral symptoms in elderly patients with dementia (38).

From a different perspective, numerous studies have reported that people with neurological disorders are at increased risk of developing dementia and cognitive decline, so that progressive problems can predict the development of dementia in the next 6-10 years (39 and 40). These futuristic studies support the hypothesis that cognition and gait (as risk factors for fall) are interconnected because they share common neural networks and / or gaitis related to certain aspects of cognition. Additionally, it has been suggested that gait changes can act as a biological indicator for future cognitive decline and dementia (41). Therefore, as can be argued from the findings of this research, cognition and gait interaction are directly related to different causes, such as the sharing of similar neural networks, and interventions that improve one of these factors can lead to enhancement of the other factor.

After 3 months of cognitive-motor training, the elderly of the dementia group had a significant decrease during the TUG test. Also, in the FR test, dementia participants had a significant improvement in this test and, as a result of balance, prevented them from increasing their risk of falling. This fact could be due to improvement of stride, gait speed and balance indices. It has been shown that success in these two functional tests is correlated with decreasing the risk of falling in the elderly. Therefore, the intervention seems to have reduced the risk of falling in subjects.

A study with 30 participants with Alzheimer's disease, vascular dementia and elderly with normal cognitive status showed a significant decrease in stride and gait speed compared

with the control group (42). The researchers concluded that the stridein comparison with speed and cadence was a more significant predictor of risk of falling, and that this finding might be directly related to changes in the blood flow in the anterior cortex of the cortex. The results of this study showed improvement in performance in terms of the pattern of gait that may be due to improving or maintaining the attention and performance of the participants, which are mainly processed by the anterior region. In this study, improvement of cognitive status in elderly patients with dementia as a result of training intervention, which can improve other parameters studied.

Waler and Schatzker compared elderly patients with Alzheimer with elderly people with normal cognitive status and reported that the incidence of falling in the elderly with Alzheimer was 36%, while the numbers for the normal group were 11%. The same researchers have argued that reducing functional autonomy poses a high risk of falling. According to Nutt et al. (1993), the notion of functional impairment is a way of walking a fixed feature of people with dementia (43). In this study, 55 elderly patients with dementia based on the progression of dementia were divided into three groups (mild, moderate and advanced). The findings of this study coincide with the results of Nutt and colleagues that the reduction of cognitive function can increase the functional defect of the walking and consequently increase the risk of falling.

In terms of motor tests used to evaluate seniors with dementia, encouragement and guidance during tests are extremely important. However, research literature does not emphasize these encouragements, which indicates the need for the development and adaptation of guidance techniques for the elderly, in order to achieve optimal performance. Therefore, in the present study, the intervention protocol provided clear, objective, and repeated guidance to guide the participants in the implementation of the exercises.

Although this study has a positive effect on motor cognitive impairment in the elderly with dementia, consideration of problems related to the control of factors such as the transfer of subjects to practice and test, the loss of subjects, and the length of the intervention period are necessary. One of the barriers to the lack of cooperation of the elderly, the doctor or his caregiver is to transfer to the test and practice, which sometimes causes the loss of a number of subjects in the middle of intervention. In this study, due to the good cooperation of the authorities of the elderly care center, this barrier was minimized so that, except for the elderly who had been discharged from their careers during the research period, the rest of the elderly (38 people) until the end of the investigation hadfull cooperation. The length of the intervention period is also one of the factors potentially causing the subjects to fall. However, it should be noted that in order to achieve significant improvement in the balance and reduce the risk of falling in the elderly under the intervention of the three months of training provided in this study was necessary.

In the research literature, there is still no agreement on non-pharmacological treatments such as cognitive-motor exercises for dementia and Alzheimer. The present study aimed to help the development and effectiveness of these approaches and provide a better understanding of this issue. These approaches can be used as therapeutic supplements along with medication and contribute to the development of rehabilitation science and physical therapy.

This study is unique in that it provides an intervention aimed at improving cognitive, balance and gait and examines the effect of improvement in these parameters on the fall rate in elderly people with cognitive impairment. By understanding and recognizing the effects of

cognitive-motor activity on the risk of falling in the elderly with dementia, we will be able to take a new step towards developing a new approach to preventing falling into this community.

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Relationship between Heart Rate Variability after Judo Performance, and Aerobic and Anaerobic Maximal Tests with Lactate Level in Elite Judo Athletes

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Abstract

Background & Purpose: Elite Judo players need concurrent aerobic and anaerobic metabolism to reach optimal level of performance. Capacity to remove Lactate is an effective factor in anaerobic capacity measurement in these athletes. The main purpose of this study is to evaluate the relationship between Judo players lactate level and heart rate variability after maximal tests.

Methods:Subjects who were 24 judo players with minimum 5 years' experience in national team were assessed by Wingate anaerobic, Bruce aerobic and Judo Specific Fitness Test. Data regarding heart rate variability, lactate and lactate dehydrogenase enzyme were collected in base line and after above tests.

Results: High correlation was observed between para-sympatic activity indices (high frequency power, mean of R-R interval and mean of R-R interval standard deviation) with level of lactate and lactate dehydrogenase enzyme right after judo specific test. Among sympatic activity indices, low frequency power had no significant correlation with lactate level but high to low frequency ratio had high and positive correlation with lactate and lactate dehydrogenase enzyme.

Conclusion: Judo training causes the enhancement in both aerobic and anaerobic metabolism paths, as well as modifications in cardiovascular performance. However, after judo maximal tests, interruption in para-sympatic system activity occurs which alters the heart rate variability in turn. These alteration is in line with lactate and lactate dehydrogenage enzyme increases which implies the direct relation between these phenomena.

Key Words: Heart rate variability, Judo, maximal test, lactate, sympatic activity

Introduction

Fatigue is the most important factor in limiting the ability of athletes to perform better. One of the reasons for local fatigue is the accumulation of lactic acid in the active muscle and concentration of hydrogen ion in the blood. The severity and type of muscle fatigue depends on the type, duration, intensity of exercise and the type of active muscle fibers and various environmental factors and severity of these factors (5). Increasing the amount of lactate in anaerobic exercises is due to decreased blood flow because of isometric contractions in active muscles following intense exercise. Intracellular acidosis as a result of increasing lactic acid is an important factor in causing skeletal muscle fatigue (1).

Severe aerobic and anaerobic activities, in addition to musculoskeletal changes, also change the athlete's heart rate. The heart rate varies by sympathetic and para-sympathetic nervous systems, so that short-term and long-term changes in heart rate reflect the functioning

of the autonomic nervous system (14). These changes in the heart signal seen during two consecutive pulses are called HRV (16). Therefore, heart rate analysis can be used as a monitoring tool for modifying the autonomic nervous system in the clinic. As studies have shown, in brain injuries, Guillain Barre syndrome, uremic neuropathy, diabetic neuropathy, and in general, in all disorders caused by sympathetic and para-sympathetic imbalance, HRV analysis can be performed as a non-invasivemeasure of function change in autonomoussystem (7).

The main goal of athletes and instructors is to reach the peak sport performance. At the high levels of championship sport, the boundary between victory and failure is very small. In the last decade, HRV has been widely used as a non-invasive indicator to evaluate the effect of autonomic nervous system on post-exercise heart rate dynamics with varying degrees and severity. Recently, new studies have been done to investigate cardiac changes after exercise with maximum intensity, which has shown that periodic protocols have a great impact on endurance athletes, as well as combat sports like judo.

Researchers have shownthat declineof post exercisecardiac auto response after Wingate anaerobic test, sequential running and various protocols of intermittent running exercises, suggesting that the drop in para-sympatic index of HRV is a common response to training exercises withpredominant anaerobic component (3).

Martial arts such as Judo require intermittent participation in aerobic and anaerobic metabolism pathways. The higher capacity of lactate depletion, which in turn is due to delays in muscle tiredness, is an effective factor in assessing the anaerobic capacity of martial athletes. On the other hand, researchers have shown a drop in post exercise auto-cardiac response after various anaerobic and aerobic tests. Therefore, it is expected that there will be a correlation between heart rate variability after the maximum aerobic and anaerobic tests with lactate level.

Specific Judo Fitness Test (SJFT), which often includes anaerobic activity, was first proposed by Sterkowicz(1995) as a useful training tool. It has been shown that lactate concentrations after this judo test are very similar to the lactate concentrations obtained after judo competitions, which indicates similar metabolic responses in these situations (4).Sterkowicz(2001) observed that the elite Polish judo players (national competition medalists), as compared to lower-level athletes and light weight class athletes, had a better indicator of judofitness test than heavyjudo players (23).

Sterkowiczand Franchini (2001) in a study evaluated the characteristics of novice and elite, youth and adults, as well as lightweight and heavyweight male judo players. The results of this study showed that Judo specific test is able to distinguish between judo athletes according to their performance in the tournament (22). In addition, Franchini et al. (2005) found that athletes under the age of 16 who participate in the same type of training have similar performance in this test (4).

Franchini et al. (2005) investigated the relationship between the Wingate test, judo specific test and simulated combat. The subjects were thirteen male university judo players who included seven members of the Brazilian university athletes and six substitute of the team. Subjects were evaluated for two consecutive days with 3 hours interval between measurements. The results showed that blood lactate after judo specific fitness test had a high correlation with the blood lactate following the combat, which indicates the metabolic similarity required in these events. In addition, this study showed that morphological, physiological and technical actionsin judo were related together.

Derid et al. (2009) in their study aimed to determine the fitness characteristics of sixteen elite female judo players from the Serbian national team. The results showed that there was a positive and significant correlation between the number of throws in judo and fitness, which means that Judospecific fitness test can be used as a specific fitness test (2).

There is little research about cardiac autonomous changes after maximal tests, while the anaerobic component in martial arts like judo, which has high neuromuscular and cardiovascular requirements, is very important. Although these sports require intermittent participation in aerobic and anaerobic metabolism pathways, anaerobic capacity, especially in the upper extremity, is a critical factor for the use of explosive actions as well as pull and push activities in competition. However, the study of anaerobic capacity has been neglected in previous studies, which motivated this study to assess aerobic and anaerobic capacities of judo players.

On the other hand, higher levels of lactate in elite athletes have been reported as an adaptive response to high-intensity exercises. The higher capacity of lactate depletion, which in turn is due to delays in muscle fatigue, is an effective factor in assessing the anaerobic capacity of martial athletes. Therefore, it is expected that there will be a correlation between heart rate variability after the maximum aerobic and anaerobic tests with lactate level. However, this issue requires studies that have been neglected before. Finally, our review showed that so far, no study has examined the heart rate, HRV, and blood lactate levels after exercise immediately at recovery time after a maximal intermittent task.

Methods

In this quasi-experimental study, 24 male judo players in under 60 and under 81kg categories were randomly selected among the Iranian junior players with a history of membership in the national team who have more than 5 years of competitive experience at the national and international levels (200 athletes) and currently practice at least 3 sessions a week. All subjects completed the informed consent form for participation in the research.

Participants were recruitedearly morning in fasting state. After reaching the test site, subjects were resting for 10 minutes to measure heart rate data, HRV, lactate and lactate dehydrogenase enzyme at baseline. Subjects were then allowed to have their breakfast and 2 hours later they completed a standard warm-up protocol to prepare for a judo-specific test. After the end of the judo test, the heart rate and lactate concentration were measured similar to the baseline level. Subjects then had a snack (including muffins and juice) and had active rest for up to 1 hour. Afterwards, they were moved to the laboratory forWingate anaerobic test and Bruce's aerobic test. After performing these two tests, heart rate data, HRV, lactate and lactate dehydrogenase enzyme were collected. At the end, the subjects were asked to perform cool down or 5 minutes using different running and stretching movements.

The instruments used in this study were aergometer for performing an anaerobic 30-second Wingate test and evaluating anaerobic power (mean and peak power, fatigue index) and treadmill for executing the maximum Bruce test and assessing aerobic power (time to reach exhaustion, distance covered before exhaustion, the maximum oxygen consumed). The Judo Performance Test (BSJT) is also used to assess the specific performance of judo players (fitness index, number of throws with ipon sui nage technique in 15, 30, and 30 seconds with 10 second rest intervals). Blood lactate concentrations are reported using the reagent lactate enzymatic method. Also, the amount of lactate dehydrogenase enzyme is measured using a special kit. Heart rate variability is also recorded using the Biofeedback Heart Rate Monitor (E.C.G BIOFEEDBACK).

To describe the results of the study, descriptive statistical methods such as mean, standard deviations and figures and tables are used. For all analyzes, the natural distribution of data was investigated through the Kolmogrov-Smirnov qualitative test. Homogeneity of variances was confirmed by the Levenmedian test. A logarithmic transmission was performed for absolute low-frequency and high-frequency values to obtain a normal distribution. Pearson correlation coefficient is used to determine the correlation between research variables. SPSS version 22 is used for statistical analysis of data, and EXCEL and WORD 2010 are used to draw charts and tables. The significance level was $P \geq 0.05$.

Results

Heart rate variability of subjects was tested by heart rate biofeedback device (data is shown in Table 1). Heart rate variability was determined using time and frequency domains methods. Time domain indices were mean heart rate, mean R-R interval (mRR), and standard deviation of RR intervals (SDNN). Also, the frequency domain indices were logtransformed low frequency power (LnLF), logtransformed high frequency power (LnHF), and log-transformed Low Frequency to High Frequency ratio (LF/HF).

Data are reported as median. Four consecutive 256-second windows were calculated.

Table 1 HRV indices before performing tests

Indices	Time domain indices			Frequency domain indices		
Time of test	mean heart rate	mRR	SDNN	LnLF	LnHF	LF/HF
Baseline	69.4 + 7.5	1152 + 48.7	49.6 + 3.4	6.06 + 0.23	6.91 + 0.18	85.4 + 21.9

mRR= mean R-R interval, SDNN= standard deviation of RR intervals, LnLF= logtransformed low frequency power, LnHF= logtransformed high frequency power, LF/HF= log-transformed Low Frequency to High Frequency ratio

Blood lactate and lactate dehydrogenase enzyme were measured in baseline and immediately (within 30 seconds) after the end of the judo test, Wingate test and Bruce test. The information obtained in this part can be seen in Table 2.

Table 2 Blood lactate and lactate dehydrogenase enzyme at baseline

Test	Baseline	
Data	lactate	lactate dehydrogenase
Mean	1.02	114.38
Standard deviation	0.42	3.67

Table 3 pearson correlation between HRV indices and lactate dehydrogenase enzyme immediately after Judo specific test

HRV indices		lactate	lactate dehydrogenase
Time domain	mean heart rate	0.618 **	0.642 **
	mRR	0.667 **	0.690 **
	SDNN	0.495 *	0.529 *
Frequency domain	LnLF	0.174	0.207
	LnHF	0.670 **	0.693 **
	LF/HF	0.512 *	0.546 *

According to the data presented in Table 3, a high correlation was found between the para-sympathetic activity (high frequency power, mean R-R interval and mean R-R interval) and blood lactate level and lactate dehydrogenase degradation immediately after the judo test. Among the para-sympathetic activity indices, low frequency power did not have a significant correlation with blood lactate level, but the low to high frequency ratio had a significant positive correlation with lactate level.

Table 4 pearson correlation between HRV indices and lactate dehydrogenase enzyme immediately after maximal aerobic test

HRV indices		lactate	lactate dehydrogenase
Time domain	mean heart rate	0.229	0.245
	mRR	0.518 *	0.547 *
	SDNN	0.348	0.360
Frequency domain	LnLF	0.136	0.152
	LnHF	0.469 *	0.491 *
	LF/HF	0.357	0.379

According to the data presented in Table 4, high correlation between para-sympathetic activity (high frequency power, mean R-R interval and mean R-R interval) and blood lactate level and lactate dehydrogenase degradation was observed immediately after the maximal aerobic test (Bruce). Among the para-sympathetic activity indices, low frequency power did not have a significant correlation with blood lactate level, but the low to high frequency ratio had a significant positive correlation with lactate level.

Table 5 pearson correlation between HRV indices and lactate dehydrogenase enzyme immediately after maximal anaerobic test

HRV indices		lactate	lactate dehydrogenase
Time domain	mean heart rate	0.645 **	0.682 **
	mRR	0.477 *	0.503 *
	SDNN	0.331	0.369
Frequency domain	LnLF	0.182	0.216
	LnHF	0.316	0.345
	LF/HF	0.139	0.170

According to the data presented in Table 5, the high correlation between para-sympathetic activity (high frequency power, mean R-R interval and mean of standard deviation of R-R interval), and blood lactate level and lactate dehydrogenase degradation was observed immediately after the maximal anaerobic test (Wingate). Among the para-sympathetic activity indices, low frequency power did not have a significant correlation with blood lactate level, but the low to high frequency ratio had a significant positive correlation with lactate level.

Discussion

Exercise as a mechanical pressure can cause increased biochemical changes in the body. The results of this study confirmed the increase in lactic acid and lactate dehydrogenase enzyme in the subjects after all three types of aerobic, anaerobic, and specific judo activity. The results of this study are consistent with numerous research findings from Falun et al

reporting increases in indices. While Matsus et al. did not showed any significant increase in the amount of these enzymes after aresistant exercise session with 10 repetitions and one-minute rest, in most previous studies, it has been observed that the type of exercise, recovery time and exercise intensity affect the release of these enzymes.

Judo training improves both aerobic and anaerobic performance, and also changes the function of the cardiovascular system (13). In addition, Garriod et al. (1995) suggested that high-vo2max Judo players have faster keratin phosphate and anaerobic glycolysis systems than those with lower Vo2max. Meanwhile, with a higher aerobic power, the regeneration of the phosphagen system is faster, and the return to primary anaerobic glycolysis system and removal of lactic acid will be faster. Therefore, elite Judo players have the ability to rapidly deplete lactic acid, which begins during activity and continues at recovery period. Lactate as the main metabolite due to exercise stress can undergo major changes in maximal tests. This research hypothesis was confirmed based on the information obtained from the subjects. On the other hand, changes in HRV after maximal exercise are attributed to disturbances in para-sympathetic activity. Therefore, after the maximal exercise, both lactic acid and HRV are impaired, which may indicate a link between them.

Post exercise impairment in para-sympathetic activity in this study can be attributed to the nature of the judo specific test and the accumulation of stress metabolites due to anaerobic activity (17). In fact, the values of lactate that were evaluated in this study are consistent with what has been shown in recent studies under similar training conditions, so that in other studies, para-sympathetic re-activation has been significantly impaired (16, 17, 20). In the present study, maximal exercise was associated with high participation of anaerobic component with a low level of para-sympathetic re-activation. Previously, the minimal disorder in HRV indices after 60 and 120 minutes of exercise was below the maximum, which was performed under the first ventilation threshold (55-65% Vo2max; lactate after exercise = 1 ± 0.1 mmol / L) (20), after 25 minutes of exercise with a 50% intensity of Vo2max (16) and after 5 minutes of exercise with intensity less than 30% of Vo2max (17).

These findings suggest that anaerobic participation more than average aerobic power and training period can be an indicator of immediate post-exercise activity. Other contributing factors affecting post exercise autoimmune disorder (i.e., sympathetic activity) include activation of muscle baro-reflexes (18), oxygen debt repay (short and sedlock, 1997) and central temperature regulation (Franklin et al. 1993). Of course, these factors were not evaluated in this study, which is why we cannot discuss the extent of their impact on post-exercise autonomic activity.

Immediately after the judo test, the para-sympathetic-related indices (i.e. the mean R-R interval and high frequency power) were significantly reduced, while indicesrepresentative of sympathetic activity (i.e. low frequency power and LF / HF) increased. It should be noted that while HRV is a qualitative marker for para-sympatheticregulation of heart, it should be considered in the interpretation of sympathetic-vaginal balance indices because the LF component represents some unknown interactions between sympathetic and para-sympatheticinteractions (10). However, these findings have been shown in previous studies with a reduced level of HRV-related indices (and, on the other hand, an increase in sympathetic indices) after maximal and sub-maximal exercises (6, 8, 11). In fact, in the previous studies, HRV was delayed for 5 to 10 minutes after training for 30 to 46 minutes with 79% Vo2max (15) and for 10 minutes after a 30-second Wingate test (7) has impaired.

Artolio et al. (2005) investigated the blood lactate related to JudoFitness Test. After

conducting the judo test, blood samples were collected from tip of fingers and analyzed for blood lactate levels. Blood lactate level was recorded as lactate-3 at the third minute after the test, and the lactate level was measured 5 minutes after the test as lactate-5. The results of this study showed that the Score of Judo Fitness Test could be used as a score for Judo players as one of the criteria for choosing the intensity of individual training. This test is also used to determine the fitness profile for female judo players (21). Hence, in the present study, a specific test was used for judo, due to the high physical requirements of this test, a large change in the HRV level was observed after that. Also, a high correlation was found between the blood lactate level measured immediately after this test and the HRV indices.

On the other hand, the results of this study were not consistent with the research by Detanco et al. (2012), Franchini et al (2005) and Sterkowiczet al. (1999). Possible reasons for the inconsistency of the results of the present research with these studies can be the gender differences of the subjects (the subjects of this study were all male) and the skill level of the athletes, because the subjects in this study were all elite judo players with extensive national and international experiences, but in opposed research, judo players have been used at different levels. Although judo is known as a sport in which intense activity exists, and these activities are controlled by anaerobic metabolism, the results of this study indicate that the aerobic components associated with certain situations in Judo have a significant effect.

These findings can be useful for those professionals who evaluate the response to specific training exercises. For example, Iellamo et al. examined cardiac changes in the autonomic nervous system at world-class athletes during a 9-month training period and showed that the heart rate variability is correlated with performance and exercise load (12). Along with this approach, Hautala and his colleagues suggested that daily assessment of the autonomic nervous system activity can be used as an indicator for restoring physiological conditions prior to maximal exercise (9).

Conclusion

Recent studies have reported that the status of the autonomic nervous system is a major contributor to the athlete's response to exercise load. Hence, in assessing the functioning of the autonomic nervous system, important information about the acute physiological processes occurring before and after the maximal exercise should be recorded. The findings of the present study suggest that monitoring heart rate variability can be used as a non-invasive tool for assessing the autonomous / homeostatic effect of a particular type of maximal exercise.

The high correlation between heart rate variability and blood lactate levels and the lactate dehydrogenase enzyme immediately assessed after a judo test confirmed the idea that both of these factors share common ground in the autonomic nervous system. Among the variables of heart rate, high frequency power, mean RR and mean standard deviation of RR interval, most correlated with lactate and lactate dehydrogenase levels, which can be due to the effect of both heart rate variability and blood lactate level impairment of the para-sympathetic nervous system after maximal exercise.

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An Investigation into Female Students' Levels of Anxiety about Physical Education at Da Nang University

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Abstract

Physical education (PE) at university is an essential aspect of education and training with an aim at improving health and personal qualities for students. Using Sprilberger'sState-Trait *Anxiety Inventory* (STAI) to survey 576 female students, we found that there were 18.1 per cent of them felling anxious about PE courses. Their common expressions are headache, stomache, tiresome, unability to concentrate, boredom and unwillingness to join the PE course. The causes of such anxiety were rooted in their fear of failing the course requirements, re-taking the course, re-taking the exam, depression and tiresome after school hours, not taking their favorite PE course, and failing to graduate on time due to lack of the PE certificate. Consequences of students' anxiety about PE courses are incorrect perception about PE, boredom at PE hours, and disappointment about PE teachers. The paper recommends a number of solutions to reduce levels of anxiety for students such as course counselling, improving distribution of course information, cordinating integrated activities into PE classes to motivate and inspire students.

Keywords: physical education; anxiety; expressions of anxiety; female students; anxiety reducing solutions

1. Introduction

In a study by Haskell, W. L., Lee et al. (2007), in a 50-year statistics (1900-1959) American economistsfoundthat if a country invested in humaneducation, especiallyphysicaleducation, sports would help increaseits profits.

In Viet Nam, the Constitution 92 (article 41), and Decree No. 36/CT issued by the 7th Central CommitteeCommunist Party of Viet Nam regulate: (1) Physical education (PE) at schools is an important component of education and a fundamental to develop sport talents; and (2) PE is a kind of investment in human so that they can develop comprehensively in terms of physical and mental well-being.

Universities and colleges have had a tendency to expand and diverse modes of education,

including PE. In fact, PE curriculum has been periodically revised, facilities have been improved, courts and tools for students have been constructed, training courses for improving teachers' capacity have been provided. Some schools even invested in renovating and constructing modern sports buildings serving the needs of PE class, extracurricular sport activities, popular sport movements, and students sport tournaments, etc.

According to Pham The Hoang (2015), physical and sport education at universities and colleges has encountered certain challenges and has not met their educational goals and requirements. Some common problems are low quality of PE classes, and students' attitudes towards the classes.

This study is conducted based on a hypothesis that female students struggles with PE classes due to levels of anxiety taking the course which affects negatively their course grades. The results presented in this study is a summary from a scientific research project (at the University of Da Nang level) namely An investigation into levels of anxiety of females students about physical education in The University of Da Nang", code **B2016-ĐN01-01**, led by Nguyen Xuan Hien**.** The study is aimed at identifying female students' levels of anxiety about PE (including expression, levels, causes, and effects) to recommend solutions to reduce their levels of anxiety about PE.

Theoretically, anxiety is a normal reaction of human being toward challenges and threats from the nature and society that they have to struggle to overcome. Anxiety is an alarming sign, signaling an upcoming danger, urging people to employ all means to cope with the threats.

In late 19th century, various researchers shared special interest in human's mental health. Once classifying mental illnesses, anxiety and depression were considered psychological diseases. The International Classification of Diseases (ICD) 8 and 9 (in 1978) indicated that anxiety had a psychological cause. In 1992, ICD 10 described anxiety as a disease related to physical expressions of human. In 1994, American Psychiatric Association introduced the Diagnostic and StatisticalManual of Mental Disorders 4 (DSM-4) statingthatanxietyis a negative feeling affectingpersonalcapacity, and degradingphysiological and psychologicalactivities.

According to Dinh Dang Hoe (2005) : Anxietyis a natural (normal) reaction of humanbeingtowardsnatural and man-made challenges and threats to survive. Doctor Nguyen Minh Tuan (2006) said : Anxietyis a simple type of disorderwhich has an expression of a long-lasting concernwith or without a clearsubject.

There are different expressions of anxietybothphysiologically and psychologically. In terms of physiological expressions, people withanxiety have 2/3 symptomssuch as headache, stomache, hand and legshaking, faint, tiredness, insomnia, dietdisorder. Regardingpsychological expressions, they tend to bebehaviorally inactive/ indifferent/ opposing/ sighing; or emotionallydispointed/ depressing/ sad/ nervous; and inability to think, calculate or memorizing, etc. In brief, people withanxietynormally have physiological, psychological (behaviorally, emotionally, and cognitively) expressions thathappensatdifferentindividuallevels. Consequently, wecanassess expressions of anxietyusing observation and calculationmethods.

Femalestudents' anxiety about PE is a mental state occuring in a long time (2 weeks and above) makingthemfeeltired and unable to addressdaily life events. Theynormally have expressions such as headache, stomache, hand and legshaking, tiredness, nervouse and unable to thinkpositively.

2. Methods

- CharlerD.Spilberger's (1989) State-Trait *Anxiety Inventory* (STAI) has been employed,

including 40 items with 4 levels increasing from 1 to 4. The first 20 items evaluate the state of anxiety while the remaining 20 items evaluate the individual characteristics.

- Questionnaire isused to study the levels, expressions, causes, and effects of anxiety of students in specificcontexts and solutions to reducelevels of anxiety for femalestudents in PE classes.

-SPSS 22.0 isused to analyze data collected.

Table 1: Research participants

Institutions	No.	Percentage	Subjects	No.	Rate
University of Education	182	31.45%	Football	55	9.63
University of Technology	154	26.7%	Basketball	43	7.47
University of Foreign Language Studies	103	17.9%	Athletics	48	8.38
University of Economics	128	22.22%	Volleyball	122	21.19
Faculty of Medicine and Pharmaceuticals	9	1.56%	Rhythmic gymnastics	133	23.03
			Badminton	119	20.72
			Table tennis	26	4.43
			Chess	30	5.15
Total	576				576

The total number of students taking part in the survey is 576 in which there are 182 students from University of Education and only 9 students from the Faculty of Medicine and Pharmaceuticals. The number of students in Rhythmic gymnastics, volleyball, and table tennis classes accounted for 23.03%, 21.9%, and 4.43% respectively.

3. Results

3.1. The anxiety situation of female students in the UD

Clearly explain the nature of the results (10 pt). Tables and Graphs: Minimum of 10 pt type size, all captions should be upper and lower case, centered. Each Table and Figure must be on a separate page (or pages if required).

Illustrations and Photographs: Halftones, minimum of 10 pt type size, captions should be in upper and lower case, centered. Images must be computer-designed (postscript or MS Word format). Digitized photographs in 256 gray-scales are recommended. Please do not submit color images.

The results show that out of 576 female participants, 2.3% students were diagnosed with “very anxiety” level, 15.9% were anxiety (with averaging scale is above 40 scores), 64.2% had normal level of anxiety while only 19.9% had none in the 2 weeks before the survey time.

In total, there were 18.1% survey respondents had very anxiety level. Compared to previous research findings with 15-20% population having similar level, the anxiety levels of female students of The University of Da Nang (UD) was appropriate.

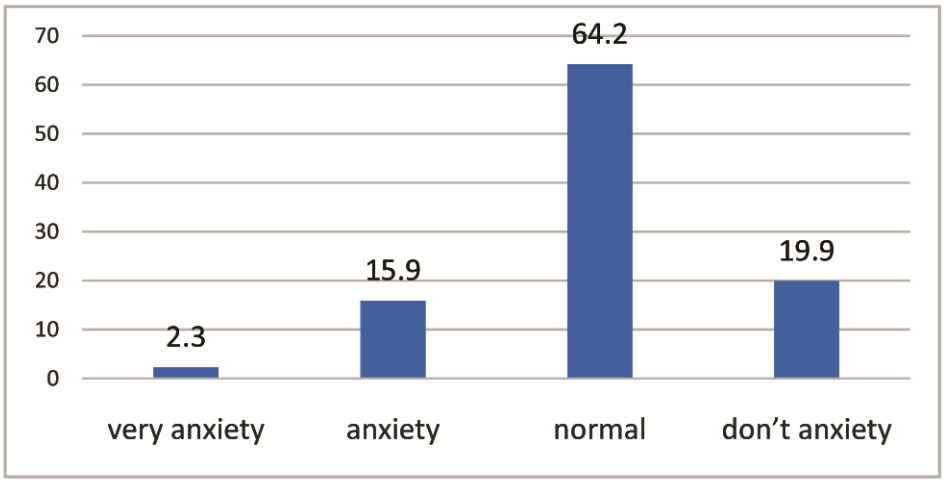

Figure 1: UD female students' levels of anxiety

Once classified into specific subject, athletics is the subject that worries the most number of female students (at 19.2%) followed by football (15.1%), chess (13%), basketball (11.8%), table tennis (11%). Students are anxious least with such subjects as Rhythmic gymnastics (9.2%), badminton (10.3%), and volleyball(10.4%).

Using in-depth interviews, we asked students about their feelings taking the most and least favorite PE classes. T.L.P, a female student, said that: "I am very frightened taking the athletics class as I feel dizzy and breathless even only after a few rounds. I prefer Rhythmic gymnastics class since it helps me become more flexible and stronger. I can practice it at home with my favorite music choices".

"I am afraid of football. Though I have to take the class due to my mistake in course registration, I always feel very tired and bored in class. I used to love chess, yet I quickly felt demotivated by complex calculation of moves", said N.L.R

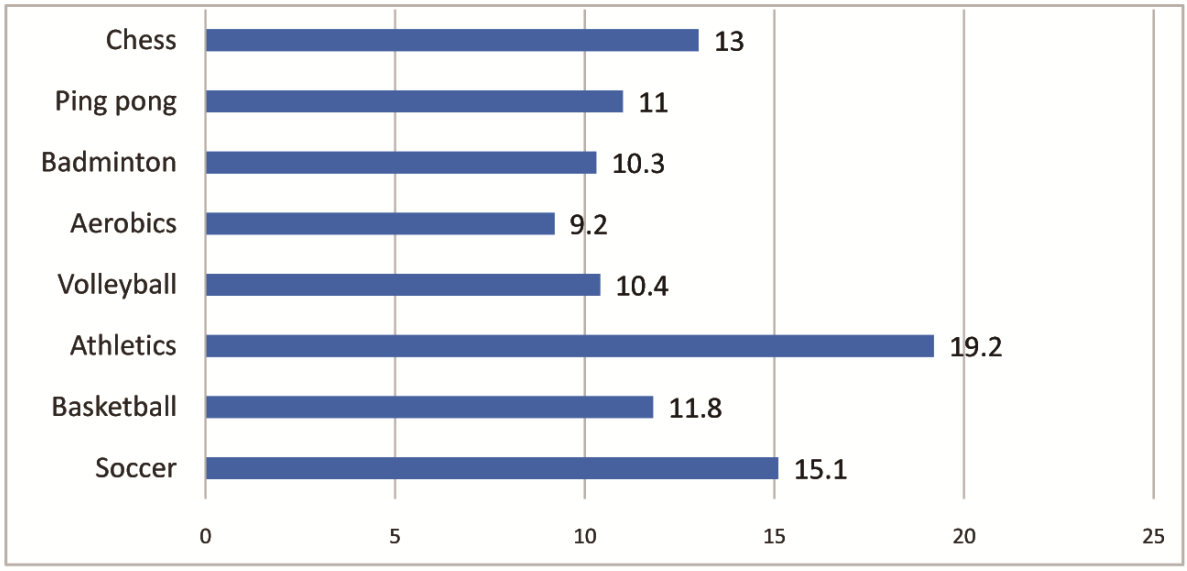

Figure 2: UD female students' levels of anxiety according to subjects

3.2. Expressions of anxiety of students while studying PE subjects

Expressions of anxiety of survey participants (in 2 weeks) were: unwillingness to attend class (average = 3.8), late arrival (average = 3.32), feeling tired and depressed (average = 3.28), suffering from lower study capacity (average = 3.24). T.Q.A, a student said, in an interview, that "I have to attend class against my will. I wish I would never have to attend PE classes. "I never go to classes late, except for PE class because I do not want to" (L.K.N.). "I can not concentrate on PE class" (L.Q.B.) "Long run is my worst nightmare. Some of my classmates fainted after finishing their turn and discouraged all of us terribly". (N.V.D).

Other expressions include: dizziness, headache, making mistakes in study and daily life, demotivation, etc. according to American Psychiatric Association (ICD 10), those that have these symptoms in 2 weeks in a row are considered people with anxiety.

Table 2: Participants' expressions in 2 weeks in a row

Expressions	Levels (%)				Average	P	Correlation (r)
	Never	Seldom	Occasionally	Frequently			
Tired, depressed	34.3	36.1	18.5	11.1	3.28	< 0.05	.509
Hard to concentrate	37.6	22.4	28.7	11.3	3.25		.462
Study grades going down	27.4	21.2	35.5	15.9	3.24		.396
Unwilling to attend class	1.6	10.8	48.6	38.9	3.8		.318
Attending class later than expected	2.2	5.9	49.2	42.7	3.32		.470
Making mistakes in study, daily life and work.	4.9	7	53.5	34.6	3.2		.399
Sweating (head, palm, foot)	3.2	3.2	50.3	43.2	3.08		.475
Dizzy, breathless	3.8	4.9	53.5	37.8	3.16		.502

Studying about causes of students' anxiety about PE classes, we found that the number one cause is "pressure to pass the course, fear of re-taking exams and course, and late graduation" with average at 3.52/4. Followed by "physical tiredness after PE class" (average at 3.19/4) and "unability to take favorite PE course".

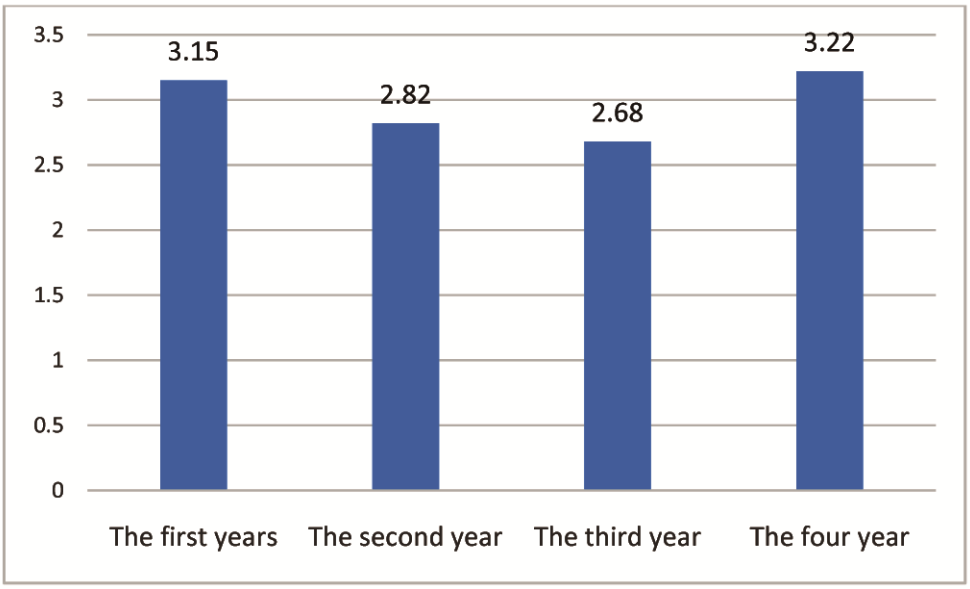

Figure 3:Students' levels of anxity over school years

In terms of participation of students, the percentage of students in the University of Education who are concerned about physical education was 23.8%; Faculty of Medicine made up 17.5%; University of Economics accounted for 13.5%.

Comparing the anxiety level of female students in institutions of UD, the results showed that students of University of Education were most worried, with avarage at 3.11; Students of Faculty of Medicine werethe next, with avarage at 2.80, followed by students at University of Foreign Language Studies with avarage at 2.58.

	Institutions	**Students' levels of anxit (compared to entire institution)**	**Avarage**	**Standard deviation**
1	University of Education	23.8%	3.11	0.34
2	University of Technology	11.3%	2.3	0.38
3	University of Foreign Language Studies	13.2%	2.58	0.42
4	University of Economics	13.5%	2.52	0.37
5	Faculty of Medicine	17.5%	2.80	0.46

Table 3: Comparion of the proportion of students concerned with PE according to the criteria of insitution, UD

3.2. Causes of students' anxiety in PE

A survey of the causes of anxiety for students from PE, the first reason to be taken into account is the "pressure to pass the test, the fear of re-taking, retest, fear of graduation" with

an avarage at 3.52 / 4.

The second cause is "fatigue after studying PE", with an avarage at 3.19/4. The third reason is "Not allowed to learn the favourite kind of sports"

Table 4. Perception of causes of anxiety about PE class

No.	Perceptions of causes of anxiety	Level of agreement					
		Disagree	Partly	Agree	Totally agree	Mean	SD
1.	Pressure to pass the course, fear of re-taking exams and course, and late graduation	2.7	3.2	61.6	32.4	3.52	2.31
2.	Fear of injury while practice	4.3	35.1	45.4	15.1	2.56	1.61
3.	Tiredness after PE class	3.8	8.1	53.5	34.6	3.19	1.38
4.	Unability to take favorite PE course	4.3	11.9	51.4	32.4	3.12	1.48
5.	Inappropriate timetable of PE class (either too early or too late)	2.2	6.5	52.4	38.9	3.04	1.72
6.	Poor health	2.2	13.5	56.2	28.1	2.84	1.75
7.	Teachers (Behavior/ methodology, unability to select favorite teachers)	2.7	10.8	41.1	45.4	2.52	1.13

According to Pham The Hoang (2012) "The causes for students' anxiety about PE class are inadequate facilities, curriculum, and mostly students' inability to exercise".

Mr. Nguyen Tung Lam, Principal of DinhTien Hoang high school, Ha Noi, believed that "We haven't seen the importance of PE. Students lack opportunities to select their favorite subjects and instead, get graded for courses they dislike, especially subjects that require high skills and achievements. Hence, students always feel stressful and anxious".

Mr. Nguyen Van Khanh, PE teacher, assured that Vietnamese people seldom exercise or play sports, that is why pupils or students are discouraged to attend PE class. Even their parents or non-PE teachers take PE for granted so they make students focus on Math, Physics, Literature, English, etc. and ignore PE. The rate of students having to re-take PE exams accounted for 10%. Many students fail to graduate on time due to their incompletion of PE courses.

In addition, T.L.Q said: "Even though PE is an important course, many students take it for granted because grades from PE courses do not affect their final GPA. Also, students are demotivated and discouraged at attending inappropriate PE classes against their will. Popular PE subjects now are running and volleyball of which students feel tired and opposed".

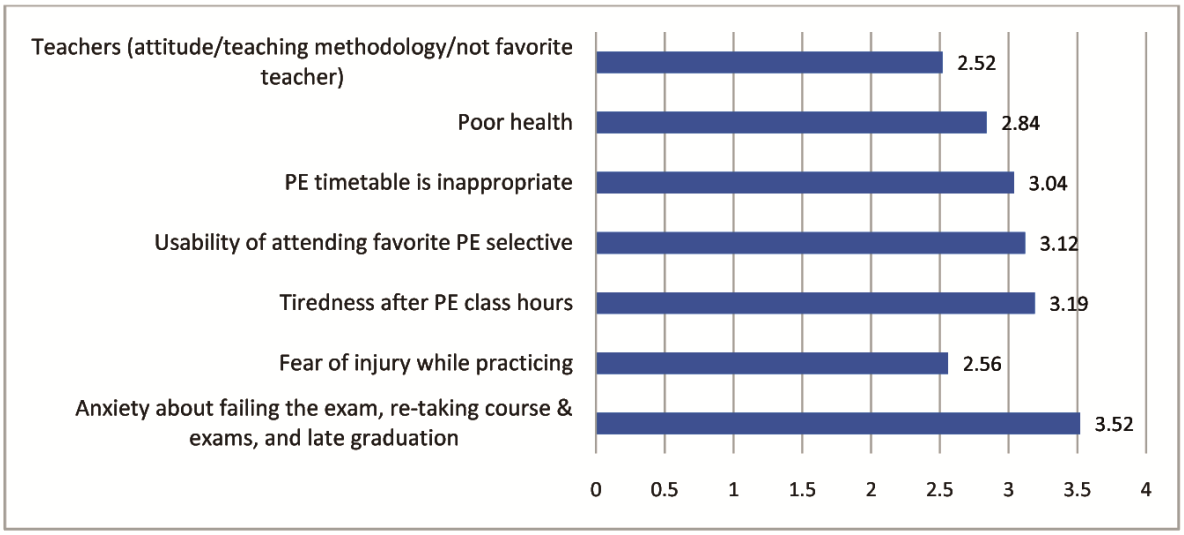

Figure 4: Causes of students' anxiety about PE classes

3.3. Solutions to reducing female students' levels of anxity about PE class

From the above findings, some solutions to reduce levels of anxiety for female students

have been recommended. The solution that was students' favorite was "increasing students' awareness about roles of PE subjects which are improving and protecting one's health", (accounted for 85.2%). There were 83.1% of students agreed on the solution to create a relaxing and funny PE class hours, e.g. course counselling or relaxing activities, etc.".

About 67.3% students suggests "an opinion mailbox for students to feedback so that their teachers can modify and revise teaching methodology" and "it is necessary to design relaxing activities related to the lesson content and reduce levels of tiredness and stress". Also, "teachers have to set specific requirements for each subject which are appropriate with students' health." In addition, teachers have to encourage, cheer up, and motivate students to practice on a regular basis.

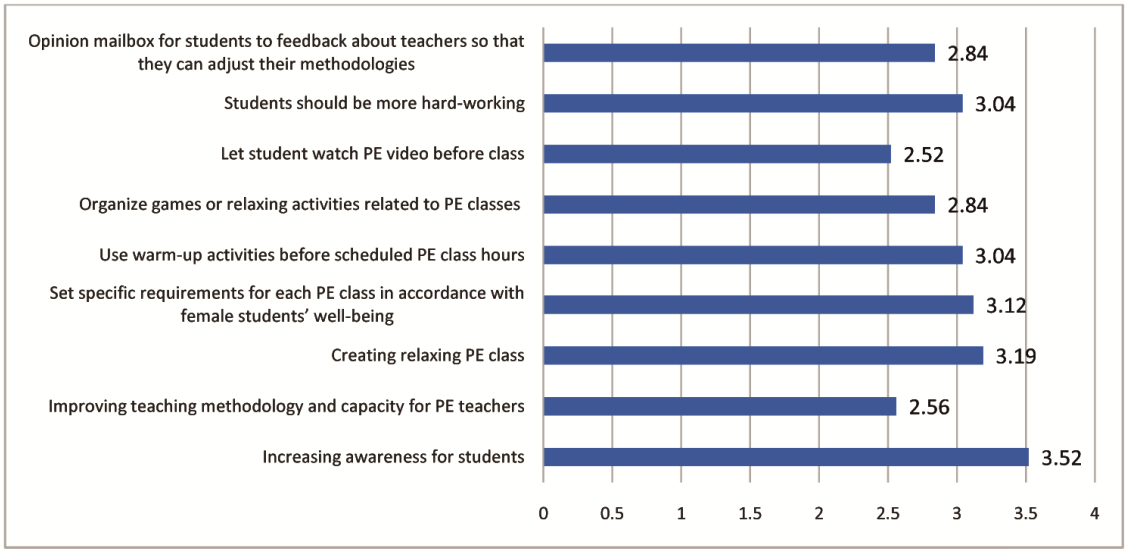

Figure 5: Solutions for reducing female students' levels of anxiety

4. Conclusions and discussion

Clearly indicate advantages, limitations and possible applications.

Employing Spilberger's STAI in the calculation of results, we found that there were 18.1% female students with anxiety about PE courses in which the highest levels of anxiety was on athletics. The common expressions of anxiety were headache, stomache, losing focus, tiredness, sweating, and study scores going down. The causes of anxiety were identified: fear of failing the PE course, re-taking PE class and exams, late graduation, tiredness and anxiety after PE hours, and attending dislike PE courses. Effects of anxiety were wrong perceptions of PE course, demotivation, and disappointment about PE teachers.

Accordingly, some solutions have been recommended to reduce female students' levels of anxiety, namely counseling activities to increase students' awareness about roles of PE. These activities can be organized in curriculum hours, sport news bulletin, clubs, and conferences.

Teachers should modify and revised currciculum and teaching methodology in accordance with students' interest. In-class activities can be organized to motivate and inspire students during PE hours. Teachers should also motivate and encourage students in PE class to help them understand the role of PE. Sport clubs, e.g. badminton, volleyball, football or basketball, should be established to increase peer-to-peer support after PE class hours.

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Sports Nutrition: What The Future May Bring

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Introduction

The field of nutrition is a dynamic one. Athletes often ask their trainers, physiologists, coaches, doctors, and dietitians for guidance related to what to eat and which supplements to use. Registered Dietitians have choices to work within clinical dietetics, nutrition support, research, outpatient or private counseling, consulting to the food industry, consulting to the supplement industry, direct food or supplement industry employment, in product development and many other economical beneficial areas. Exercise physiologists can work in cardiac rehabilitation settings, private health clubs, academic institutions, research organizations, for various private companies (corporate wellness, exercise equipment design, etc.) and other related positions. Often the weekend athlete and the professional athlete will seek nutrition advice from both the dietitian and exercise physiologist. This advice is Sports Nutrition.

Sports Nutritionists may work with individuals, teams, and professional organizations or due to economic influences and opportunity have to split their places of employment (i.e., hospital and private consulting). In our field, the understanding of exercise physiology, psychology, integrated metabolism and biochemistry along with ethics are intrinsic ingredients to success. Within sports, of any sort, there is always a prevailing notion that the athlete strives to get better or be "bigger, faster and stronger". However, whether the athlete is one that is involved in competitive sports, competes with him or herself, or is a "weekend warrior", our charge is to stay ahead of their curve by staying abreast of the latest relevant findings and then applying these findings. If you take into consideration that our friends, family, patients, clients, magazine editors and others are always asking questions about nutrition and couple these questions with those received by our athletes, and it becomes obvious that the motivation to stay current with knowledge both real and theoretical is warranted.

Sports Nutrition is not a licensed profession (yet). Many organizations (i.e., The International Fitness Professional Association, International Sports Sciences Association, etc.) supply certification examinations for sports nutrition. However, none of these organizations carry the clout of the American Dietetic Association, the American College of Sports Medicine or the National Strength and Conditioning Association. Additionally, none of these organizations are able to obtain recognition for their certifications by state governments or the Department of Education. One member of our organization was stated (paraphrasing) that to be a sports nutritionist, all one had to do is to have taken one or two classes in sports nutrition (which most universities do not offer) and that additional coursework in exercise physiology was not needed. Thus, as long as you took your basic American Dietetic Association mandated coursework and a course in sports nutrition, you were capable of working with any athlete (albeit, amateur or professional). The exercise physiology undergraduate training in nutrition is limited, though through elective courses this can be strengthened (also if the student has a double major or a minor in nutrition). Let's be clear, times have changed and we are involved in enabling change. This change includes the advancement of our profession, sports nutrition.

Sports nutrition is a complex field, and a good sports nutritionist has core

competencies in nutrient metabolism (biochemistry and metabolism), exercise physiology, and psychology. Athletes today are demanding that we understand their sport. The traditional learning model has taught basics of anaerobic and aerobic metabolism, but not much emphasis on sport specific energy expenditure, nor the influence of post-exercise oxygen consumption (EPOC). Thus, advanced learning beyond that of a baccalaureate degree should be pursued. The need for advanced education whether it is in the form of continuing education, a legitimate advanced degree certification (perhaps analogous to a Certified Nutrition Support Dietitian or the Exercise Physiologist-Certified) is evident.

Sports nutrition is often considered within the field to have divergent thought leaders. We know that since the science is evolving and that not all keep up-to-date with the latest publications (journals or texts) that not all of us are on the same advising page. Perhaps, controversy is good. If we all were of the same opinion, than what would be the motivation for progress and the pursuit of new knowledge? Take for example, the heated arguments that occur just over the protein needs of athletes as compared to sedentary folk as well as anaerobic versus aerobic athletes. This in and of itself drives the sales of many books and magazines. However, one needs to be cognizant that athletes often view food as one means of obtaining their goals, while ergogenic aids at times are believed to be the missing link which will propel the athlete's performance over the competition. In this situation, knowledge about the safety and efficacy of ergogenic aids is paramount in truly helping your clients.

If we examine basic sports nutrition guidelines over the past fifty years, it becomes apparent the biggest breakthrough was the discovery of how to glycogen load, refinement of the means of glycogen loading (from the days of depletion followed by super-compensation to tapering exercise duration while concomitantly increasing the diet to almost exclusively carbohydrate), followed by nitrogen balance studies demonstrating a slight increase in needs for athletes as compared to the sedentary and the evolution of creatine monohydrate as an ergogenic aid. However, the last ten years may be the most exciting in the advancement of sports nutrition.

The following areas of nutrition are where the most growth is occurring: evaluating the effects of exercise on protein utilization, thus the overall protein needs, meal timing to maximize the anabolic response, the true "essentiality" of essential amino acids, the potential for ribose to benefit those engaged in high-energy repetitive sports (i.e., football lineman), and creatine and its uses within athletics and medicine. It is up to us and other academic thought leaders to help grow the biological and metabolic understanding of the interaction of foods, nutrients, nutrient supplementation, exercise and the recovery from said exercise as well as the actual performance to the next level.

Protein

A brief review of protein needs of athletes reveals that the current recommended intakes of protein for strength and endurance athletes are 1.6 to 1.7 g/kg and 1.2 to 1.4 g/kg per day, respectively. Presently, most athletes consume an adequate amount of protein in their diet. However, depending upon overall caloric needs and training intensities, the reality of obtaining all nutrition from foods alone will dictate the needs for protein supplementation. The timing and nutritional content of the post-exercise meal, although often overlooked, are known to have synergistic effects on protein accretion after exercise. New evidence suggests that individuals engaging in strenuous activity consume a meal rich in amino acids and carbohydrate soon after the exercise bout or training session. In addition to this, pre-workout feedings have been demonstrated to show a greater net effect on skeletal muscle protein

synthesis over and above that of post-exercise feedings.

Nutrient Timing

Meal timing and type is important for the athlete and their nutritionist to be aware of. A recent study found that performance of moderate- to high-intensity exercise lasting 35–40 min is improved by consuming a moderately-high carbohydrate, low fat, low protein meal 3-hr before exercise compared to a similar meal consumed 6 hr prior to exercise.Thus, athletes should not skip meals before competition or training sessions. However, one should note that while research used exercise duration of about 40 minutes, some of our athletes exercise or compete for hours at a time. In this case, meal timing, snacking, and appropriate liquid supplementation during exercise becomes of paramount importance.

Meal timing has also been shown to have an effect on muscle protein synthesis (MPS). Affecting MPS may allow the downstream creation of new muscle mass (lean body mass). Recent data indicate that consuming a small meal of mixed macronutrient composition (or perhaps even a very small quantity of a few indispensable/essential amino acids) immediately before or following strength exercise bouts can alter significantly net protein balance, resulting in greater gains in both muscle mass and strength than observed with training alone. With aerobic exercise, some evidence suggests immediate post-exercise (but perhaps not pre-exercise) supplementation is also beneficial. Second, protein type may also be important owing to variable speeds of absorption and availability, differences in amino acid and peptide profiles, unique hormonal response, or positive effects on antioxidant defense.In addition to athletes, many others who desire to regain, maintain, or enhance muscle mass or function, including those with muscle-wasting diseases, astronauts, and all of us as we age, need to ensure that nutrient availability is sufficient during the apparently critical anabolic window of time associated with exercise training sessions. The additional data compiled from the cumulative studies examining the effects of low dose essential amino acids with or without carbohydrate (sucrose) indicate that the prudent use of supplemental protein may be the easiest way to augment the MPS response post-exercise. Since post-exercise carbohydrate intake alone does not affect MPS, but essential amino acids do, there is much more to learn about post-exercise nutrition. Future studies are needed to fine-tune these recommendations.

Is a Sugar a Sugar?

Recent popular press literature has been noted for promoting the pentose, ribose as a dietary supplement. In fact, many patents and patent-pending filings exist for the uses of ribose in athletics and medicine. Ribose is a carbohydrate, or sugar, used by all living cells and is an essential component in our body's energy production. The company who holds the ribose patents claims the following on their website: "Ribose is essential in helping the body restore its cellular energy level. The cells use ribose to convert nutrients in ATP, so it makes sense that more ribose means more ATP production. Research shows that ribose increases ATP production in both fast-twitch and slow-twitch muscles by 3.4 to 4.3 times. The catch is, the body only has so much ribose at any one time, and there's no food source that increases the body's ribose level. The good news is that supplemental ribose does just that. Weight lifters; sprinters; football, basketball and soccer players; triathletes; cyclists and other athletes requiring sudden high-energy bursts may benefit from supplemental ribose. Energy recovery in muscle cells during and after strenuous high-intensity exercise is enhanced with ribose supplementation. Ribose increases both *de novo* (new) synthesis and salvage of nucleotides in heart and skeletal muscle. Research conducted by Bioenergy and others suggests that even low doses of ribose will have an effect on energy recovery following high-intensity exercise.

Maintenance doses as low as two grams per day will increase recovery of lost nucleotides by increasing de novo synthesis and salvage of nucleotides that are in danger of being lost due to strenuous activity. Further, there appears to be a functional benefit of ribose loading prior to a high-intensity event. Bioenergy continues to investigate this effect."

Published research in peer-reviewed journals does not support the hyperbole behind the purported use of ribose. It should be noted that oral D-ribose supplementation has been reported to increase adenine nucleotide synthesis (TAN) and exercise capacity in certain clinical populations. Increasing TAN, may cause the downstream increase in ATP production during times of stress. Analysis of uses in anaerobic exercise and during sprint cycling from recent published studies does not support the use of ribose for athletes. More research is needed to determine if there is an applicability of ribose within athletic protocols.

Help the ISSN Develop the Future of Sports Nutrition

The future of sports nutrition will dictate that we collectively will have to have a higher standard of care and education for counseling athletes, whether individually or in groups. The integration of many different disciplines (physiology, metabolism, psychology, etc.) will become a minimum mandatory set of disciplines for any aspiring sports nutritionist. A standardized certification is also expected to be available to Registered Dietitians and Ph.D.'s (in related areas) within the next two-years, this certification will help the public to decipher the true sports nutritionist from the one who has read many popular press articles and has not been exposed to the same educational rigor as others. The International Society of Sports Nutrition (ISSN) is currently working on this certification. We are in an era of unprecedented growth and the new knowledge is evolving. This exciting time that we live in can be driven further by all of us sharing our passion to help others while being open minded to the discoveries that await us. Please share your stories, research and life experiences with us.

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The Impact of Stress Management through Meditation Practices of Interuniversity Participants

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Abstract

The purpose of the study was to find out the impact of stress management through meditation practices of interuniversity participants. The study was conducted on thirty male college students in Mangalore University who have participated in various competitions in the interuniversity level in the year 2006-2007 were selected as subjects. Subjects were randomly assigned equally into two groups, Group –I underwent Meditation Practices Group(n = 15) and Group II (n=15) acted as control Group. Stress Management was measured before and after the experimentation using the stressful life event questionnaire. The data was collected from the meditation practices group and control groups were statically examined with Analysis of covariance (ANCOVA) shows significant at .05 level.

Key words: Stress Management

Introduction

In the modern world we have become quite successful in our external achievements--we have created powerful technologies and a variety of products, we are obsessed with accumulating power, wealth, property and objects--and yet we have not been able to create either individual or social peace, wisdom, or happiness. We have only to look around and see the destructiveness of ones weapons, the emptiness of ones pleasures and entertainments, the misuse of ones material and personal resources, the disparities between rich and poor healthily and unhealthily, and above all, the loneliness and violence of ones modern world. We see that amid all our success in the external world, we have accomplished little of lasting value. These problems will not be solved through new technological developments. Instead, the resolution to these human problems will come only when we discover within ourselves that for which all of mankind is searching--inner peace, tranquility, and wisdom.

Stress is the phenomenon of being stretched by he demands, made on an individual, beyond the limits of his/ her potential to cope. Almost everyone suffers from stress. It has become a normal feature and a fall- out of his life – style factors of the modern age. Stress is a signal, a sign, a message from any energy system out of balance and out of control. Today life problems are the outcome of daily hassles and conflicts, which directly affect our behavior pattern and psycho-social well being. Modern age has been called the age of anxiety and stress. Today everywhere one can see anxious, unhappy, bewildered people suffering from a host of stress disease and most of them unable to achieve a satisfactory adjustment to the problems of life, missing their best potential. The only word ruling all over the world is stress. The stress is constantly creating problems on physical, mental and emotional levels in the form of various diseases***(Hardy,1992)***.

Stress is caused by many factors. Some of them are in the environment like events in our life, noise, crowd, culture family etc. It also comes from within such as our beliefs, attitudes and expectations about the world and us from our habits and behaviors, and from our

personality. The result of this stress appraisal is emotion. The most commonstress related emotions are fear,anger and sadness.

In many situations stress results from the necessity of choosing between two needs or goals. Even positive events like marriage, winning an election can be seen as stressful. Any event that disrupts our ability to maintain psychological and emotional stability will be stressful to a certain degree.

There is growing evidence that stress playsan important role in illness and health. Stress leads to diverse bodily reactions. The heart, lungs and digestive, endocrine and nervous systems, among others, work overtime when people experience stress.

Yoga is a wonderful tool for calming the mind and promoting psychosomatic health. It is an effective vaccine against stress mental stress and psychosomatic disorders. Our body and mind are intricately interrelated and constantly influence one another. Asanas and Dhyana influence our mind and thereby body. Yoga can play an important role in decreasing tensions and produce positive results.

Yogais an ancient art based on a harmonizing system of development for the body, mind and spirit. The word comes from the Sanskrit root "yuj" which means, "to join" or "to yoke". It is a practical aid. Yoga is one of the six systems of Indian Philosophy. Yogic practices in their less extreme forms are believed to be conductive to health, clarity of intellect, and long life.

Stress is a feeling that's created when we react to particular events. It's the body's way of rising to a challenge and preparing to meet a tough situation with focus, strength, stamina, and heightened alertness. A little stress or the right kind of positive stress can help keep you on your toes, ready to rise to a challenge.

The events that provoke stress are called stressors, and they cover a whole range of situations - everything from outright danger to stepping up to take the foul shot that could win the game. Stress can also be a response to change or anticipation of something that's about to happen - good or bad. People can feel stress over positive challenges, like making the varsity team, as well as negative ones.

Distress is a bad type of stress that arises when you must adapt to too many negative demands. Suppose you had a fight with a close friend last night, you forgot your homework this morning, and you're playing in a tennis match this afternoon. You try to get psyched for the game but can't. You've hit stress overload! Continuous struggling with too much stress can exhaust your energy and drive ***(Smith AM, 1996).***

Stress is an integral part of our lives. "It is a natural byproduct of all our activities". Life is a dynamic process and thus forever changing and stressful. Our body responds to acute stress by liberation of chemicals. This is known as the fight-or-flight response of the body, which is mediated by adrenaline and other stress hormones, and is comprised of such physiologic changes as increased heart rate and blood pressure, faster breathing, muscle tension, dilated pupils, dry mouth and increased blood sugar. In other words, stress is the state of increased arousal necessary for an organism to defend itself at a time of danger. Alterations of hormones in the body include not only adrenaline, but also substances like testosterone and human growth hormone. Up to a certain point stress is beneficial. We perform with greater energy and increased awareness with the influx of excitatory hormones that release immediate energy***(Hardy, 1992)***.

Methodology

The study was conducted on thirty male college students in Mangalore University who have participated in various competitions in the interuniversity level in the year 2006-2007 were selected as subjects. Subjects were randomly assigned equally into two groups, Group –I underwent Meditation Practices Group (n = 15) and Group II (n=15) acted as control Group. The training period was limited to 12 weeks. Stress level was measured before and after the experimentation using the stressful life event questionnaire.

Results and Discussion

The data collected from the Meditation Practices Group and Control Group prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences. The level of significance was fixed at .05 level of confidence to test the 'f' ratio obtained by analysis of covariance.

Table – I

THE SUMMARY OF PRE AND POST TEST MEAN ON STRESSFUL LIFE EVENTOF MEDITATION PRACTICES GROUPANDCONTROL GROUP

Criterion variables	Pre Test and Post Test Mean	Meditation Practices Group	Control Group
Stressful Life Event	Pre test mean	207.33	199.33
	Post test mean	134	204

Table – I shows that pre and post test mean of Stressful Life Event Meditation Practices Group and Control Group. It was concluded that Meditation Practices Group had significant improvement in the performance of Stressful Life Event. However Control Group had no significant improvement in the performance of selected variables.

The analysis of covariance on of Stressful Life Event of Meditation Practices Group and Control Group have been analyzed and presented in Table – II.

Table – II

ANALYSIS OF COVARIANCE ON CRITERION VARIABLES OF MEDITATION PRACTICES GROUP AND CONTROLGROUP

Criterion Variable	Adjusted Post Test means		Source of variance	Sum of square	df	Mean squares	'f' – ratio
	Yogic Practices Group	Control Group					
Stressful Life Event	130.12	190.88	B	40010.02	1	40010.02	186.68*
			W	5786.63	27	214.32	

**** Significant at .05 level of confident.***

Table value required for significance at .05 level with df 1 and 27 is 4.21

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From table – II, the obtained value of 'f' - ratio for Stressful Life Event, for adjusted post test means were more than the table value of 4.21 for df 1 and 27 required for significant at 0.05 level of confidence. The results of the study indicated that significant differences exist among the adjusted post test means of Meditation Practices Group andControl Group on the development of Stressful Life Event.

Conclusion

From the analysis of the data, the following conclusions were drawn.

The Meditation Practices Group improved significantly on stressful life event when compared to the Control Group.

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Current Trends in Sports Marketing in India

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Abstract:

Product Placement is a new innovative and modern form of advertising and promotional mechanism in which the marketers brand their goods by placing it in sports & entertainment programs. Brand Placement when collaborated with a well respected athlete or is strategically placed on the field at a game has helped many brands draw much needed exposure to their product offerings. The modes of product placement have transformed over the years, from the traditional practice of inserting ten or thirty seconds commercials to direct placement of the brand during live game or match intervals. The infiltration of corporate sponsorship and advertising into organized sport like cricket has now opened up new gates for sports administration in India. In 2008, the Board of Control for Cricket in India (BCCI) launched the Indian Premier League (IPL) – a high octane, sporting extravaganza filled with glitter, glamour and entertainment quotient. The IPL has turned out to be a very successful advertising and branding platform for various brands. IPL, a multi-million-dollar business in India has created a fusion of commercial interest and political power. The league has become a mass sports property for major multinational brands. The success of IPL has given rise to league in other sports like hokey, kabaddi, football and badminton. They are also huge success. The main objective of this study is to find out the effectiveness of brand placement as a promotional tool. Understanding the nature and extent of incorporation of brand placement in sports tournaments like the IPL, IHL,pro-kabaddi and studying the viability from advertiser's point of view as a marketing tool.

Keywords: Product Placement, Indian Premier League, Sports Marketing, Sponsorship, Advertising, Cricket, Branding

Introduction

Walk into a stadium during an IPL match or watch it on television or via online streaming feed, all you will see is ads everywhere. Every conceivable property from boundary line ropes, billboards, stumps to even the sight screen have been covered with brands and monetized. There is no sport Indians are more passionate about than cricket. The gentlemen's game has not only won the hearts of millions of cricket fans, but also managed to attract global brands to its league. In 2008, the Board of Control for Cricket in India (BCCI) launched the Indian Premier League (IPL) – a high octane, sporting extravaganza filled with glitter, glamour and entertainment quotient. The IPL has turned out to be a very successful advertising and branding platform for various brands. IPL, a multi-million-dollar business in India has created a fusion of commercial interest and political power. Despite the Indian sports industry being disorganized, the size of Indian sports market isn't negligible and can't be ignored. India is now a favored destination for various sports events such as world's leading T-20 league in form of the Indian Premier League(IPL), Hockey India League(HIL), Pro-Kabbadi League, Badminton Premier League and many more diversified sports premiership. Sport offers corporations and other businesses a means of breaking through cluttered marketplaces, delivering advertising messages effectively, and segmenting by

specific demographics. Indian Premier League has contributed majorly towards the growth of sports culture in India. The media has played a significant role in creating it as a business model of success. Sports has captured widespread mass and media attention; this has reflected the dominant mode of economic transaction in the country. Television has played a crucial role in enabling a global fan-base approach to the world of sports. The marketers have grabbed the opportunity of growing visibility by using the techniques of marketing appeals. The visual media, television has transformed sport beyond recognition. Top sport personalities have now become major global celebrities with high earning power.The Indian Premier League has turned out to be the best property for advertisers, considering its short three-month schedule, consumer involvement and high television ratings. Over the past decade, IPL has managed to attract clients such as PepsiCo, Vivo, Oppo, Vodafone, DLF, Karbonn, Godrej, Panasonic, Havells, Cadbury-Kraft, Samsung mobiles, Cargill Foods, Kent RO and more leading multinational companies. The estimated Rs 20000 crore brand value of IPL has created a platform for these brands to reach millions of audience without having to fight too much. Be it the little known mobile phone manufacturers such as Vivo or Micromax to global telecommunications giant, Vodafone all these brands have been successful in creating brand awareness through successful campaigns during the IPL seasons. The tournament scores on two major counts – Firstly, the three-hour format makes it attractive not just to the male and young audience, but it also attracts high viewership numbers of women and other elderly family members. Secondly, the prime time slotting of games between 8pm-11pm during weekdays and double headers on weekends make it a cost effective form of entertainment means for urbanized families across India. Young fans are emotionally invested into the tournament that they form an attachment with the IPL. The deeper the association with the sport, the stronger the emotion a fan feels for the brand. The infiltration of corporate sponsorship and advertising into organized sport like Cricket has now opened up new gates for sports administration in India. The boom of commercial sponsorships has not only provided economic support to many professional and semi-professional cricketers, but it has also provided the necessary financial infrastructure for a number of lesser known cricket associations across India. Indian Premier League has reshaped sports marketing concepts, in order to meet the needs of television and the promotional industry. Major events have been transformed into the central theme of intense money making commercial activity, in which the commodified spectacle generates huge profits for the advertisers. The global sports industry is now displaying multifaceted characteristics, by transforming itself into a branch of the advertising and promotion appeals. IPL allows for extensive ground sponsorship, for brands that helps in creating brand recognition and recall. "Over the last few editions of the IPL tournament, the likes of Vodafone and Pepsi have gained single-handedly brand recall scores, which can never be achieved through orthodox advertising on general entertainment channels. Also there is a lack of options that offer a combination of high TVR and product placement opportunities. Product placement, is a psychological influence at its finest, continues to be a wildly successful form of marketing that benefits multiple parties at once. As time goes on, product placement stands to become increasingly successful as it expands into different media. Product placement is a form of advertising in which name brand goods are placed in sports & entertainment programs. Brand Placement when collaborated with a well respected athlete or is strategically placed on the field, at a game has helped many brands draw much needed exposure to their product offerings. Collaborations with sports figures have long been a method of effectively influencing viewers as they watch their favorite sport.

Sports collaborations between an athlete or a sports team with a brand or company, like other channels, have adapted and incorporated the aspects of the ever changing marketing landscape to remain effective. Technological development and growth has helped in adopting a very different approach as compared to the traditional advertising. In the current scenario, product placement helps the brand to reach out to the viewers on a large scale through various forms of media - from magazine features to TV sitcoms. Brand placement is bringing revolutionary changes in commercial economics. This trend, has encouraged consumerism through consumption in a growing market economy. Product placement is a promotional tactic used by the company where the brand or the product is highlighted in different forms of media. They can be in the form of verbal mentions, actual use of the product by a character, visual display of a logo. The core motive of such product communication is to create awareness and higher recall about the brand to the audience.

Review of Literature

The book 'Foundations of Advertising – Theory and Practice' (Chunawalla & Sethia, 2001) helps us to understand the reasons behind advertisement and the influence it has on the viewers. It focuses on the scope of marketing, psychological, communicational, creative and production aspects of advertising and media management. It also highlights the shift that has taken place over the last few decades in the field of advertising, marketing and communication strategies.

The paper 'Research on Advertising Effectiveness' (Charles, 1956) talks about how various groups of consumers see or perceive a product, brand, make or model. It states that there is a psychological effect of how consumers are motivated and behave in terms of their perceptions of the product and the manufacturer. New understanding of perception has enormous implications for advertising, promotion and sales effort. The perception aspects of this research provide an advertiser with the knowledge of the features of the product that are seen as important, the good features they do not see in the product, the features they see as poor and unsatisfactory. The paper 'Product Placement Effectiveness' (Liu & Li Liao, 2012) the authainment component of the programme maintaining the audience attention.

Objectives of the Study

The Present study is based on the following objectivies.

1 To study the current strategies in sports marketing.

2 To study the role of marketing in sports development.

Analysis

It is not news that India is a cricket-obsessed nation and that cricket is not a sport but a religion for us Indians. But recently, sports other than cricket have been creating quite a few 'dangals' of their own.

According to KPMG's 'The business of sports' report September 2016, during 2013-15, eight major league-based sports tournaments were launched. These include ISL (Indian Super League), Pro Kabaddi League (PKL), Premiere Badminton League (PBL) and Hockey India League (HIL).

While the Indian Premiere League (IPL) is still the big brother of all leagues, ISL and PKL have also tasted success and cashing in on this rising popularity of other sports are brands and marketers.

According to Darshan M, Director, Vuvuzela Retail Private Limited and Investor and Board of Advisors, Sportytrip Experiences Private Limited, the rising interest of brand and marketers to associate with sports other than cricket can be narrowed down to three reasons.

"Brands have finally begun looking beyond cricket. There are three main reasons for this phenomenon. Firstly it is due to the exploits of young stars like Saina Nehwal, PV Sindhu, Dipa Karmakar, Sakshi Malik etc., at an international scale. Secondly, cricket has become very expensive and stars like Virat Kohli are not within the marketing budgets of most brands. And finally the third reason is the increased media exposure to smaller sports like kabbadi, etc., due to the increased number of sports channels. In the last decade the number of sports channels has nearly doubled."

Sanjay Tripathy, Senior Executive Vice-President and Head Marketing, Analytics, Digital and E-Commerce, HDFC Life, however, feels it is a case of 'bogies following the engine'

"Yes. It is true that today brands are willing to associate with sports other than cricket. However, it is, in my opinion, essentially a case of bogies following the engine. I mean, today the Indian consumers actively associate with many other sports and where consumers go brands will follow. Take for example, the recently concluded Olympics where the Indian contingent captured the nation's attention and imagination, with their performance and human stories. It's natural then that brands today would love to be associated. A PV Sindhu or a Dipa Karmakar are household names today in large parts of the country and it is obvious that brands would want to cash in on that."

"Essentially I see two things happening here. The Indian consumer today is open to consuming more sports than a decade ago. This is visible even around us as today, you see children getting actively trained in so many sports and other activities. Education hasn't remained the sole domain either. Given this attitude shift, we are steadily seeing an increased consumption for other sports. On the other hand, we have seen brands and media actively investing behind other sports with properties such as the sports leagues and several sports have received a boost this way as well," he added.

Another reason that brands are reaching out to sports such as football and kabaddi is that it allows them to reach out to a different set of audience.

Elaborating on the point Indranil Das Blah, Founding Partner, Kwan Entertainment & Marketing Solutions, said, "While cricket remains the number one sport and the biggest platform for a brand to market its products, but the fact remains that cricket is really expensive and it is also cluttered. So, the other sports provide a good platform for brands to reach out to other kinds of audiences. For example, if you look at football, which is largely an urban phenomenon, you have the ISL, for a more 'massy' product we have the PKL. These sports leagues cater to different set of audiences."

We are seeing a lot of brands bringing sportsmen and sportswomen who are not cricketers into their ad communication. JSW Steel featuring Geeta Phogat in its ad film, Mountain Dew bringing wrestler Sushil Kumar on board and Sania Mirza and Saina Nehwal holding their own as far product endorsements go, examples of brands roping in star players from other sports are galore.

Explaining why this works for a brand, Jigar Rambhia, National Director, Maxus Global, said, "When you see a P V Sindhu or a Sania Mirza doing well in their chosen sports, for a parent or a kid, winning tournaments globally becomes an achievable target. Then for parent and kids alike, picking a sport outside cricket becomes a doable thing. Otherwise, every parent wants their child to become a Sachin Tendulkar, which frankly is not possible. If you go to Shivaji Park right now there will 1,000 kids playing dreaming of becoming the next Sachin but there can only be 11 players in the team. But with people like Sindhu, Mirza and

Nehwal there is some incentive of picking up another sport and for a brand to take a sportsperson outside cricket would make sense."

Rambhia also feels that the number of brands and marketers wanting to associate with other sports will increase in the coming years.

"There are more and more world beaters in India. For example, in badminton there are some five or six Indians in the top 30. We have kabaddi world champions, we are doing well in tennis. So, we are doing well in terms of other sports. But we have to up the ante. From the top 15, we have to go to the top 10 consistently and that will ensure more and more brands come to other sports."

But when should a brand bring in a sporting personality?

Cricket still dominates sports viewership in India and contributes to around two-thirds of all sports viewership. However other sports have been on a high growth trajectory in the recent years and have now grown to take up around one-third of the total sports viewership. This growth in the viewership of non-cricket sports is across a wide spectrum of sports. WWE has an extremely strong consumer connect. Local leagues have also driven the viewership growth of non-cricket sports. A number of key initiatives have also been major contributors of growth, for example UFC and NBA have enjoyed a viewership range of 130 to 145 million viewers each in the last year."

There has also been an increase in the number of female viewers of sports, paving way for brands like Zivame and others to milk the opportunity.

"If you look at the numbers for most of these leagues, a large part of the audience comes from family viewers. If you look at the kabaddi league the number of female viewers is huge because a large number of families watch the league. Interestingly while it is popularly believed that football is a male dominated sport, actually almost half of the audience of the IPL comes from families, women and children. So, families and women are major drivers for these leagues," said Blah.

But a lot of responsibility lies with the broadcasters as well.

Elaborating their role in making a sport famous and ensuring that it reaches its audience, Iyengar said, "Broadcasters are critical because TV is still the largest medium from a reach perspective. It is important that broadcasters are willing to invest. A classic example is kabaddi. Just the role Star played in popularising the sport and investing to build up the sport was great and they made it a great sport for fans to consume. In India with channels like Star and Sony willing to invest in other sports will play a crucial role in furthering these games."

Seconding Iyengar's views, Colaco, said, "Broadcasters play a significant role in reaching out and engaging with the audience. Our broadcasting partner of over five years, Sony Six, has successfully delivered comprehensive coverage of the NBA to our fans. The popularity of the NBA continues to grow and, through the diversity of NBA programming on Sony Six, we've been engaging with our viewers across India. For example, the last season the NBA and Sony Six introduced a customised, local live NBA wraparound programme called 'Around the Hoop' that brought viewers closer to the game."

Sandip Tarkas, Independent Management Consultant, feels that although sports marketing is growing in India, there is still a long way to go.

"A lot of marketers are afraid to touch sports that they don't understand. They come with their own preconceived notions on what the sport is about and things like that prevent them from participating and it becomes a bit of a limiting factor sometimes."

He believes sport has to become a culture in India if we are to see more improvement in the field and better participation from brands.

"We have to have a lot more investment in ground level sports and that will happen when it becomes a culture. It will be good for the country as a whole and the health of the country as a whole, if sporting becomes a culture. That will happen with increased exposure to all sports. When people watch sports more and more, kids will be encouraged to pick up something and then there will role models coming from each sport and they will only further influence the coming generations."

All said and done, Blah warns that brands should be careful when they are investing in sports.

"While these have helped marketers, I think there needs to be some sort of consolidation of these leagues because every sport now wants to follow the IPL model and start a league. We don't know how many of them will be sustainable and how many of them will work in the long run. So, marketers should exercise some sort of caution when they get into sponsoring these leagues. Yes, these are a viable option but marketers need to be careful about what they want to be a part of."

Conclusion

From the above study we can conclude that sports marketing in India has come long way from cricket to other sports like Badminton, Hockey and football. Marketing of sports has increased substantially and helped the sports a great deal. Viewership has increased and people are more interested in sports than earlier.

Although this all is happening lots need to be done specially to encourage the children in rural area to come out and play. Athletics is another are which is still to be explored.

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Role of Yoga in Improving of Sports Performance

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Abstract:-

Yoga may seem like just a light muscle stretching activity with all those delicate moves. But in fact yoga is really not that simple to perform. Those slow moving stretches could give a huge impact on a person's body in a good way. Not only for average people, but for professional athletes like Serena Williams, Pete Sampras and even NFL team members from Miami Dolphins and New York Giants are practicing yoga to improve their performance on the field.

Yoga can benefit professional sports persons, it is necessary to explore what is required to play a sport and play it well. It is well acknowledged that to play any sport, whether it be tennis, volleyball, surfing, swimming or running, we must develop the basic skills and continually train the body so that we can apply the skill in a refined and polished way. This of course requires considerable time, energy and commitment to practice the skill at hand. Having a body that is flexible, strong and controlled is also another important consideration, if one is not able to move the body with the grace, velocity and speed required, then performance will be lackluster. So, we can say that yoga is very beneficial to everyone specially for a sportsmen.

Keywords: Yoga, Injury, Fitness, Performance.

1. Objectives of the Study

1. To study the role of Yoga in sports.
2. To study how yoga can be beneficial in improving the sports performance.

2. Research Methodology

This study is based on secondary source of information. The information has been collected from reliable sources such as journels, article and web .

The presence study is exploratory and analytical in nature.

3. Introduction

Yoga originated thousands of years ago in India as a technique to help people achieve spiritual enlightenment. Based on the idea that the mind and body are one, students believe that Yoga improves health by improving how you see the world, which calms the spirit and decreases stress. Today, people practice Yoga to improve their physical, mental and/or spiritual well being. There are many disciplines of yoga that emphasize different aspects of the mind, body and spirit. However, in the West, mainstream Yoga focuses largely on the physical practice, primarily Hatha Yoga. Hatha is a widespread style that incorporates a series of poses (called Asanas) that emphasize stretching, breathing (called Pranayams), relaxation and meditation techniques to help build strength, increase flexibility and balance, and improve coordination. Yoga has a lot of definitions floating around in today's world; however, if we go back to the roots of the word, we find that the term 'Yoga' has its origins in Sanskrit. It means to unite – Yoga helps the body to unite with the other vital metaphysical aspects of the mind and spirit. It is also often defined as a lifestyle which aims to have a healthy mind within a healthy body. Most simply defined, yoga is a set of poses or 'asanas', coupled with

breathing techniques, which help impart strength and flexibility to the body while helping to balance the mind and its' thinking. Unlike other physical forms of exercises, like the aerobics, by practicing yoga, one can not only achieve physical health, but also mental and spiritual well being. There is a great need of yoga and yogic practices to be taught and also to practice yoga, to overcome physical, mental and physiological problems. Yoga is an appropriate practice for many athletes, providing physical exercise, breath control and flexibility, as well as mental focus it helps athletes gain knowledge about the mind and body connection, improving body awareness and enhancing mental clarity. Studies conducted by the National Center for Complementary and Alternative Medicine illustrate that the physical benefits of yoga for athletes are lowered heart rate, increased oxygen intake, functional strength and flexibility, but athletes also report enhanced focus and greater concentration.

4 effects of yoga on sport performance

4.1 mental health

A common practice in yoga is to breathe only from one nostril at a time, while holding the other one closed with the tip of your finger. Medical research has shown that this boosts increased activity of the opposite side of the brain, leading to better cognitive performance and tasks associated with the other side of the brain. Regular yoga practice helps children with attention deficit disorder and people suffering from anxiety, depression and mood swings. It also helps keep the mind calm and reduce stress and thereby increase the general well being of the person.

4.2 Strength

In order to preserve the balance in your body, you must strengthen the core, which is the center of your body. The human body is divided into two major muscles groups, the upper body muscles and lower body muscles. The core is the one that has the duty to balance these so they can work synergistically; therefore, it has to be strengthened. Perhaps there is no better way of understanding and achieving this other than practicing yoga.

4.3 Flexibility

1. The popular notion that you need to be flexible in order to do yoga is incorrect; it is really the other way round – you should do yoga so that you can be more flexible. If you have a flexible body, you find it easy to do tasks. A lot of poses in Yoga concentrate on stretching and improving your flexibility.
2. With yoga, not only the muscles of the body, but also the softer tissues of your body are worked out, resulting in less build up of the lactic acid, which is responsible for stiffness in various parts of the body. Yoga increases a range of motions of the less used inner muscles and helps in lubrication of joints. The result is a more flexible body, able to perform tasks easily!

4.4 Cardiovascular

1. Yoga has a lot of positive effects on the cardiovascular system of our body. A healthy cardiovascular system is responsible for preventing heart attacks, strokes and hypertension. Heart disease is a problem which has roots in an improper lifestyle, faulty diet and negative thinking.

Our thoughts, emotions and feelings affect our body and negative emotions/thoughts send a series of complex and unhealthy chemical processes throughout the body, giving alarms that something is amiss. Yoga tends to control these by bringing in fresh life-giving oxygen. The antioxidant properties of Yoga help in preventing the negative emotions and promote a general well being in the body.

4.5 Increased power

We all know power, strength and speed are directly related to proper body mechanics: when our body is properly aligned, we can transmit force much more efficiently and perform better across the board.

Whatever your sport, by returning your body to its optimal alignment, yoga can help you reduce power leakage in your dreads and cleans, improve running gait and efficiency, and help you punch, jump, or throw more explosively.

4.6 Better Endurance

By opening posture, yoga significantly increases respiratory capacity; in fact, many have overcome asthma and other respiratory conditions through regular practice. Obviously, this is invaluable to athletes.

Yoga has also been proven to dramatically enhance circulation, digestion,, and efficiency of motion, which all further improve energy and endurance.

4.7 Better Balance/Proprioception

Along with opening the body, yoga builds greater body awareness, including balance, stability, and proprioception. As a result, not only is performance enhanced but our training becomes far more efficient.

4.8 Better Injury Prevention

Of course, we all know that the one thing that stalls progress even more than inadequate training is an injury.

By improving body mechanics and awareness, yoga dramatically reduces the risk of injury, both in training and competition, in turn increasing competitive longevity and allowing more consistent progress in our sport.

4.9 Enhanced Recovery

A little-appreciated but significant benefit for athletes is improved recovery. By enhancing circulation and lymphatic flow, yoga not only increases strength and endurance but also allows muscles to process metabolic byproducts more quickly, powerfully speeding healing time and re-growth.

4.10 Improved Focus

Finally (and perhaps most important of all), regular practice dramatically enhances our clarity and focus. Why does this matter? As Ultraman world-champion, Rich Roll states, "When you look at the highest level of sport, all athletes are incredibly talented and train extremely hard. So what distinguishes the Olympic champion from the 'also-ran?' The mind." Practiced regularly, yoga can give you the awareness and mindfulness you need to take both your training and your performance to the next level. Of course, the list goes on and on. In addition to the above, yoga's been clinically proven to improve immune function, balance hormonal balance and improve stress management, all extremely beneficial to athletes. Put together; you can see why so many professionals have come to consider yoga every bit as indispensable to their training as strength or conditioning.

Conclusion

Overall, the studies comparing the effects of yoga and exercise seem to indicate that, Yoga can help to a great extend in improving the performance of a sport person. Mental health is one of the important factor affecting the performance and there is no better substitute to Yoga in achieving it. Various Asanas of Yoga and Pranayam keeps a sport person feet mentally as well as physically However, future clinical trials are needed to further examine the distinctions between exercise and yoga, particularly how the two modalities may differ. In

their effects on sports performance. researcher find out that yoga in sports as important as other think it helps us in different ways and different levels in a sports men life.

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Effect of Yogic Practices Resistance and Plyometric Training on Selected Physiological Variable among Hand Ball Players

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Abstract

The purpose of the study was to investigate the combined effect of yogic practices, resistance and plyometric on selected physiological variables among Hand ball players. To achieve the purpose of the present study, forty five Hand ball players were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=45) were randomly assigned to three equal groups of fifteen subjects each. The groups were assigned as yogic practices with resistance training (YPRTG), yogic practices with plyometric training (YPPTG) and control group (CG) in an equivalent manner. The three groups were participated the training for a period of twelve weeks to find out the outcome of the training packages. The three groups were statistically analysed by using analysis of covariance (ANCOVA) and Scheffe's post hoc test was applied to find out which pair of group is high among the others.

Key words: Yoga, Resistance Training, Plyometric Training, Hand Ball Players.

Introduction

The international Yoga day is conducting from 21st June 2015 onward. Yoga is a science practiced in India over thousands of years. It produces consistent physiological changes and have sound scientific basis **(lyengar,** 1968). Yoga has been practiced in India for over two millennia. Stories and legends from ancient times testify to the existence of yoga, and to the practitioners and divinities associated with it (Ananda, 1982). Yoga is a science like all other sciences it is based on observation and experiment. (This method of observation and experiment is regarded in the west as a distinctly modern innovation, but as a matter fact it was adopted in India in very ancient time by the seers of truth.

Today the people of every country are more concerned with physical fitness than ever before as it has become the vital part of winning sports competitions. Resistance training is well established effective methods of exercise for developing muscular fitness. Fleck and **kraemer** (1988) describe the primary goals of resistance training as improving muscular strength and endurance.

Training with this mode of exercise increase muscular strength and improve a specific skill whether it is to jump higher, jump longer, throw farther or hit harder. Systematic plyometric exercises follow a specific pattern of muscle contractions. The most common exercises from ordinary exercisers for this type are jumping rope, jumping jacks, throwing and catching ball on wall, and boxing with a punching bag. There are Jechniques and rules to follow when training with plyometrics especially if you are training for a specific sport **(Chu, 1998).**

Objectives

1) To find out the Skill performance, psychological variables among the Hand Ballplayers with Yogic practices.
2) To evaluate the Yogic practices with plyometric training develop the selected psychological and skill performance variables among Hand Ballplayers,
3) To evaluate the experimental groups would significantly develop the selected physiological, psychological and skill performance variables than the control group a Hand Ballplayers.

Methodology

To investigate the combined effect of yogic practices, resistance and plyometric training on selected physiological variables among Hand Ball players.

To achieve the purpose of the present study, forty five Hand Ballplayers from were selected as subjects at random and their ages ranged from 18 to 25 years divided into three equal groups.

TABLE -1

S.NO.	VARIABLES	TEST ITEMS	UNITS
1	Vital Capacity	Spiro meter	In Litters
2	Resting Pulse Rate	Stethoscope	In beats/min
3	Systolic Blood pressure	Sphygmomanometer	Inmmhg
4	Diastolic Blood Pressure		

True randomized experimental group design has been employed with three groups, namely yogic practices with resistance training group, yogic practices with plyometrics training group and control group with 15 subjects each. Group I and II participated their respective treatments for a period of twelve weeks and no training were given to the control group. The three groups were statistically analysed by using analysis of covariance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, as a post - hoc test, the Scheffe's test was applied to find put which pair of group is high among the others.

Results and Discussion

The detailed procedure of analysis of data and interpretation were given below.

Table-II

Summary of Descriptive Statistics on Selected Physiological Variables among Hand Ball Players

S.No	Variables	YPRTG		YPPTG		CG	
		Pre-Test Mean	Post-Test Mean	Pre-Test Mean	Post-Test Mean	Pre-Test Mean	Post-Test Mean
1	Vital Capacity	1.59	2.92	1.56	3.17	1.57	1.63
2	Resting Pulse Rate	74.06	70.66	74.13	70.20	74.46	74.26
3	Systolic Blood Pressure	123.86	120.80	123.53	120.60	123.93	124.06
4	Diastolic Blood Pressure	83.60	79.46	82.60	79.80	83.60	82.93

YPRTG = Yogic Practices with Resistance Training Group
YPPTG = Yogic Practices with Plyometric Training Group,
CG = Control Group

The mean differences between yogic practices with resistance training and yogic practices with plyometric training of vital capacity (0.27), resting pulse rate (0.45), systolic blood pressure (0.17), diastolic blood pressure.

Conclusions

Within the limitation of the present study, the conclusions were drawn.

1) The Yogic Practices with Resistance Training Group (YPRTG) had shown significant improvement in all the selected physiological, psychological and performance variables than the control group.
2) The Yogic Practices with Plyometric Training Group (YPPTG) had shown significant improvement in all the selected physiological, psychological and performance variables than the control group.
3) The Yogic Practices with Resistance Training group (YPRTG) and the yogic practices with plyometric training group (YPPTG) had shown the similar improvement in all the selected physiological, psychological and performance variables.

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A Comparetive Study on Physical Fitness among Basket Ball and Football Players of Mangalore University

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Abstract:

Physical Fitness and Performance are essential to an individual's health and well-being. The ability to efficiently carry out the activities of daily life is essential in evaluating physical performance and predicting the likelihood of illness in the future (Li et. al 2006). Physical fitness is a physiological state of well-being that provides the foundation for the tasks of daily living, a degree of protection against chronic disease and a basis for participation in sport. In essence, physical fitness describes a set of attributes relating to how well one performs physical activity. (Laura Chaddock,et all 2011). In this study, fifteen men basketball and fifteen football players were selected from Mangalore University. The subjects has been tested in the AAHPEAR youth fitness test. Among the thirty subjects were taken has experiment group. Basically they were trained in various games this was help for my test. I explained which are the test going to conduct for them and demonstrated them and clarified their doubts about the test and study. Prior to the tests, the purpose of study was explained to the subjects. Before conducting the test, meeting was conducted by the researcher and explanations were given to the all subjects about the particulars of the study. The tester instructor demonstrated and explained how to do particular Pull-Ups, Sit-Ups, Shuttle Run (10x4yards), Standing Broad Jump, 50-Yard Dash and 600 Yards Run and Walk. The effect that takes place in the body was also explained. The selected subjects were studying in the post-graduation level, so explanation of the test method was easy. The mean value for each item of performance and standard deviation for the results of each activity and the same. On the basis of the data analysis the research is confident of arriving at certain conclusion based on his result of the study.

Key words: Physical Fitness, Performance, Games, Chronic Disease.

Introduction

The study has a wide application both in physical fitness testing programs and in research studies together it should be a help to know the general capacity of individual. It also should be a help to compare two types of individual on the basis of physical fitness. The study also reveals the changes in performance due to the physical fitness. The study will be a useful contribution to the Basketball and Football field. The study may help the coaching programme planner to prepare better training schedule.

Physical fitness and performance are essential to an individual's health and well-being. The ability to efficiently carry out the activities of daily life is essential in evaluating physical performance and predicting the likelihood of illness in the future (Li et. al 2006).

Physical fitness is a physiological state of well-being that provides the foundation for

the tasks of daily living, a degree of protection against chronic disease and a basis for participation in sport. In essence, physical fitness describes a set of attributes relating to how well one performs physical activity. (Laura Chaddock,et all 2011).

Materials and Methods

Selection of Subjects

In this study, fifteen men basketball and fifteen football players were selected from Mangalore University. The subjects has been tested in the AAHPEAR youth fitness test. Among the thirty subjects were taken has experiment group. Basically they were trained in various games this was help for my test. I explained which are the test going to conduct for them and demonstrated them and clarified their doubts about the test and study.

Selection of test items

For these study mainly six variables were taken, they are given below:

AAHPEAR youth fitness test batteries:

1. Pull-Ups.
2. Sit-Ups.
3. 50-Yard Dash.
4. Standing Broad Jump
5. Shuttle Run(10x4yards)
6. 600 Yards Run And Walk

Procedure

Prior to the tests, the purpose of study was explained to the subjects. Before conducting the test, meeting was conducted by the researcher and explanations were given to the all subjects about the particulars of the study. The tester instructor demonstrated and explained how to do particular Pull-Ups, Sit-Ups, Shuttle Run (10x4yards), Standing Broad Jump, 50-Yard Dash and 600 Yards Run and Walk. The effect that takes place in the body was also explained. The selected subjects were studying in the post-graduation level, so explanation of the test method was easy.

Results & Discussion

The mean value for each item of performance and standard deviation for the results of each activity and the same was tabulated below

Table - 1, the statistical values for the Pull-ups

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	10.31	11
Standard Deviation	1.77834	
Standard Error of mean	0.5	
Standard Error of the difference between mean	0.45	
Degree of Freedom	15	
T Value	2.973	

Table – 1 also shows that the calculate value of Pull-ups among basketball and football players. The calculated value is 2.973 and the table value is for the 0.01 level is 2.947 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.01 level of confidence in Pull-ups among football and basketball players. So the t value shows that basketball players are having good Shoulder strength compare to football players.

Table- 2 the statistical values for the Sit-ups

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	37.89	43.83
Standard Deviation	6.65	
Standard Error of mean	1.73	
Standard Error of the difference between mean	1.66	
Degree of Freedom	15	
T Value	3.573	

Table- 2 also shows that the calculate value of sit-ups among basketball and football players. The calculated value is 3.573 and the table value is for the 0.01 level is 2.947 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.01 level of confidence in sit-ups among football and basketball players. So the t value shows that basketball players are having good abdomen strength compare to football players.

Table- 3. The statistical values for the Shuttle run

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	11.04	9.13
Standard Deviation	1.83	
Standard Error of mean	0.42	
Standard Error of the difference between mean	0.46	
Degree of Freedom	15	
T Value	4.176	

Table- 3 also shows that the calculate value of shuttle run among basketball and football players. The calculated value is 4.176 and the table value is for the 0.01 level is 2.947 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.01 level of confidence in shuttle run among football and basketball players. So the t value shows that basketball players are having good agility power compare to football players.

Table-.4The statistical values for the Standing Broad Jump

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	1.74	2.1
Standard Deviation	.0.45	
Standard Error of mean	0.1	
Standard Error of the difference between mean	0.11	
Degree of Freedom	15	
T Value	3.161	

Table- 4 also shows that the calculate value of standing board jump among basketball and football players. The calculated value is 3.161 and the table value is for the 0.01 level is 2.947 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.01

level of confidence in standing board jump among football and basketball players. So the *t* value shows that basketball players are having good explosive power compare to football players.

Table- 5The statistical values for the 50 yard dash

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	7.06	6.9
Standard Deviation	0.39	
Standard Error of mean	0.24	
Standard Error of the difference between mean	0.1	
Degree of Freedom	15	
T Value	2.662	

Table- 5 also shows that the calculate value of 50 yard dash among basketball and football players. The calculated value is 2.662 and the table value is for the 0.05 level is 2.131 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.05 level of confidence in 50 yard dash among football and basketball players. So the *t* value shows that basketball players are having good speed ability compare to football players.

Table- 6Mean Value of 600 Yard Run/Walk of Football and Basketball players

Statistics Value	Football Players	Basketball Players
Number of Samples	16	16
Mean	1.57	1.63
Standard Deviation	0.1	
Standard Error of mean	0.04	
Standard Error of the difference between mean	0.02	
Degree of Freedom	15	
T Value	2.556	

Table - 6 also shows that the calculate value of 600 yard run/walk among basketball and football players. The calculated value is 2.556 and the table value is for the 0.05 level is 2.131 of 15 degree of freedom. Hence the researcher hypothesis has been accepted in 0.05 level of confidence in 50 yard dash among football and basketball players. So the *t* value shows that football players are having good endurance ability compare to basketball players.

Conclusions

On the basis of the data analysis the research is confident of arriving at certain conclusion based on his result of the study, they are as follows. The strength of basketball players is better than the football players. The agility of basketball players is better than the football players. The speed of basketball players is better than the football players. Football is endurance oriented sports; they require more endurance, which make them to have a good endurance. Football players should improve their fitness by regular panned practice.

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A Comparative Study on Common Injuries in Kabbadi and Wrestling

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Abstract:

The purpose of the study was to compare the common injuries among Kabaddi players and wrestlers. With many injuries, the both players have face deadlines to get well and resume participation. These deadlines often conflict with the time required for adequate healing and rehabilitation. Kabaddi and wrestling are the game of strength, speed, agility, stamina and some skill played all over the India. Students from the rural area mostly participate in this games. In this study researcher tried to survey the injuries of Kabaddi players and wrestlers. For the present study Selected samples of 40 Kabbadi players and 40 wrestlers are taken to find out the common injuries participants in various level competitions of south Canara sports person. The data received from 80 respondents of kabaddi players and wrestlers was analyzed with percentile technique and collected data was entered in computer with the help of data entry operator for the purpose of analysis through percentage, each variable observed has been clearly depicted in the respondents table which is supported by suitable graphical representation.

At the very outset we knew that the problems are innumerable. Kabaddi players were got more number of injuries than the Wrestlers. The majority of the injuries were occurred on lower body parts than the upper body parts.Abrasion and Incision of skin was very common on leg, thigh, hip, shoulders and palms among Kabaddi players and Wrestlers. Calf and hamstring muscles strain, contusions were found common injuries among Kabaddi players and Wrestlers. Open fractures are very less in both the Games. Dislocation of Shoulder joint and Knee Ligament Injury was very common joint injury among the Kabaddi players and Wrestlers.

Key words: Kabaddi, Wrestling, South Canara, Injury

Introduction:

Kabaddi and wrestling are the traditional games of India. It is played all over the Country. The game wrestling and Kabbadi are very simple in nature, easy to organize, less expensive. There seems immense potentiality to cater to the needs of health, fitness and recreation of people of all walks of life in the society, with minimum cost, time and equipment. Performing the game comprises a combination of task components, which should be taken care of. It is the lack of facilities and lack of research in the field of sports performance that most often deter the Indian athlete to come close to the world-class level of performance.Performance is being influenced by a number of factors. Sports injury is one of those important factors. In India, as very few studies have been done in the field of Injuries inKabaddi and wrestling games, it is inevitable to take up basic research in this area. It is always been reported by the players, coaches and sports personnel that the injuries occurring during training or competition have been detrimental for carriers of sports person. It has been reported that the players specifically Kabaddi and wrestling player after training are hesitant to play in competitions due to fear of injury. The large forces involved in movements during

playing kabaddi and wrestling, inevitably injuries occur. Most of these injuries result from accidents; others are due to poor training practices, inadequate facilities, lack of conditioning, or insufficient warm-up and stretching. Unfortunately, although this game is widely played in India, not much study has been undertaken in this country to find out the injury profile of the players of Kabaddi and wrestling

Sports injury

The term "sports injury" in the broadest sense, refers to the kinds of injuries that most commonly occur during sports or exercise. Some sports injuries result from accidents, others are due to poor training practices, improper equipment, lack of conditioning, or insufficient warm-up and stretching.Although virtually any part of your body can be injured during sports or exercise, the term is typically reserved for injuries that involve the musculoskeletal system, which includes the muscles, bones, and associated tissues like cartilage. Traumatic brain and spinal cord injuries

Importance of the Study:

The overall goal of the survey study was to assess the common injuries in Kabaddi players and wrestlers. With many injuries, the both players have face deadlines to get well and resume participation. These deadlines often conflict with the time required for adequate healing and rehabilitation. Kabaddi and wrestling are the game of strength, speed, agility, stamina and some skill played all over the India. Students from the rural area mostly participate in this game. In this study researcher tried to survey the injuries of Kabaddi players and wrestlers

Statement of the SStudy:

The purpose of the study was to compare the common injuries among Kabaddi players and wrestlers.

Hypothesis:

- It was hypothesized that shoulder dislocation and knee Injuries are very common among Wrestlers and Kabbadi players.
- It was hypothesized that muscle and skin injuries are common in Kabbadi players and wrestlers.
- It was hypothesized that more Skin injuries occurred to Kabbadi players than the Wrestlers.

Limitations of the Study:

For collection of the data questionnaire was used and limited to the knowledge of university experts. The responses obtained from the subjects are treated as correct and genuine. Owing to lack of comparable date it is not possible to say whether the findings are higher or lower, than other published studies. In this study only common injuries are included and overuse injuries are not considered for investigation.

Review of Related Literature:

It is always useful to know the opinion and suggestion of expert and previous research in support of the study undertaken. A panoramic view of the related literature becomes necessary in order to have a clear cut understanding in this direction. The view and statement taken from various authoritative sources are stated in sequential order. The knowledge of relevant literature is an essential step to get a full picture of what has been done with respect to the problem under study.

Kabaddi and Kho – Kho game are involves rapid and forceful movement of the body as a whole with tremendous physical stamina and quick reflexes inevitably cause for common

injuries. To date, there are no epidemiological studies on Kabaddi and Kho – Kho that presently reliable data about the incidence of injuries and its cause. Hence the researcher has taken up a study to find out injuries would take place during training and competition time in Kabaddi and Kho – Kho events among the players. Total sixty male players (thirty kabaddi players and thirty Kho-kho players) who represented Mangalore University at South Zone and All India level competition were selected as subjects at random. The questionnaire will be administered consisting of questions related to common injuries (skin injuries, muscle injuries, bone injuries and joint injuries), causes and successive treatment for injuries. The results of this study indicate that injuries are very common among the kho-kho and kabaddi players. Most of the injuries were accrued with contact with the player and contact with the hard/uneven ground. For bone and joint injuries treated immediately after the injuries accrued. Severity of injuries among Kabaddi players was more when compared to Kho-Kho players. It was concluded that players and coaches should be made more aware of the importance of protective equipment in helping to prevent injury or re-injury and effective emergency care of injuries by using rest, ice, compression and elevation.

A 5-year study of the injuries sustained by a single intercollegiate wrestling team is presented. The total number of injuries, a description of the injuries classified according to anatomical distribution, and mechanism of injury are given. A high incidence of upper body injuries is noted, and comments are made concerning protective measures that can be taken.

Injuries treated at the University Of Rochester Section Of Sports Medicine over a 7 year period were surveyed. Patients were drawn from professional, intercollegiate (Division 111), high school, intramural, and unorganized athletics at the University and the surrounding community. Data on injury diagnosis was available for 4,551 cases, with data on age, gender, and sport of injury available for 3,431 of the cases. The average patient age was 21.6 years, with a peak in the 16 to 19 age group. Patients with fractures had an average age below the overall mean, while those with internal derangement of the knee, patella femoral pain syndrome, and inflammatory injuries were significantly older than average. Males accounted for 80.3% of all injuries. For both sexes the most common areas injured were the knee and ankle, with sprains/strains the most common injuries. Injuries involving the patella femoral articulation were significantly more frequent among females. The most common sport of injury was football, with greater than 12 times the number of injuries seen in the next most common sport.

Background: Better understanding of the incidence, mechanisms, and characteristics of potential injuries in wrestling helps to implement preventive measures to better care for these athletes. Several studies have investigated the incidence and type of injuries in amateur and intercollegiate wrestling; however, there is a lack of studies that review the incidence and nature of injuries in elite wrestlers during Olympic Games or World Championships.

A two-year study was made of injuries received in high school sports. Athletic trainers were placed in four high schools to conduct the investigation. Injuries occurred in women's sports at a rate of 22 per 100 participants; men's injuries occurred at a rate of 39 per 100 participants. Football and wrestling accounted for the highest injury rates; tennis and swimming accounted for the lowest rates for both sexes.

Participation in high school sports helps promote a physically active lifestyle. High school sports participation has grown from an estimated 4 million participants during the 1971-72 school years to an estimated 7.2 million in 2005-06. However, despite the documented health benefits of increased physical activity (e.g., weight management,

improved self-esteem, and increased strength, endurance, and flexibility), those who participate in athletics are at risk for sports-related injuries. High school athletes account for an estimated 2 million injuries, 500,000 doctor visits, and 30,000 hospitalizations annually. To date, the study of these injuries has been limited by inabilities to calculate injury rates, compare results among groups, and generalize findings from small, non representative samples. During the 2005-06 school years, researchers at a children's hospital in Ohio used an Internet-based data-collection tool to pilot an injury surveillance system among athletes from a representative national sample of U.S. high schools. This report summarizes the findings of that study, which indicated that participation in high school sports resulted in an estimated 1.4 million injuries at a rate of 2.4 injuries per 1,000 athlete exposures (i.e., practices or competitions). Surveillance of exposure-based injury rates in a nationally representative sample of high school athletes and analysis of injury patterns can help guide activities aimed at reducing these injuries.

Aim of the present study was to assess the prevalence of injury in Kabaddi and Kho-Kho players. The data was collected with the help of questionnaire. Total 60 female subjects , age ranged from 18 to 28 years, consisting of 30 Kho-Kho and 30 Kabaddi players wear selected randomly after their informed consent. All the data was collected from the subjects during intercollegiate competition organised by Amravati University, Amravati. Result of the present study demonstrated that the players of both game injured at afternoon hours, during cold condition and the Kho-Kho players took consultancy than kabaddi players. Players of both the team took Ice as first-aid and cause of the injury was stress in players of both the game.

Kabaddi is the most popular contact, speedy, exhaustive, intermittent outdoor game played almost in all rural and urban Indian schools and colleges. The study was conducted to measure the injuries sustained by female Indian kabaddi players, during the 2001-2002 seasons. A self-completion questionnaire survey was administered. Out of 231 questionnaires 212 were returned (92% completion rate). The questionnaire was composed of a few questions related to playing experience, location of play, use of protective equipments, injuries etc. Concussion (32%) and distortion (28%) were the predominant nature of the injury sustained. Upper extremities (51%) were more vulnerable than lower extremities (46%). Among all body parts, knees (19%) were more injury-prone followed by ankles (14%). Regarding aetiology, contact with the opponents (57%) caused maximum injuries followed by contact with uneven ground (15%). The playing surface (causing 29% of all injuries) was also observed to be a noteworthy risk factor. The idea of immediate treatment following the injury was neglected. In 71% of the cases, the injured players were able to resume training and playing within 1-2 weeks of the injury. Attention to factors such as the use of protective equipment, more scientific coaching to overcome problems like an unfavourable playing surface, maintenance of physique, as well as giving importance to immediate treatment of any injury (irrespective of severity) would reduce the incidence of injury problems.

Research Methodology:

The purpose of the present study was to bring to light the A Comparative study on common injuries in Kabbadi and wrestling of south Canara .Selected samples of 40 Kabbadiplayers and 40 wrestlers are taken to find out the common injuries participants in various level competitions of south Canara sports person.

They are framed tactfully without either calling for confidential information or arousing feelings of resentment or irritation. Questions are corroboratory in nature to the

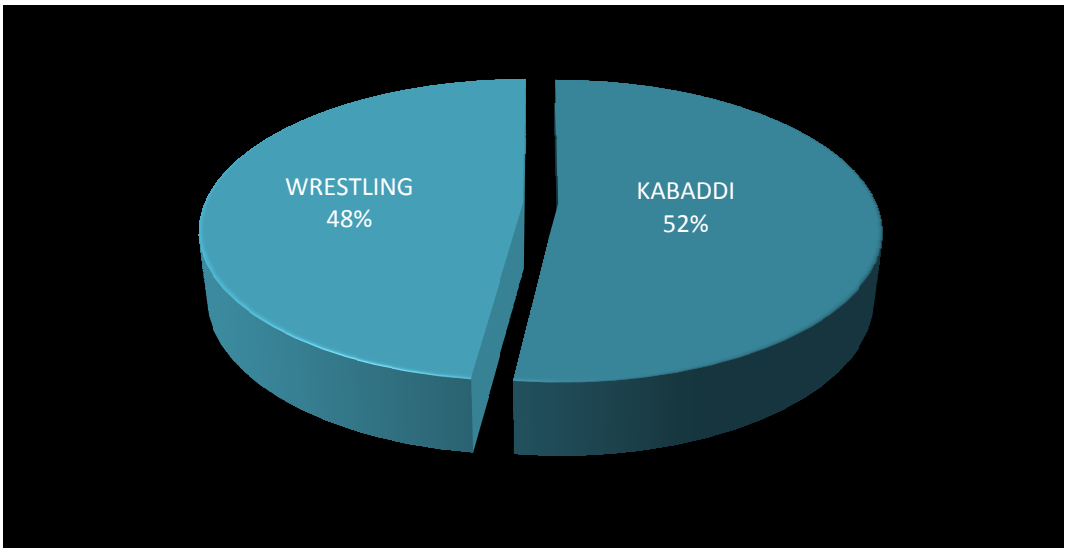
extent possible. Questions are capable of directly eliciting the desired information without prejudice on the part of the informants. Wherever desirable the questions have been cautiously worded so as to carry an appeal and not show any force or compulsion. Questions were presented with exactly the same wordings and same order to all the respondents. The reason for standardizing the question is to ensure that all respondents reply the same question. Care has been taken to see that the purpose of the question is clear.

Here methods and procedures applied in this study are described. This includes the selection of subjects, selection of variables (skin injuries, muscle injuries, bone injuries, joint injuries) and orientation of subjects and statistical analysis of data. The questionnaire was prepared thoroughly by the experts in the concerned final and then it is applied to the subjects for purpose of efficient data. Mangalore is used to send teams for the most of sports events held in various level competition. Two combat games such as Kabaddi and wrestling were selected for the present study. The sample population for the survey was comprised of male players who represented various level competitions. Total 80 players were selected as subject 40 payers from each game (Kabaddi and wrestling) were selected as subject at random. Sports causing common injuries among wrestling and Kabaddi Players were measured with a questionnaire.

The data received from 80 respondents of kabaddi players and wrestlers was analyzed with percentile technique and collected data was entered in computer with the help of data entry operator for the purpose of analysis through percentage, each variable observed has been clearly depicted in the respondents table which is supported by suitable graphical representation.

Data Analysis and Interpretation:

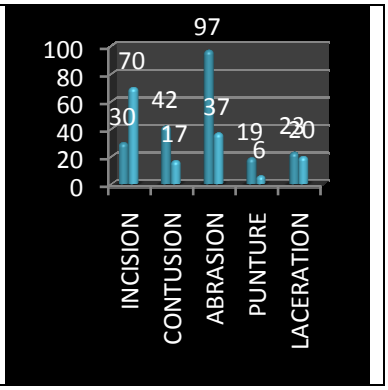
The Percentage of Injuries among the Kabaddi Players and Wrestlers



Graph 1 Shows that 52% of Kabaddi players and 48% ofWrestling Players had injured. It says that Kabaddi players were suffered more number of injuries than the Wrestlers**.** It may be happen because Kabaddi is most aggressive and heavy contact game, commonly played in hard (mud) surface, were as Wrestlers is also aggressive and heavy body contact game, but played in soft (mat) surface.

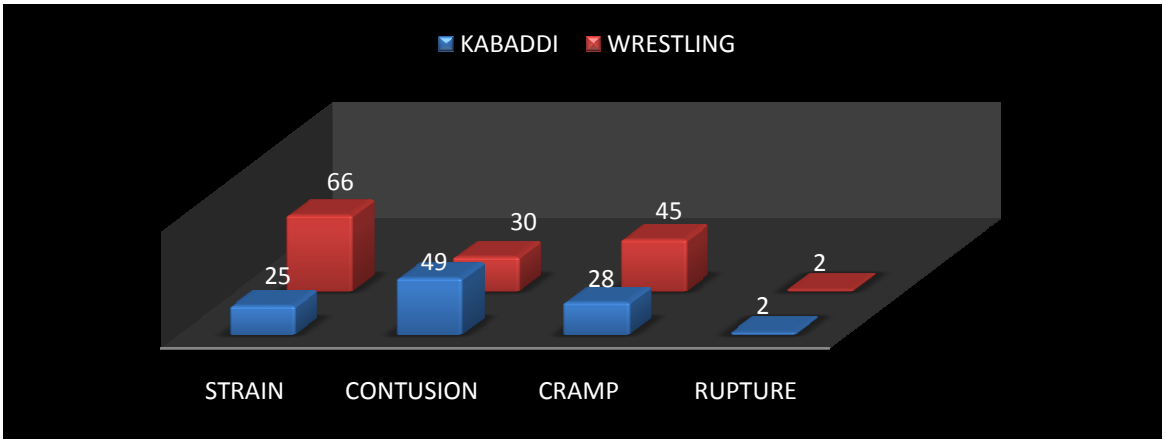
The percentage of skininjuries sustained by kabaddi players and wrestlers

Type of injury	Kabaddi	Wrestling
Incision	30%	70%
Contusion	42%	17%
Abrasion	97%	37%
Puncture	19%	6%
Laceration	23%	20%



Nature of Skin Injury, as reported by the players is shown in Table and Graph 2.Percentage of Abrasion(96%) in Kabbadi was more followed by Contusion(42%) Incision (30%) Laceration(23%) Puncture(19%).In Wrestling Incision(70%) is a predominate injury followed by Abrasion(37%) Laceration(20%) Contusion(17%) and Puncture(6%).kabaddi players having more skin injuries than the wrestlers because kabaddi has long duration activity and commonly playing in hard surface.

Percentage of Muscle Injuries Sustained by Kabaddi Players and Wrestlers



Nature of Muscle injury, as reported by the players, is shown in Graph 3. In Kabaddi Contusion (49%) was more followed by Cramp (28%) strain (25%) and Rupture (2%). In Wrestlers Strain (66%) was happened more followed by Cramp (45%) and Contusion (30%) and Rupture (2%).

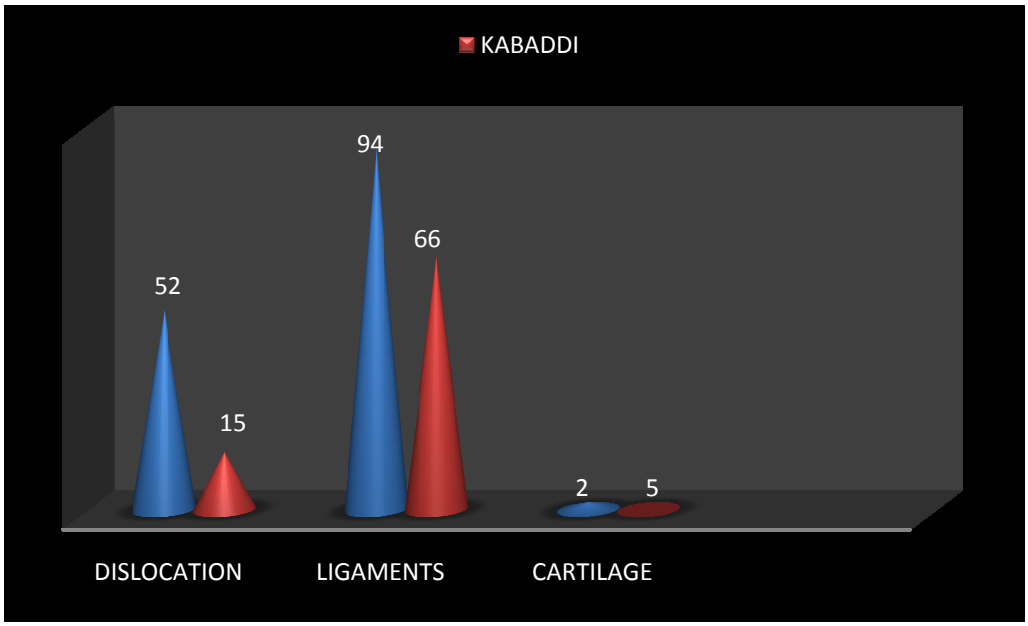
The Percentage of Bone Injuries Sustained by the Kabaddi Players and Wrestlers

Type of Injury	Kabbadi	Wrestling
Open Injury	4%	2%
Close Injury	24%	12%

Nature of Bone injury, as reported by the players, is shown in Graph 4. In Kabaddi Close fracture (24%) is caused more followed by Open fracture (4%). In Wrestlers Close fracture (12%) is happened more when compared to Open fracture (2%). In Kabaddi most bone injuries appear to be located on the Lower extremities followed by Upper extremities

and Clavicle. In Wrestlers most injuries appear to be located on Upper extremities, Lower extremities and Back bones respectively.

The Percentage of Joint Injuries Sustained by the Kabaddi Players and Wrestlers



Nature of Joint injury, as reported by the players, is shown in Graph 5. In Kabaddi Ligament Injury (94%) is caused more followed by Dislocations (15%) and cartilage (5%). In Wrestlers ligament Injury (66%) is most common followed by dislocation (15%) and cartilage Injury (2%) in the joint. In Kabaddi most joint injuries appear to be located on the Ankle followed by Knee and Shoulder. In Wrestlers most injuries appear to be located on the Knee followed by Shoulder and Ankle respectively.

Summary Conclusion and Recommendation:

The research work has been taken up with the purpose of identifying a study on compare the common injuries among Kabbadi players and wrestlers. At the very outset we knew that the problems are innumerable. Kabaddi players were got more number of injuries than the Wrestlers. The majority of the injuries were occurred on lower body parts than the upper body parts.Abrasion and Incision of skin was very common on leg, thigh, hip, shoulders and palms among Kabaddi players and Wrestlers. Calf and hamstring muscles strain, contusions were found common injuries among Kabaddi players and Wrestlers. Open fractures are very less in both the Games. Dislocation of Shoulder joint and Knee Ligament Injury was very common joint injury among the Kabaddi players and Wrestlers.

Conclusion:

In conclusion the results of this study indicate that the incidence of injury in Kabaddi and Wrestling are highly notable. The implication of the findings are that players should be made more aware of the importance of protective equipment in helping to prevent injury and re-injury, the probable dangers of neglecting injuries by continuing activities. The overall goal of the survey study was to assess the common injuries in Kabaddi players and wrestlers. With many injuries, the both players have face deadlines to get well and resume participation. These deadlines often conflict with the time required for adequate healing and rehabilitation. Kabaddi and wrestlers are the game of strength, speed, agility, stamina and some skill played

all over the India. Students from the rural area mostly participate in this game. The students from the rural are generally alien to injuries and safety precautions. In this study researcher tried to survey the injuries of Kabaddi players and wrestlers. In this study players got injure almost all part of their body. It is found that Knee, Ankle sprain and Skin injuries are the most injury prone site of Kabaddi players. Knee sprains and Dislocation were found to be the two main injuries in Wrestlers.

Knee is the body part which directly involved in the game. Hard, uneven playing surface and contact of the knee creates a situation of possible injury. The palm also comes in contact with the rough surface, which also sometimes cause injury to the hand and fingers. Injuries to the hand also occur from falling on to the hand as well as contact with another player. The knee and ankle were the most common sites of injury in It is generally seen that due to excitement of the game the Kabaddi. Offensive players 'touching' rather 'pushes' vigorously the seated defensive players which may lead them towards the injury. Fractures in the extremities were mainly due to falling on the ground or violent collision with team mates. Kabaddi players and Wrestlers major cause of the injury was the stress, and lack of proper warming up, conditioning and cooling down.

Recommendation:

1. It is the lack of facilities and lack of research in the field of sports performance that most often deter the Indian players to come close to the world-class level of performance.
2. In order to decrease recovery time and promote healing, swelling and tissue congestion in the injured area must be controlled and reduced.
3. It is also important to prevent further injury by allowing adequate healing and providing appropriate protection during recovery.
4. Indian games making aware of injury to perform better the games. Furthermore, nutrient supply for rebuilding injured tissue must facilitate.
5. Sports injury is one of those important factors. In India, as very few studies have been done in the field of treatment of sports injuries, it is inevitable to take up basic research in this area.
6. Morbidity is decreased by minimizing de conditioning through early initiation of the reconditioning program.

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The Impact of Modern Technology in Facilitating the Task of the Scouts (15-18) Years Old in Mobile Trips from the Point of View of Scout Education Leaders

Mr. Majid Kadhim Howeidi: Samawah secondery school School for Boys

Abstract

The research aims to identify the effect of technology in the modern era in the development of some scouting skills for the advanced scout stage at the age of 15-18 years. The researcher used the survey method for its suitability and the nature of the research problem. The research sample reached (25) Under the supervision of the researcher to conduct a questionnaire questionnaire included several questions and after the presentation of the results and analytical and discussed the researcher concluded that the technology in the modern era has affected the development of some scouting skills for the stage of Scouts advanced age (15-18)

1.1 Introduction and importance of research

an introduction:

There are many means of technology and its goals and objectives, including what serves the science of education, educational and educational, including trade and economy, including entertainment, etc. There is a close relationship between science and technology, and it is noted that the basis of technology is the study of science study completed and employed in the areas of life to meet the needs of the individual and society and therefore it connects the government and the sources of education, factories, companies and society in the work of the government sector and the private sector to develop strategies that benefit from human resources graduated from Schools, universities or colleges (research, innovation or invention) to be consistent with the continuous development. We also note that universities periodically change the strategy in the sources of information to suit the factories and laboratories of technology that take the secret development Because of the explosion of knowledge in the world.

Innovation in the sources of information and the search for all new create creative individuals and innovators who meet the needs of society in line with the developments that are happening all the time in the world and therefore we must employ the areas of technology activities applied in our scientific methods using the latest technology.

study Problem:

By introducing the researcher to the concepts and characteristics of the scouting movement in general, and the objectives of the stage of the Scouts advanced age (15-18) years

Especially, note that the use of technology means positively affect the

Development of Scouts Scouting Scouts, and by observing the skill level of the teams

Scouts of these ages that fall within the schools of secondary school of the city of Samawah and especially located

Within the geographical area that did not rise to the level of ambition, the researcher found weakness and decline in

Scouting skills, which necessitate their development to a better level and through interviews

The researcher with some specialists in this field pointed to the lack of interest at this

stage

Advanced and delayed detection and detection in the implementation of scouting approaches that sponsor this category and the age group

the mission . For these reasons and a solution to the problem, the researcher saw the use of technology in the modern era in the development of some scouting skills for a stage that the Scouts advanced 15-18 years can not dispense with.

Objective of the study:

To identify the impact of modern technology in facilitating the task of scouts in mobile flights from the point of view of leaders of Scout Education.

1. Determination of the most important scouting skills for the advanced detection stage (15-18 years)
2 - the use of technology in the modern era in the development of some scouting skills for a stage that can not search advanced age (15-18) years

Study hypotheses

- Technology in the modern era has a positive effect in facilitating the task of scouts in mobile flights from the point of view of leaders of Scout Education.
- There are statistically significant differences between the results of tests for the sample of the research and for the tests for the sample of the study under study
- There are statistically significant differences between the results of tests for the research sample and the use of technology in the development of some scouting skills and for the tests for the sample of the research under study

Research Areas:

- Human field: Scout troop in the Samawah high school for boys in Samawah, the advanced search at the age of 15-18 years and the 25 scouts
- The spatial sphere: the external arena in the Samawah Boys' High School in the city of Samawah Center

Time domain: for the period from 1/10/2017 to 1/11/2017

Statistical Methods:

The researcher used the ready-made statistical bag SPSS to extract the following:
Median, mean, mean, total, and torsion coefficient

- View and discuss the results:

.Frequency Table

is not likable to me

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.4	12	48.0	100.0	100.0
Missing	System	13	52.0		
Total		25	100.0		

search function easier and better

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8.6	25	100.0	100.0	100.0

activities is futile

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.4	8	32.0	100.0	100.0
Missing	System	17	68.0		
Total		25	100.0		

has an advantage

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.6	18	72.0	100.0	100.0
Missing	System	7	28.0		
Total		25	100.0		

in classroom classes in theory

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.1	2	8.0	100.0	100.0
Missing	System	23	92.0		
Total		25	100.0		

better practical way

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6.4	11	44.0	100.0	100.0
Missing	System	14	56.0		
Total		25	100.0		

a competent professor is unnecessary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	6	24.0	100.0	100.0
Missing	System	19	76.0		
Total		25	100.0		

Use of GPS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.3	5	20.0	100.0	100.0
Missing	System	20	80.0		
Total		25	100.0		

want in scouting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.4	9	36.0	100.0	100.0
Missing	System	16	64.0		
Total		25	100.0		

negative effects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.2	6	24.0	100.0	100.0
Missing	System	19	76.0		
Total		25	100.0		

positive effects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	13	52.0	100.0	100.0
Missing	System	12	48.0		
Total		25	100.0		

difficulty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8.9	11	44.0	100.0	100.0
Missing	System	14	56.0		
Total		25	100.0		

do not like

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.5	10	40.0	100.0	100.0
Missing	System	15	60.0		
Total		25	100.0		

is forced to

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	14	56.0	100.0	100.0
Missing	System	11	44.0		
Total		25	100.0		

unique in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.7	12	48.0	100.0	100.0
Missing	System	13	52.0		
Total		25	100.0		

characteristic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6	11	44.0	100.0	100.0
Missing	System	14	56.0		
Total		25	100.0		

very important

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	11	44.0	100.0	100.0
Missing	System	14	56.0		
Total		25	100.0		

activities is not likable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.7	8	32.0	100.0	100.0
Missing	System	17	68.0		
Total		25	100.0		

has benefits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.4	9	36.0	100.0	100.0
Missing	System	16	64.0		
Total		25	100.0		

in limited

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	6	24.0	100.0	100.0
Missing	System	19	76.0		
Total		25	100.0		

multiple benefits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.9	12	48.0	100.0	100.0
Missing	System	13	52.0		
Total		25	100.0		

takes longer

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6.6	11	44.0	100.0	100.0
Missing	System	14	56.0		
Total		25	100.0		

neither useful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.1	15	60.0	100.0	100.0
Missing	System	10	40.0		
Total		25	100.0		

distinctive to me

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.8	22	88.0	100.0	100.0
Missing	System	3	12.0		
Total		25	100.0		

useful in the development of a Scout

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8.2	25	100.0	100.0	100.0

Conclusions:

In the light of statistical treatments of the research results presented and analyzed and discussed

Researcher to the following conclusions:

1 - The use of GPS scouting activities used to help develop the Scout skills of the advanced search age (15-18) years

2 - The results show a positive development for students in the use of GPS devices to develop scouting

Recommendations:

In the light of his conclusions, the researcher recommends the following:

1 - Emphasize the use of technology to enrich the positive scouting work in the development

of scouting skills

- Pay attention to them within the programs and curricula of scouts, especially the stage of advanced search at the age of (15-18) years

.

3 - the need to use technology, focusing on the development of other detection skills.

4 - the need to conduct experimental research in the future selection of different Scout variables and applied to

Other samples.

5 - the need to codify tests for scouting skills to become applied on scientific grounds

The construction of a test battery for scout detectors based on reliable scientific basis Researchers in the future.

6 - the need to pay attention to Scouts in Iraq in general and the province of Samawah, especially by the authorities

- Responsible and to form in the future the central detection teams for the stage of the Scout Advanced (15-18) years in all junior high schools in Samawa

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A Study on Association between Hand Grip Strength and Emotional Intelligence in High School Boys

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Abstract

Physical performance is naturally high in those adolescents who are physically active. The child engaged in leisure time pursuits like sports, games, dance and martial arts ect. Tend to exhibit higher levels of physical performance capacities. Hand grip strength testing is widely used because of its fear ability and economy. Male adolescents are highly benefited due to physical activity, Social inhibitions and their conventionalities keep them reserved in Indian society. (Jonatan R, et al., (2010) Emotional intelligence is most essential during adolescence. Dealing with outside world needs lot of temperament and emotional stability. an individual or usually judge by the way of emotional expression. Experiences in sports and allied activities give ample opportunity to stabilise personality. There are plenty of channels to exhibit emotions and gain control over them in sports. (Fazadkhodamoradi, et al., (2015) This paper is an attempt to explore a study on association between hand grip strength and emotional intelligence in high school Boys. To achieve the purpose of the study necessary data was collected from 274 subjects of belonged to rural locality in Karnataka during 2016-17. Handgrip strength was used for assessing physical performance and various standardized questionnaires were used to assess emotional intelligence. Apart from descriptive statistics Pearson product moment correlation coefficient was calculated using SPSS. The findings are discussed in detail. On the basis of the results of the present study it has been concluded that there was significantly positive linear relationship of handgrip strength with emotional intelligence in adolescent boys of rural locality in Karnataka.

Key Words: adolescent, physical Activity, hand grip strength, Emotional Intelligence. Emotion.

Introduction

Physical performance is naturally high in those adolescents who are physically active. The child engaged in leisure time pursuits like sports, games, dance and martial arts ect. Tend to exhibit higher levels of physical performance capacities. Hand grip strength is an ideal way to assess physical performance in adolescence. Although there are plenty of tests to determine physical performance. Hand grip strength testing is widely used because of its fear ability and economy. Male adolescents are highly benefited due to physical activity participation, Social inhibitions and their conventionalities keep them reserved in Indian society. **(Jonatan R, et al., (2010)**

The period of adolescence is known as period of emotional disturbances with various types of tensions, uncertainties, failures and frustrations, which may be dealt more effectively

through proper direction and guidance by utilizing the emotional intelligence as an aid. Emotions are quite common and maintaining stability is of almost importance. The emotions cannot be expressed at will of an individual. Timely expression of emotions is detrimental for achieving stress in life. Emotional intelligence enables the adolescent to develop very good interpersonal relationships and to have better social support. It is a highly desirable and personally valuable attribute to possess. Through physical activities and sports emotional intelligence of adolescents can be improved and thus can lead them towards a very successful future life **(beenajohnson, 2009).**

Adolescence is a stage filled with fluctuation in emotions. Frequent outburst of emotions can be dangerous in certain circumstances. Emotional intelligence is most essential during adolescence. Dealing with outside world needs lot of temperament and emotional stability. an individual or usually judge by the way of emotional expression. Experiences in sports and allied activities give ample opportunity to stabilise personality. There are plenty of channels to exhibit emotions and gain control over them in sports. The period of adolescence is known as period of emotional disturbances with various types of tensions, uncertainties, failures and frustrations, which may be dealt more effectively through proper direction and guidance by utilizing the emotional intelligence as an aid. **(Fazadkhodamoradi, et al., (2015)**.

The present generation of children is more emotionally troubled than the past. On an average, children are growing more loudly and depressed, more angry and unruly, more nervous and prone to worry, more impulsive and aggressive. So there is an increasing need to address the emotional health of our children and adolescents. The present study is being undertaken under the premise that emotions which have the power to shape the destiny of an individual need to be trained, guided and directed. In order to prepare better students for this new century, it might be better to include emotional intelligence in lives of adolescent boys and girls. Sports activity is integral to the all-round development of human personality. Sports bring pleasure due to emotional overtones and outward focus of attention in sports activities. Emotional overtones of sports life removes boredom of daily routines and adds depths of feeling in coloured life. Outward focus of attention in sport brings not only well mental health but also emotional satisfaction. **(Li, G.S.F. et all 2009).**

Materials and Methods

Selection of Subjects

To achieve the purpose of the study necessary data was collected from 274 subjects of belongs to rural locality of high school boys in Karnataka. During 2016-17. The subjects selected from various schools of Bengaluru and Mysuru divisions were studying in 9^{th} standard and their age ranged between 14 to 16 years.

Selection of Test Items

Assessment of Handgrip Strength

Dominant hand grip strength was used for assessing physical performance among school students. Grip strength was measured by the help of an analogue hand grip dynamometer. Before taking the measurement, the subjects were requested to sit in a comfortable position. They were asked to squeeze the dynamometer as hard as possible without moving the body. Thus, the final grip strength was measured for both hands and the reading was taken from the dynamometer scale when the pointer no longer moved. Three trials were given to each subject and the best reading was the score of the subjects.

Assessment of Emotional Intelligence

The study included 33-item Emotional Intelligence Scale (Schutte et al., 1998) comprised of six factors where items are rated on a 5-point scale anchored by 1=strongly agree to 5=strongly disagree. The model of emotional intelligence of Salovey and Mayer (1990) provided the conceptual foundation for the items used in the scale. With higher score indicating greater emotion.

Procedure

The investigator personally visited various rural locality high schools of Karnataka state and collected data. Firstly, descriptive tests including mean and standard deviation were calculated to determine the nature of the data. The questionnaires and hand grip strengths were conducted in the class room setting. Apart from descriptive statistics Pearson product moment correlation coefficient was calculated using SPSS 21.0 statistical package.

Results

The descriptive statistics on handgrip strength and Emotional Intelligence of adolescent rural boys as given in table 1.

Table 1. Results on handgrip strength and Emotional Intelligence of adolescent rural boys.

	Mean ± S D
Handgrip strength	26.60±6.24
Emotional Intelligence	114.124±16.41

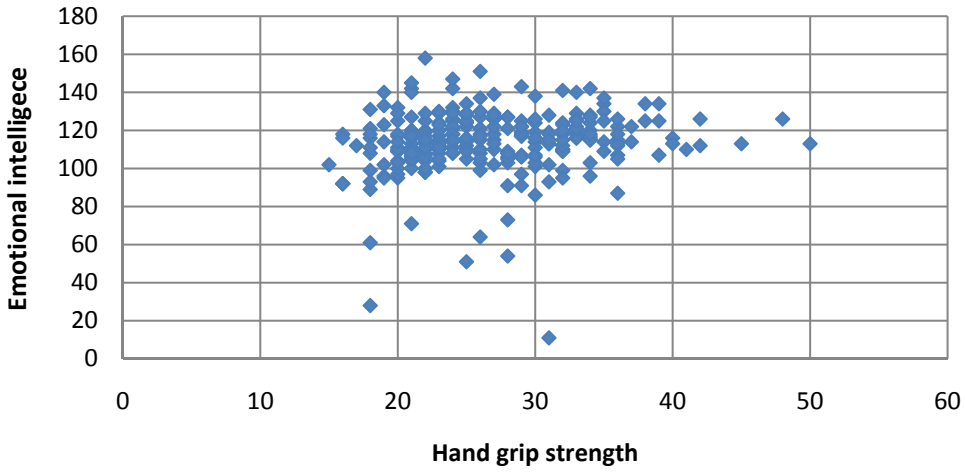
Table 1. On handgrip strength and Emotional Intelligence of adolescent rural locality boys makes it clear that the results are there is Significant positive linear relationship between physical performance measured through handgrip strength and emotional intelligence in rural boys; with acceptable homogeneity. Results on relationship between physical performance and Emotional Intelligence of adolescent rural boys are provided in table 2.

Table 2. Summary of Pearson product moment correlation coefficient regarding relationship between handgrip strength and Emotional Intelligence of adolescent rural boys.

			Handgrip strength	**Emotional Intelligence**
Rural Locality	**Handgrip strength**	Pearson Correlation	1	.132*
		Sig. (2-tailed)		.029
		N	274	274

From table 3 it is obvious that there is positive linear relationship between physical performance measured through handgrip strength and emotional intelligence in adolescent boys of rural area. The above results are graphically depicted in figure 2.

Figure 2. Graphical illustration of association between physical performance and emotional intelligence in rural adolescent boys



From table 3 it is obvious that there is positive linear relationship between physical performance measured through handgrip strength and emotional intelligence in adolescent boys of rural area.

Discussion

It has been observed that the rural locality boys tend to have greater emotion as their hand grip strength enhanced. as we know under privileged and un privileged boys now a day's attend Rural locality high schools. In such boys, being physically active can be considered as a remedy to overcome ill effects of emotional intelligence. These boys are over protected and get very less opportunity to involve in physical activities and sports. Overall it was observed that the physical performance measured in terms of hand grip strength has significantly positive linear relationship with emotional intelligence. This means that the boys are benefitted from physical activities and sports their adolescents emotional intelligence can be improved and thus can lead them towards a very successful future life.

Conclusions

On the basis of the results of the present study it has been concluded that there was significantly positive linear relationship of handgrip strength with emotional intelligence in adolescent rural boys of Karnataka.

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Effects of Different Packages of Selected Yogic Practices and Health Fitness Components among Police Men in Chennai

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Abstract

Yoga is a re-education of one's mental process, along with the physical. Yogic practices make possible not only physical and mental development but also intellectual and spiritual development. Yoga practices are called a 'non-violent activity' (Sharma, 1984). Health - related physical fitness can be viewed thus: Physical fitness is a multifaceted continuum extending from birth to death. Affected by physical activity, it ranges from optimal abilities in all aspects of life through high and low levels of different physical fitness, to severely limiting disease and dysfunction. (AAHPERD, 1980). The term is most commonly associated with police services of a state that are authorized to exercise the police power of that state within a defined legal or territorial area of responsibility. The word comes via medieval French police, from Latin politia "civil administration", from ancient Greek For the purpose of this study Ninety Police men of "TAMIL NADU POLICE ACADEMY" at KOLLAPAKKAM, VANDALUR, CHENNAI were selected as subjects, their age was ranged from 30 to 45 years. All the subjects were assigned to two Experimental groups (A and B) and one Control group (C), each consisting 30 subjects. Group A and B were treated as experimental group and named, The researcher reviewed the available scientific literature pertaining to the Suryanamaskar, Asana, Pranayama, Bandha, Mudra and Transcendental Meditation on selected Health fitness components, Physiological, and Psychological variables. To achieve these purpose only three groups consisting 30 subjects were selected. Group 'A' trained with Yogic practices of Package – I and Group 'B' trained with Yogic practices of Package – II for Twelve weeks. After the training period all subjects were tested on selected criterion variables at different stages such as pre post test. The Analysis of covariance (ANCOVA) was used to find out the pre test and post test significance difference among three groups and to find out the paired mean differences, scheffe's post hoc test was used. On the basis of the results of the present study it has been concluded that there was significantly positive linear relationship of Yogic Practices and Health Fitness Components In Police Men In Chennai at Tamil Nadu.

Key words: Yoga, Health, Fitness, Police, asana, Human body.

Introduction

Yoga means the experience of oneness or unity with inner being. This unity comes after dissolving the duality of mind and matter into supreme reality. It is a science by which the individual approaches truth. The aim of all yoga practice is to achieve truth where the individual soul identifies itself with the supreme soul or God. Yoga has the surest remedies for man's physical as well as psychological ailments. It makes the organs of the body active in their functioning and has good effect on internal functioning of the human body. Yoga is a

re-education of one's mental process, along with the physical. Yogic practices make possible not only physical and mental development but also intellectual and spiritual development. Yoga practices are called a 'non-violent activity' **(Sharma, 1984).**

Yoga could superficially appear as just a physical exercise to tone the body, but its benefits lies buried only to be unraveled with persistent practice. The Police officials have turned to Yoga to beat their work stress due to their hectic lifestyle. Yoga asana apart from contributing to the physical fitness of an individual extends to calm and sooth the mind paving way for deeper relaxation for stress management. This in turn helps for more increased productivity in one's career, here with the police department, to curb crime. **Hema (2003)**

Health - related physical fitness is important to everyone and should be stressed by physical educators and medical people alike. Health related fitness is defined as the ability to perform strenuous activity without excessive fatigue showing evidence of traits that limit the risks of developing diseases and disorders which affect a person's functional capacity. Components of health related physical fitness are identified as muscular strength, endurance, flexibility, cardio respiratory endurance and body composition. The American Alliance for Health, Physical Education, Recreation and Dance had published two standardized tests for the schools: The health - related physical fitness test and the youth fitness test. According to AAHPERD, health - related physical fitness can be viewed thus: Physical fitness is a multifaceted continuum extending from birth to death. Affected by physical activity, it ranges from optimal abilities in all aspects of life through high and low levels of different physical fitness, to severely limiting disease and dysfunction. **(AAHPERD, 1980:3).**

The police are people empowered to enforce the law, protect property and reduce civil disorder. Their powers include the legitimized use of force. The term is most commonly associated with police services of a state that are authorized to exercise the police power of that state within a defined legal or territorial area of responsibility. The word comes via medieval French police, from Latin politia "civil administration", from **ancient Greek**

The Tamil Nadu Police is recognized as one of the finest forces in the country. It is in the forefront in most professional areas as is borne out by its performance in successive All India Police Duty Meets. The high traditions of Tamil Nadu Police include service delivery to the public at large, effective enforcement of traffic laws, with a view to ensuring safety on the roads and adoption of e-Governance with a view to bringing about more transparency in the functioning of the Police.

Materials and Methods

Selection of Subjects

For the purpose of this study 90 Police men of "TAMIL NADU POLICE ACADEMY" at KOLLAPAKKAM, VANDALUR, CHENNAI were selected as subjects, their age was ranged from 30 to 45 years.

All the subjects were assigned to two Experimental groups (A and B) and one Control group (C), each consisting 30 subjects. Group A and B were treated as experimental group and named,

Group A – Twelve weeks - Yogic practices of Package - I.

Group B – Twelve weeks - Yogic practices of Package - II.

Group C -- Control group.

Selection of Test Items

The researcher reviewed the available scientific literature pertaining to the Suryanamaskar, Asana, Pranayama, Bandha, Mudra and Transcendental Meditation on selected Health fitness components, Physiological, and Psychological variables.

In the present study following variables were selected.

Dependent Variables

Health Fitness Components (Health related fitness)

- Endurance
- Strength
- Flexibility
- Body composition

Independent Variables

The two different packages (I & II) of yogic practices are selected on the basis of the difficulty. The practices are simple can perform easily by all the Police men.

Yogic Practices of Package -I (Group - A)
(Swami Sathyananda Saraswathi)

- Loosening Exercises
- Suryanamaskar
- Asana
- Pranayama
- Mudra
- Transcendental Meditation

Yogic Practices of Package - II (Group - B)
(Swami Kuvalayananda)

- Loosening Exercises
- Asana
- Pranayama
- Bandha
- Mudra
- Relaxation

Procedure

To achieve these purpose only three groups consisting 30 subjects were selected. Group 'A' trained with Yogic practices of Package – I and Group 'B' trained with Yogic practices of Package – II for Twelve weeks. After the training period all subjects were tested on selected criterion variables at different stages such as pre post test.

The Analysis of covariance (ANCOVA) was used to find out the pre test and post test significance difference among three groups and to find out the paired mean differences, scheffe's post hoc test was used.

Results

The Body composition was measured through Body Mass Index Scale (BMI). The Table- VI shows the variance of Body composition among Yogic practices of Swami Satyananda Saraswati (Group A), Swami Kuvalayananda (Group-B) and Control group (group C) of Police men.

Table-1
Scheffe's Post-Hoc Test for Body Composition

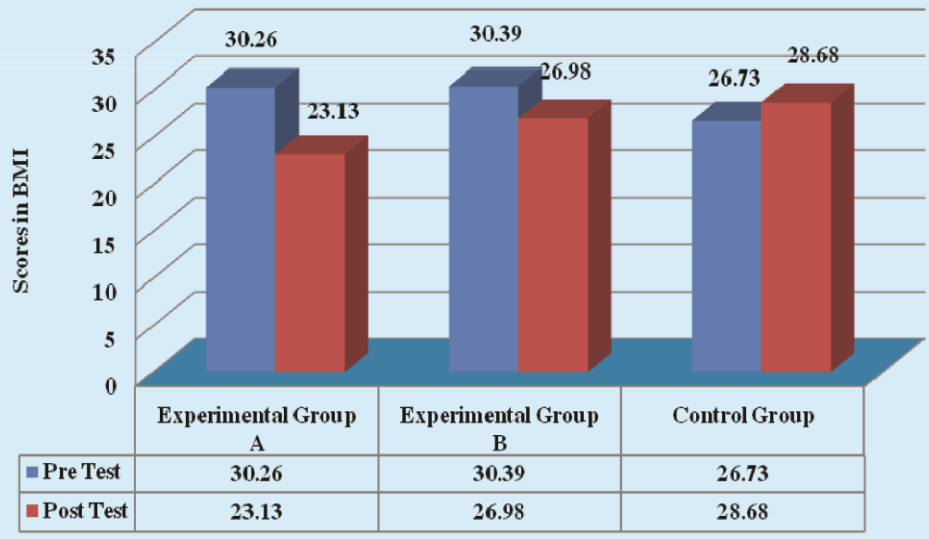
MEANS			Mean difference	Required C.I
GROUP-A	GROUP-B	CONTROL		
22.13	25.87		3.73	0.98
22.13		30.80	8.66	0.98
	25.87	30.80	4.92	0.98

* Significant

The multiple mean comparisons shown in table 1 proved that there existed significant differences between the adjusted means of Yogic practices of Group A and control group, Yogic practices of Group B and control group. There was significant difference between Yogic practices of Group A and Group B.

The ordered adjusted means on Body composition were presented through bar diagram for better understanding of the results of this study in Figure 1.

FIGURE - VI
BAR DIAGRAM SHOWING THE MEAN DIFFERENCE AMONG YOGIC PRACTICES (GROUP A& B) AND CONTROL GROUP ON BODY COMPOSITION



The Table-1 shows that Scheffe's confidence interval values of Body composition among Yogic practices of Swami Satyananda Saraswati (Group A), Swami Kuvalayananda (Group-B) and Control group (group C) of police men.

From the Table-1 it is clear that the mean value of Yogic practices of Swami Satyananda Saraswati (Group A), Swami Kuvalayananda (Group-B) and Control group (group C) of police men were 23.13, 25.87 and 30.80 respectively.

The mean difference between Yogic practices of Swami Satyananda Saraswati (Group A) and Swami Kuvalayananda (Group-B), Swami Satyananda Saraswati (Group A) and control group (group C), Swami Kuvalayananda (Group-B) and control group (group C) were 3.73, 8.66 and 4.92 respectively. The required Scheffe's confidence interval to be significant at 0.05 level was 0.98 and the difference between yogic practices of Swami

Satyananda Saraswati (Group A), Swami Kuvalayananda (Group-B) and control group (group C) of police men were greater than required confidence interval and hence it is significant.

Discussion and Findgs

For the purpose of this study it was discussed on that the Yogic practices of Swami Satyananda Saraswati (Group A), Swami Kuvalayananda (Group-B) would improve the selected Health Fitness Components as compared to control group (group C). The results presented in Tables 1 proved that there was a significant difference due to Twelve weeks Yogic practices of Swami Satyananda Saraswati (Group A) and Swami Kuvalayananda (Group-B) on Health Fitness Components like Body composition. Thus, the results was accepted at 0.05 level.

The result of this study on Health Fitness Components. It was also findings that the changes on selected Health Fitness Components as a result of Yogic practices of Swami Satyananda Saraswati (Group A) and Swami Kuvalayananda (Group-B) would differ significantly. The post hoc analysis of the results proved that Yogic practices of Swami Satyananda Saraswati (Group A) was slightly effective than Yogic practices of Swami Kuvalayananda (Group-B) in improving Body composition maintaining the findings was accepted at 0.05 level.

Conclusions

Within the limitations and delimitations of the present study, the following conclusions were drawn,

It was concluded that Endurance, Strength, Flexibility, VO2 Max, Breath holding time, Job Satisfaction, Job Involvement, Organizational climate were significantly improved and Body composition was significantly maintained and Resting Pulse rate, Blood pressure and Anxiety were significantly reduced due to the influences of Twelve week training Yogic packages of Swami Satyananda Saraswati (Group A) and Swami Kuvalayananda (Group-B) than the control group C on Police men.

It was concluded that Yogic packages of Swami Satyananda Saraswati (Group A) was slightly effective than Swami Kuvalayananda (Group-B) in improving Endurance, Strength, Flexibility, VO2 Max, Breath holding time, Job Satisfaction, Job Involvement & Organizational climate, maintaining the Body composition and reducing the Resting Pulse rate, Blood pressure and Anxiety on Police men.

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Information Technology Key Role in Athletic Science

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Objective:

The world of sport is continually changing over the years, and the use of technology is just one of those areas that has made an impact on many sports in the modern day. See the annual sports technology awards for the latest technology ideas in the world of sport. One criticism of the use of technology is that it can slow down the speed of the game, but on the other hand for many people it makes watching it more enjoyable to see the correct decisions being made.We are living in the computer age today and most of our day-to-day activities cannot be accomplished without using computers. Design an equipment, a sports dress, sports material, publish a newsletter, record the events, plan sports calendar, etc., all involve computer in one way or the other. Computer is affecting every sphere of our life be it government, business, education, sports, legal practice, entertainment, etc,. Computer has become an indispensable and multipurpose tool.

Super computers can forecast whether, embedded computers, help in giving the various types of information, to the users. In the area of sports an games, lot of information like – events, places, records, programmes, scores, etc., have to be kept in memory for long duration and for also9 a basis for the future. Computers can store such information and it is easy to retrieve whenever require, and can be made available to many people and organizations. Computers have brought revolution in sports. Sports industries use computers to create new designs in making shoes, balls, rackets, skies, etc., and also in making sports related equipment. Computers are excellent devices for analyzing the sports performance – like recording performances, monitoring performances, analyzing movements and afterwards analysis. Computers have been helpful in supporting sporting activities, or have the potential to do so. This is due to ever increasing processing power, and to its capability of modeling and solving problems, which are of great help for variety of sports discipline.

The computers help in the areas of coaching and training, motion analysis, development of new sports, fashion and sports wear, decision making technology and finally sports management.

2) **Coaching and Training:-** One of the earliest areas of application of computer science in sports is coaching. Techniques are discussed, which enable a coach to prepare better, and to control the performance of the team members through selected software tools.
3) **Motion Analysis:-** The approaches give a better understanding of the movement of the human body. It also helps in enabling and supporting corrective and improved actions of a sports person.
4) **Development of new sports:-** Computer technologies and computer networking allow the invention of new games and which are independent of geographical location of the players.

4.1 Timing Systems:

From the first modern Olympic Games in 1896, stopwatches were used to determine the winners' times. In 1912, an electronic automatic timing system was introduced for the athletics track events. The device was invented by Swedish engineer Ragnar Carlstedt. The timer began by the firing of the starter's pistol, and stopped manually by a timing official allocated for each runner. The system also included a photo of the winner as they crossed the finish line. The timing technology used at the Olympics continued to develop. The early stopwatches only timed to 0.2 of a second. In the 1920's, chronographs were first used to measure to the hundredth of a second.The next step in timekeeping in 1932 with the "Kirby camera", designed by Omega, which simultaneously photographed the finish line and imprinted the time on each frame. The 1948 Olympics saw the introduction of another innovation with the continuous slit camera, which is the basis of all athletics timing systems used today. Four years later the time was connected to the slit camera giving a resolution of 1/100 s, though it was not until 1972 that official times were recorded to the 100th of a second. In London 2012: London, the Quantum Timer was introduced, able to measure accuracy to one millionth of a second.

In 1964, the competitors' times were first shown live on television, and in 1976 electronic scoreboards used for display of real-time scores. GPS was used or the first time in rowing competitions in 2008, allowing viewers to see the progress as the race progressed. Other sports also had significant changes in timing systems. In the pool, contact plates were first used to time the swimming events in 1968. Other sports required infrared beams to determine finishing times.

4.1.1 Scoring Systems: *There have been some innovations recently for the sport of taekwodo, utilizing technology to get a fairer scoring system and more spectator engagement. In 2012, there were sensors placed in the vests which were activated by magnetic socks to record successful hits. In 2016, there will also be sensors in the headgear. The signals are transmitted by wireless. Fir the first time the athletes will be able to request a video replay during the contest, for whenever there is a doubt on the mat.*

5) Decision making Technology:-

5.1 Assisting the Umpires / Referees:

Most professional sports in the United States have long used instant replay and other high-tech aids to help referees make the right call. Gridiron has used video replay systems to check referees' calls for many years. Basketball referees use replay systems to make sure players are shooting within the time allotted by the shot clock. In international cricket, the third umpire has been used, one sitting off the ground with access to TV replays of certain situations (such as disputed catches and boundaries) to advise the central umpires.

The umpires out on the field are in communication via wireless technology with the other umpire. The third umpire is also asked to adjudicate on run out decisions, which he makes without consultation with the two central umpires. One sport that has resisted the use of high-tech assistance until very recently is soccer/football. Replays could be used to decide off-side decisions, whether a ball passes over the goal line, and clarify penalty decisions.

5.2 Hawk-Eye Technology:

Hawk-eye is the name of a computer and camera system which traces a ball's trajectory. It is being used in international cricket and tennis, and many other sports are also looking at making use of this technology. The system is also being trialled in soccer as part of the goal line assessment. The Premier League of Football in the UK has agreed to the

introduction of goal-line sensors after being given approval by football's rule-makers. The system being developed by the UK company Hawk-Eye, would give a definitive decision on whether the ball had crossed the line. The Hawk Eye uses a camera taking 600 frames a second on the goal-line, with the information is analyzed by computer and sent to the referee's headset or a device on his wrist. In 2015, Hawkeye technology was also used by rugby officials at the 2015 Rugby World Cup, to improve decision-making by the television match official (TMO) and also assist with player safety. In this case it is enhanced video review, rather than the ball tracking technology as used in other sports.

5.3 Sport Specific:

- **Tennis** - it is now standard at the major tennis tournaments for a line review system to be in place, with players given power to review contentious line calls. It is powered by the Hawk-Eye ball tracking system. See more about Hawk Eye for Tennis
- **Soccer / Football** - Soccer is looking at joining the 21st century, looking at various technologies for the goal line to determine if the pass passes over the line or not. See more about Football/Soccer Technology
- **Basketball** - the NBA uses replay vision to review 'last touch' decisions in the final two minutes of games, and also to determine whether players release the ball before the shot clock expires.
- **Cricket** - technology in cricket has been driven by advances in the TV coverage. Things that were once extra information provided by the TV networks are now being incorporated into the decision referral system (DRS), such as hawk-eye and hot spot, and maybe even the old favorite snicko. See more about Cricket Technology.
- **Aussie Rules Football** - umpire review system has also been implemented in AFL, with an off field umpire in certain circumstances adjudicating on whether the ball passes over the goal line or is touched, using video evidence via multiple camera angles. See more about Technology in AFL.
- **Baseball** - In 2014 a challenge system was put in place for the MLB to use replays to challenge certain umpiring decisions. See more about Technology in Baseball.
- **Rugby Union** - In 2015, Hawkeye technology was used by rugby officials at the 2015 Rugby World Cup. The video review technology with synchronised camera views was used to improve decision-making by the television match official (TMO) and also used by medical staff to assist with player safety by identifying possible concussion instances and behind play incidents.
- **Rugby League** - The NRL was an early implementer of using the video referee to help adjudicate questionable tries.

5.4 Computer Software:

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

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

6) Fashion and sports wear:- Collaboration between fashion and sports wear have hit new highs over the last decade. Designers such as Stella Merartney Yohji Yamamoto and Kim

Jones are now joining forces with sports giants, to form successful multinational, multimillion dollars business that explore a previously untapped luxury sports wear market sports and celebrity culture making the sports persons worth millions to the brands they endorse. Advanced development like the computerized Adidas-1 shoe, which adjusts cushioning according to terrain, and Nike i-pod sport which transfers data on speed distance and calories burned from the shoe to an i-pod nano. Such equipment will help the athlete to assess and improve performance.

7) Sports management:-

New management tasks for huge computer system which will help in conducting the mega events like world football championship, Olympic games, etc., such mega events require the cooperation of numerous computers. Activities in this interdisciplinary field were and are strongly affected by development in sports science. Progress in Hardware,

Process Speed, Communication Technologies, Software Tools, Information and Management concepts, Data bases, Data Mining and Media – Internet, e-learning, Multimedia are of essential importance.

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A Comparative Study on Self Concept of Students from B.P.Ed and B.Ed Courses

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Abstract:
" Self concept is the individual as known to the individual "

Morphy, (1974)

Self concept is the keystone of personality. One cannot imagine a person without self. Self is the essence of personality. Self concept in broad terms refers to a person's perception of himself or herself. In today's world of competition there is not even a single individual who is devoid of ambition in some or other form. Students of B.P.Ed. and B.Ed. are future secondary school subject teachers or physical teachers respectively. The goal settings behavior and performance are very important for both as they only bring cognitive, social and physical fitness among students. In the present study, one hundred students self concept scores were collected using Pratibha Deo and Mukta Rani Rastogi self concept scale and their self concept were calculated and tested for stated hypothesis.

Keywords: Self concept, Physical fitness, B.P.Ed. students, B.Ed. students.

Introduction:

Every individual has to acquire and develop knowledge in this competitive world through various means of capacities and their abilities. These abilities have to be developed on the basis of self concept. A great deal of individual variations is found with regard to goal settings behavior. Like other psychological phenomena motivational factors are important to directly individual's behavior consciously and make him strive to perform certain types of activity in order to achieve to a definite goal. Everyone aims at reaching a definite goal or excellence in performance and in doing so she/he sets a desire for distinction which has an inner structure perception of himself or herself known as self concept. An individual efforts and goals his strivings aspiration is largely determined by hold he perceives himself and his surroundings.

His view or picture of himself is his self-concept. Encyclopedia of psychology defines "Self concept as the totality of attitudes, judgements and values of an individual related to his behaviors abilities and qualities ". The self awareness as growth process, which developed in begins person, it changes as he develops confidence, courage, concentration to his success and failure and he should develop self concept interest and involvement in which he wants to be reach the goal. As the above concepts implies self concept is a form of self motivation involving competition with one's own past performance.

Determinants of Self Concept:

Self concept is usually of influenced by two types of factor, Viz., environmental and personal. Environmental determinants are parental ambitions, social experiences, peer pressure culture, social value competition and group cohesiveness. Personal determinants are

wishes, abilities, Interest values etc.

Objectives:

- To measure the self concept scores of B.P.Ed. and B.Ed. students.
- To study the self concept of B.P.Ed. and B.Ed. students with respect to gender.

Testing of Self Concept:

Pratibha Deo and Mukta Rani Rastagi questionnaire have been used to measure self concept. There questionnaire consists of statements it was used to measure self concept. It includes both positive and negative statements. It is a liquet method and each statement consists of five reopens. The respondants were made to make check mark on any one of the response that fit to them best. The scalar was revaluated by the researcher by administering it among one hundred college students. Hence the scale in its original form was made use for this study. The scale was scored with the help of scoring key. A scoring method was followed for positive and negative statements. The scorer obtained for both positive and negative statements were added and it was treated as individual score, the larger the score, higher the self concept score.

Sample for the Study:

B.P.Ed. (N =100)		**B.Ed. (N = 100)**	
50 Male students	50 Female students	50 Male students	50 Female students

Research Methodology:

Statistical Hypothesis:

- There is no significant difference between the means of self concept scores between B.P.Ed. and B.Ed. students.
- There is no significant difference between the mean of self – concept scores between male and female students of B.P.Ed. students.
- There is no significant difference between the mean gain self concept scores between male and female students of B.Ed. Students.
- There is no significant difference between the mean gain self concept scores between male students of B.P.Ed. and Female S.D. of B.Ed. course.
- There is no significant difference between the mean gain self concept scores between female students of B.P.Ed. and B.Ed. course.
- There is no significant between the mean gain concept scores between female students of B.P.Ed. and females students of B.Ed. course.
- There is no significant difference between the mean gain self concept scores male students of B.P.Ed. and male S.D. of B.Ed course.

Discussion on the Findings:

Table – 1

Mean, S.D and 'T' Values of Self Concept Scores of Students:

N= 100	**Mean**	**S.D.**	**Obtained 't' value**
B.P.Ed students	2.33	1.60	
B.Ed. students	2.46	1.61	0.57

The table – 1 shows that students from both B.P.Ed. and B.Ed. course gained almost equal amount of self concept scores mean, S.D. and 't' value at B.P.Ed. and B.Ed. students. The calculated 't' is 0.57, which is less than tabled 't' value at 0.05 level of significance, Hence, the null hypothesis (1) is accepted.

Table – 2

Gender wise self concept scores mean, S.D. and 'T' Values of Students from B.P.Ed. and B.Ed. Courses:

N=50	Mean	S.D.	Obtained 't' value
B.P.Ed. Female students	2.32	1.44	0.60
Male students	2.38	1.72	
B.Ed. Female students	2.72	1.61	1.625
Male students	2.20	1.59	

Table – 2 shows the gender wise mean difference of B.P.Ed and B.Ed courses. The two null hypotheses (2) and (3) stating there is no significant difference between mean self concept scores between Male and Female students from B.P.Ed. and B.Ed. courses respectively. To test there hypothesis 't' test of significance is applied. The results shown that, obtained 't' value statistically insignificant. Hence, null hypothesis (2) and (3) are accepted.

Table – 3

Mean, S.D. and 'T' Values of Self Concept Scores Students from B.P.Ed. and B.Ed Course:

N=50	Mean	S.D.	Obtained 't' value
B.P.Ed. Female students	2.32	1.44	1.315
B.Ed Female students	2.72.	1.61	

The above table – 3 shows that, the male students from B.P.Ed. scored less than B.Ed. female students. And this score is statistically significant at 0.05 level of significance and at 49 degrees of freedom. Hence, the null hypothesis (4) is rejected.

Table – 4

Mean, S.D. and 'T' Value of Self Concept Scores Male Students from B.P.Ed. and B.Ed. Courses:

N = 50	Mean	S.D.	Obtained 't' value
B.P.Ed. Male	2.38	1.72	0.45
B.Ed. Male students	2.2	1.59	

Table – 5

Mean, S.D. and 'T' Values of Self Concept Between Male Students from B.P.ED. and B.ED. Courses:

N = 50	Mean	S.D.	Obtained 't' value
B.P.Ed. Male	2.38	1.72	*1.981
B.Ed. Male students	2.2	1.61	

Table – 6

Mean, S.D. and 'T' Values of Self Concept Between Male Students from B.P.ED. and B.ED. Courses:

N = 50	Mean	S.D.	Obtained 't' value
B.P.Ed. Male	2.32	1.44	
B.Ed. Male students	2.2	1.59	0.395

Similarly, to test the null hypothesis (5) 't' test for significance is applied. To result are shown in Table – 6 there is no significant difference between gained self concept hence the null hypothesis (5) is accepted.

Conclusion:

The overall observation shows that, all students from both the gender have shown to passes almost equal amount of self concept scores except female students from B.Ed course. As mentioned earlier teacher trainees from education and physical education are expected to be motivated to develop higher self concept which is personality qualities such as, positive self concept broader out look, self confidence and many other positive attitudes. As there are the essential qualities for a effective teacher, which is a big need for India's prosperity, as teachers are the back bones of the country.

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A Study of Effects of Yogic Activities on Women's fitness and Health

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Abstract:

This paper will highlight the Health benefits of Yoga for Women through the practice of Yoga and explore how Yoga can significantly enhance their health. Yoga is a spiritual science of self-realization. It comes from India and goes back over five thousand of years. The Indian sage Patanjali, in his yoga sutra defines yoga as the control of the activities of the mind; yoga methods encompass the entire field of our existence, from the physical, emotional and mental to the spiritual. Its methods include ethical disciplines, physical postures, breath control, as well as meditation.

Today's woman is much more than her traditional role of a housewife, a mother or a daughter. Her extended roles that foray beyond her four walls, she plays an equal role in the decisions of socioeconomic and political life she leads. She is a multi-faceted, dynamic and uniquely influential part of our society and is forever striving for perfection in every aspect of life. A woman's golden years of life has their unique challenge. With age, the practice of complex asanas reduces. Asanas aimed at improving blood circulation and a healthy nervous system will help the body to extend and eventually fully relax. The aim of yoga at this stage, as always, is to maintain both physical and mental health, therefore bringing about balance and harmony. With continuity, the practice of yoga matures and women learn how to accommodate the physical limitations brought about by increasing age. Regular practice of certain specific asana (postures) provides the body with necessary strength to face the contractions to help ease labor, speed recovery and restore energy levels.

Keywords: Health benefits, yoga, women

Introduction

Practicing yoga regularly can prove very beneficial for women. Yoga can provide innumerable benefits to women like improving reproductive system, helping in natural child birth, giving complete workout to the body. Women's body is fragile and soft. This is a general view and fact. Exceptions can be everywhere and in every field. Women are designed by nature to nurture and take care and so all women are sensitive and soft at heart. On the other hand, she has to be strong from within because she has to undergo the strenuous activity of bearing a child and going through the childbirth. So, every woman has to be strong not only outwardly, she should have a strong system inside also. Yoga asanas prove to be very beneficial for women provided they do the right asanas in the right way. The yogic asanas, in fact, work in such a way that supports the basic systems of the body and boosts the immune system as well. A woman's golden years of life has it's unique challenges. With age, the practice of complex asanas reduces. Asanas aimed at improving blood circulation and a healthy nervous system will help the body to extend and eventually fully relax. The aim of yoga at this stage, astherefore bringing about balance and harmony. With continuity, the practice of yoga matures and women learn how to accommodate the physical limitations brought about by increasing age. Regular practice of certain specific asana (postures) provides the body with necessary strength to face the contractions to help ease labor, speed recovery

and restore energy levels. PostNatal practice of pranayama, or yogic breathing, and practice of gentle and easy Asana helps to restore firmness in the muscle fibers and encourage a continued supply of milk. Today's woman is much more than her traditional role of a housewife, a mother or a daughter. Her extended roles that foray beyond her four walls, she plays an equal role in the decisions of socio-economic and political life she leads. She is a multi-faceted, dynamic and uniquely influential part of our society and is forever striving for perfection in every aspect

Review of literature:

The relevwnt literature available in the subjects especially from books,journals and research papers ect,are reviewed for the study **. Hafner-Holter, Kopp and Gunter (2009)** conducted a study on Effects of fitness training and yoga on well-being, social competence and body image. It describes and compares influences from physical activity program and a yoga program on well-being, mood, stress coping, body-image and social competence in healthy people. Statistical analyses show significant improvement in social r the studycompetence in both training groups; the gym-group show a reduction in summarization and body-related anxiety as well as an improvement in physical and emotional well-being. Our findings support the evidence that physical activity in general improves psychological wellbeing, however, gym and yoga seems to have different psychological impacts. Future research should focus on comparing the psychological effects of different physical activity interventions in prevention programmes as well as exercise prescriptions in patients with mental illness. **Javnbakht M., Hejazi Kenari R. and Hisami M**. (2009) stated that Yoga has often been perceived as a method of stress management tool that can assist in alleviating depression and anxiety disorders. This study sought to evaluate the influence of yoga in relieving symptoms of depression and anxiety in women who were referred to a yoga clinic. The study involved a convenience sample of women who were referred to a yoga clinic from July 2006 to July 2007.

Objectives:

i) To Study the yoga on women's fitness and Health.
ii) To study the yoga awareness in house women's, working women's.
iii) To analyze the impact of yoga women's fitness and health.
iv) To make suggestions for further appropriate yoga practices.

Methodology:

This study is based on secondary and primary sources of information. The data has been collected from reliable sources such as published books and journals. The present study is exploratory and analytical in nature. The primary data is collected from women who are practicing yoga for several years and has different age groups. A popular technique known as "survey method" has been adopted and a structured questionnaire for this purpose by keeping all the relevant factors in mind. methodology used was Simple Random Sampling method. The data collected from respondents was analyzed with the help of appropriate statistical modules to draw logical conclusion.

Data Analysis and Interpretation:

Regular ,Time of Yoga and any others forms of exercise

parameters	Working women	House women	Total
Yes	08	12	20
No	27	15	42
Total	35	27	62

From the above table we can say that in working women's regularity of prating yoga is very low.

In case of house women above 50% are regular in their yoga practice .

In all only 30-35% women do yoga regularly .

Types of yoga perform by women.

parameters	Working women	House women	Total
Traditional	08	04	12
Power	00	00	00
Reiki	01	00	01
Total	09	04	13

From the above table we can say working women's and house women chose the tradional yoga mostly.

Kind of health problems

parameters	Working women	House women	Total
Back pain	07	05	12
Lower back pain	07	03	10
B.P.	04	01	05
Obesity	05	02	07
Diabetics	02	02	04
Thyroid	02	00	02
Arthritis	02	02	04
Total	29	15	44

This table show that the major illness in the women is back pain ,lower back pain and obesity There are other illness like B.P. ,Diabetes, Thyroid, Arthritis etc .which are also considerable in numbers.

Positive Effects of yoga on illness

parameters	Working womens	House womens	Total
Yes	10	05	15
No	01	00	01
Total	11	05	16

Above table infors that almost all the womens practicing yoga are the view that yoga has positive effects on their health .

Impacts on stress level:-

parameters	Working womens	House womens	Total
Yes	13	08	21
No	00	00	00
Total	13	08	21

From Above table it can be said that yoga has heals all the womans practicing yoga to reduce the stress level.

Conclusion

After analyzing the data as per the response given by the women both working and house wives

Following conclusion can be drawn.

1 women don't do Yoga regularly and for working women they found it difficult to spare time for Yoga.
House women also not regular but compared to working women are more regular.
2. Most of the do traditional Yoga and very few are practicing other forms.
3. All the women practicing yoga has some illnesses out of which nearly 50% has back pain problem.
4. All the women are of the view that Yoga has helped them in controlling their health issues and had positive effect o their fitness
5. Yoga has also helped in maintaining the stress level according to the response to the research.
6. All the respondent were very of the view that all women should practice yoga for their better health and fitness.

Suggestions

Women are the backbone of the family and it is very important to them to remain fit and healthy so women should exercise regularly and Yoga is best form of exercise.

Although womes are practicing yoga they are not regular so I would suggest that they should be more regular and punctual.

Women should try different Asanas for different health issues.

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Effect of Endurance Training and Pranayama on U/14 Soccer Players

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Abstract:

The actual purpose of this investigation was to find out the effect of Endurance training and Pranayama training on physiological variables on the soccer players. To achieve this purpose the research scholar selected thirty boys randomly as subjects. They were divided randomly into two experimental groups. Group I underwent for Endurance training and group II underwent for Panayama training. Here the group was of fifteen each. All the subjects of these two groups were tested on the selected dependent variable such as VO2max and resting pulse rate before and after the training. The data pertaining to the variables in this study were examined by using dependent ‗t' and analysis of covariance (ANCOVA). Two experimental groups' namely, Endurance training and Pranayama training groups here achieved significant improvement on and resting pulse rate. In view of improvement in VO2max and resting pulse rate was concerned, the conclusion was that Pranayama training was best training when compared to Endurance training.

Introduction:

In day to day life of an individual breathing properly is very important as oxygen is needed by the body to survive. When one trains for endurance by the means of 12min run walk practice his endurance certainly improves which gives them good endurance capacity. If the endurance goes down then it results in fatigue caused by the decrease in blood circulation and insufficient supply of oxygen to the blood cells. We need to breathe slowly and deeply and this should be a regular habit. Quick, shallow breathing by individuals results in oxygen starvation, which leads to significant reduced vitality, premature ageing of an individual, as well as poor immune system and fatigue. Endurance training helps in improving breathing level and increases VO2 Max level of individual but this endurance training is the best training method to improve endurance or any other way exits we need to check by comparing with pranayama technique No one can survive for more than a few minutes without breathing, yet very few us are aware of the importance of proper breathing. On the physiological level, Pranayama was designed by our Yogis. They noticed how the animals, whose breath was slow and steady, like the elephant and tortoise, lived longer. They also noticed that the animals that breathed fast and erratically, like hunting lions or dogs, had a short lifespan. Further, they realized mental control could be achieved by reining in the breath as it linked body and mind. Pranayama also helps to connect the body to its battery, the solar plexus, where tremendous potential energy is stored. When tapped through specific techniques this vital energy, or prana, is released for physical, mental and spiritual rejuvenation. Regular practice removes obstructions, which impede the flow of vital energy

Method:

Thirty u 14 soccer players were selected randomly from steadfast football academy. Selected subjects were divided into two experimental groups. The age of the subjects were ranged from 12 to 14 years. VO2max and resting pulse rate were measured by using Astrond nomogram and radial pulse method.

Procedure

Here during the training period, the experimental groups underwent their respective training programmes for Endurance Training and pranayama training five days per week for

four weeks. Group I here underwent 12 mins run walk training. The duration of training session was one day with 12 minutes approximately, for the boys while 15 minutes for the pranayama group excluding warming up. The pre-test and post-test group design was followed as experimental design for the study. Prior to and after the training program the subjects were tested and data collected as Pre Test and Post Test on VO2max and resting pulse rate. The collected data were analyzed systematically and statistically by using dependent 't' and analysis of covariance (ANCOVA). The level of significance was fixed at 0.05 level of confidence. The summary of means and dependent _t' test for the pre- and post-test on selected variables of ATG and PTG have been given in Table 1. Analysis of covariance on selected variables of ATG and PTG have been given in Table 2.

Table 1

The summary's of means and dependent 't' test for the pre and post test on selected variables and PTG.

Variables	Tests	ETG	PTG
Resting Pulse Rate	Pre Test	73.2	72.4
	Post Test	70.73	68.0
	t-test	6.15	13.13
VO2max	Pre Test	2.46	2.48
	Post Test	2.78	2.65
	t-test	13.46	14.67

Table No 2

Analysis of covariance on selected variables of ATG and PTG.

Variables	ETG	PTG	Source of variance	Sum of square	df	Mean square	F-ratio
Resting pulse rate	7.038	68.35	Between Within	30.712 49.001	1 27	30.712 1.815	16.92*
VO2max	2.79	2.65	Between Within	0.1559 0.1289	1 27	0.1559 0.0047	32.64*

Conclusion:-

From the analysis of the data, the following conclusions were drawn:

1] Due to the influence of the Endurance Training and Pranyama training improved the VO2max and the resting pulse rate.

2] Pranayama framing was identified as the best training method for improving the VO2max and resting pulse rate when compared to the Endurance Training training.

3] Future research may also benefit from long term Endurance Training and Pranayama practice studies.

The current research looks only VO2max and resting pulse rate changes in acute time frames.

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Effect of Concurrent Training Program on Selected Skill Related Physical Fitness Variables of Intermediate Male Fencing Players of Mumbai Suburban Region

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Abstract

An intermediate male fencing player is the one who has learnt the basic movements, basic skills and is going through process of becoming an elite fencing player. Researcher feels that more focus should be given on selected skill related fitness components through concurrent training program which will help players to improve selected skill related fitness components which are required to perform at elite level. The researcher intends to find the effect of this training on intermediate male fencing players of Mumbai Suburban region. Settings and Design:- Thirty intermediate male fencing players were randomly assigned to experimental (n=15) and control (n=15) groups. The experimental subjects underwent concurrent training program which consist of combinational exercises speed, agility and power for six days in a week for twelve weeks whereas control group went through regular fencing training. Materials and Method:- Standardized tests were conducted on both groups pre and post training program to assess the selected skill related fitness components i.e.; speed, agility and power of the experimental and the control group. Statistical Analysis Used:- Data were analyzed by using Paired T-Test test. Results:- The results revealed that effect of concurrent training program helped to improve speed, agility and power as compared to control group. Conclusion:- The findings conclude that effect of concurrent training program helped to improve speed, agility and power of intermediate male fencing players.

Keywords: speed, power, agility and concurrent training.

1. Introduction

Fencing was on the programme of the Games of the first Olympiad in Athens in 1896, and has been on the programme ever since. The different types of weapon used by men are the foil (since 1896), the sabre (since 1896) and the epee (since 1900). Women competed for the first time at the Games of the VIII Olympiad in Paris in 1924. The foil was the only weapon used by women until the 1996 Games in Atlanta, which saw the introduction of the epee of women. The sabre of women featured on the programme for the first time at the Games in Athens in 2004. The present study is aimed at developing skill related fitness components of intermediate fencing players in order to become an elite player. The intermediate fencing player is the one who has developed interest for the game and has learnt basic skills, stance, stepping as well as basic rules and regulations of the game. The skill related physical fitness consists of power, speed, agility, reaction time, coordination and balance. Concurrent training involves training various modalities (strength, power, speed, a, r t, m end) at the same time in order to see an improvement in fitness as well as performance of a player. Concurrent training program is combination of exercises focused upon developing components or variables which the researcher intends to find out. In other words concurrent training refers to a training program that incorporates, or integrates multiple types of

combinational exercise together into a single program. So the researcher has included combinational exercises in this concurrent training program which is focused on developing fencing specific movements and fitness.

2. Objectives of the Study

- To see the effect of Concurrent Training on Speed of Intermediate Male Fencing players.
- To see the effect of Concurrent Training on Agility of Intermediate Male Fencing players.
- To see the effect of Concurrent Training on Power of Intermediate Male Fencing players.

3. Hypotheses of the Study

H_1 : There will be a significant difference in Speed of the experimental group of Intermediate Male Fencing players.

H_2 : There will be a significant difference in Agility of the experimental group of Intermediate Male Fencing players.

H_3 : There will be a significant difference in Power of the experimental group of Intermediate Male Fencing players.

4. Materials and Method

4.1.*Population and Sampling:*

Fifty (n=30) Intermediate fencing players were identified as subjects from Mumbai Suburban region.

4.2. *Research Design: (Experimental design pretest/post-test)*

The design of the experiment had been planned in three phase's viz., Phase – I: Pre-test, Phase – II: Training or Treatment, and Phase – III: Post-test. The subjects in the experiment were divided into two groups one experimental group and one control group; each group consisted of 15 subjects. Experimental group was given concurrent training program consist of combinational exercises of speed, agility and power for the period of 12 weeks, six days in a week except Sundays and holidays, for 60 minutes in the morning session. The selected skill related fitness components are speed, agility and power. Pre and Post tests were conducted on speed, agility and power administering standardized tests such as 30 m Acceleration Test, Shuttle Run Test, Standing Broad Jump and Medicine Ball Throw Test respectively on the selected Intermediate male fencing players.

4.3.*Statistical Analysis* :

Since, there were two groups for this experimental study viz. Experimental and Control group, wherein the researcher has decided to compare Mean Scores of selected skill related physical fitness variables speed, agility and power in order to see the effect of concurrent training program. Paired t-test was appropriately used for the data analysis.

5. Results and Discussion

Table no. 1 : Mean scores of Speed of Experimental Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	< .0001
0.1376	+6.86	24		two- tailed	<.0001

From table no. 1 it is seen that there is a significant difference of 0.1376 in the mean scores of Speed of the experimental group. The calculated t score is + 6.86 and the degree of freedom is 24. The calculated one-tailed and two tailed score is 0.001 in the experimental group.

Table no. 2 : Mean scores of Speed of Control Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	0.180816
-0.0056	-0.93	24		two- tailed	0.361632

From table no. 2 it is seen that there is no significant difference between the mean scores of Speed of the control group. The calculated t score is -0.93 and the degree of freedom is 24. The calculated one-tailed is 0.180816 and two tailed score is 0.361632 in the control group.

Table no. 3 : Mean scores of Agility of Experimental Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	< .0001
0.284	+3.95	24		two- tailed	<.0001

From table no. 3 it is seen that there is a significant difference of 0.284 in the mean scores of Agility of the experimental group. The calculated t score is +3.95 and the degree of freedom is 24. The calculated one-tailed and two tailed score is 0.001 in the experimental group.

Table no. 4 : Mean scores of Agility of Control Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	0.3142915
0.004	+0.49	24		two- tailed	0.628583

From table no. 4 it is seen that there is no significant difference between the mean scores of Agility of the control group. The calculated t score is +0.49 and the degree of freedom is 24. The calculated one-tailed is 0.3142915 and two tailed score is 0.628583 in the control group.

Table no. 5 : Mean scores of Power (Leg) of Experimental Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	< .0001
-0.0764	-7.94	24		two- tailed	<.0001

From table no. 5 it is seen that there is a significant difference of -0.0764 in the mean scores of Power (Leg) of the experimental group. The calculated t score is -7.94 and the degree of freedom is 24. The calculated one-tailed and two tailed score is 0.001 in the experimental group.

Table no. 6 : Mean scores of Power (Leg) of Control Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	0.026791
-0.014	-2.03	24		two- tailed	0.053582

From table no. 6 it is seen that there is no significant difference between the mean scores of Power (Leg) of the control group. The calculated t score is -2.03 and the degree of freedom is 24. The calculated one-tailed is 0.026791 and two tailed score is 0.053582 in the control group.

Table no. 7 : Mean scores of Power (Hand) of Experimental Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	< .0001
-0.2308	-5.65	24		two- tailed	<.0001

From table no. 7 it is seen that there is a significant difference of -0.2308 in the mean scores of Power (Hand) of the experimental group. The calculated t score is -5.65 and the degree of freedom is 24. The calculated one-tailed and two tailed score is 0.001 in the experimental group.

Table no. 8 : Mean scores of Power (Hand) of Control Group

Mean $_a$ - Mean $_b$	t	df	p	one-tailed	0.1636435
0.0096	+1	24		two- tailed	0.327287

From table no. 8 it is seen that there is no significant difference between the mean scores of Power (Hand) of the control group. The calculated t score is +1 and the degree of freedom is 24. The calculated one-tailed is 0.1636435 and two tailed score is 0.327287 in the control group.

6. Conclusion

Effect of Concurrent training program consist of twelve weeks of combinational exercises of Speed, Agility and Power intervention has potential benefits to improve skill related fitness components Speed, Agility and Power of Intermediate male fencing players of Mumbai Suburban region.

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Role and Impacts of Yoga for Human Excellence

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Abstract

Despite our own true nature which is blissful, people usually become far too distracted with their own mind and body and material objects. They lose sight of this fundamental truth. This false identification makes us feel imperfect, limited, sorrowful and at a loss. Yoga seeks to provide people with a way to cast off this ignorance and become aware of their true divine Self. The goal is to free a person from those imperfections and to unite him or her with their Supreme Universal Self '. The drive for such a way of happy life is not an indiscriminate instinctive drive of an animal-man. The drive is featured by discrimination, right understanding of happiness and harmony and a calculated adoption of a suitable value system congenial to the accomplishment of increasing happiness. The drive and the norms are prescribed by the Universal law.

Introduction

The natural state of the body is health. Every smallest part and function has one overriding biological aim ,to seek and restore health at all times .wounds heal ,bones mend .fevers abate, toxins are removed ,fatigue is repaired-we have at our command a miracle of Bio-engineering which should last us into a peaceful and healthy later life .The most remarkable feat of balance we perform each day is simply standing upright on two feet .The present paper tries to solve this problem by proposing a home based simple technique that uses the combination of aerobics and yoga. Except when the body is going through hormonally influenced biological changes, a yoga practice for women can consist of the same postures as those practiced by males. Women tend to have more open hips and greater flexibility then men, while men tend to have more strength than women.

YOGA - Definition:

Yoga means joining of two i.e., mainly "body and mind'. The harmonious relationship between mind and body is called 'Yoga'.

Body and Mind:

Body is visible where as mind is in visible. We see the body, but we can't see the mind. Body is an instrument and mind is a remote. Without remote the instrument can't function. If the body and mind are not in sync, it is called absent-mindedness (paradhyanam). People hear but can't grasp. Hearing is body's work, grasping is mind's work. Mind, which is important should not be aloof from the body.

Mind - Brain:

Scientifically the brain controls is the entire body. Let us see what is the difference between the mind and the brain or intellect.

Mind occupies the entire body where as brain occupies the head (skull). The electro-magnetic waves of the brain, is called the mind. Brain also is one of the human parts of the body along with others. Brain sends messages to the body, taking information from various limbs of the body. For such communication of messages energy is required. That energy is called the electromagnetic energy. The the electromagnetic wa\ es is i mind.

Role of Yoga in Health and Fitness

Yoga take place main role in three areas that is

- Physical

- Psychological and
- Spiritual

Yoga and Woman's Life Stages

A regular yoga practice is beneficial in every stage of life. When an individual goes through changes, such as those associated with pregnancy, menstruation, or menopause, illness or injury, yoga helps them approach life with more equanimity. Yoga practitioners with depression, eating disorders, arthritis, or bone loss find that yoga can contribute to their healing. Special sequences of poses are available for a wide variety of health conditions. Puberty brings hormonal challenges, and yoga can help young women transition gracefully into adulthood while loving themselves and their bodies at the same time, being more attuned to the self. In menopause, yoga helps deal with emotional imbalance and hot flashes that some women experience. After menopause, women can expect better posture with a more upright and flexible spine, and more mobility into old age.

Yoga for Menstruation

Women are cyclic in their nature and physiology. Most sequences of poses for menstruation include supported forward bends. Forward bends quiet the brain and are perfect for this time in which one typically feels like going inward. For health reasons, it is suggested that you avoid doing inversions during menstruation. Some women also avoid standing poses or backbends at this time. Having a regular practice with a variety of yoga poses for the rest of the month is recommended for women, keeping them healthy, fit and emotionally centered. A lifelong and daily practice will cultivate the many health benefits and spiritual growth possible with yoga throughout all stages of life.

Physical	Psychological	Health
Weight Management:	Stress	Asthma:
Flexibility:	Concentrationand Sharpness:	High Blood Pressure:
Strength	Emotion	Physical Benefits
Endurande	Aggression	Blood Pressure
Balance	Anxiety	Diabetes

Physiological and Physical Benefits

Reduced sympathetic dominance/increased parasympathetic activation. Reduced blood pressure. Reduced resting heart rate, Reduced cholesterol. Reduced blood glucose levels. Improved lipid profile Decrease in inflammatory markers, Improved endothelial function. Decreased body weight, Reduced waist-hip ratio, Increased strength, Increased core stability. Improved balance, Improved lung function. Improved breath control, Improved immune system function, Reduced muscle tension, Reduction in chronic pain, including lower back pain

Mental Benefits

Aside from the physical benefits, one of the best benefits of yoga is how it helps a person manage stress, which is known to have devastating effects on the body and mind. "Stress can reveal itself in many ways, including back or neck pain, sleeping problems, headaches, drug abuse, and an inability to concentrate. Yoga's incorporation of meditation and breathing can help improve a person's mental well-being. "Regular yoga practice creates mental clarity and calmness; increases body awareness; relieves chronic stress patterns; relaxes the mind; centers attention: and sharpens concentration,'" Many men and women are resorting to pills and surgeries to alleviate these symptoms Yoga poses pressurize and depressurize specific glands. These subtle compressions and decompressions can regulate

secretions.

1. Regulate your hormones. Hormone imbalances affect how you look, sleep and feel. Yoga's focus on breathing, meditation and poses has a positive effect on the endocrine system and helps balance hormones when they're off kilter.
2. Balance your body. The brain, nervous system and endocrine system all work together to move your body: The brain commands the action, the nervous system carries the message and the endocrine system is responsible for long-term body maintenance using glands and hormones. Yoga keeps the systems fluid and balanced.
3. Power your master gland. Certain yoga poses stimulate the pituitary gland. The pituitary gland, the "master gland," produces hormones that power other endocrine glands. This gland is responsible for growth hormones, which stimulate the thyroid gland and adrenal gland. But it also releases endorphins that soothe the nervous system and decrease feelings of pain.
4. Sleep better. The pineal gland excretes the melatonin hormone that regulates sleep patterns. Certain yoga poses stimulate the pineal gland.
5. Improve mood and relieve anxiety. Get your GABA on! Boston University School of Medicine researchers say yoga is a better anxiety reliever and mood lifter than other exercise after a study compared gamma-aminobutyric acid (GABA) levels of yoga practitioners and walkers. Depression awl anxiety are linked to low GABA levels.
6. Mitigate menopause. With menopause comes fluctuating hormones, which can disrupt your sleep, pack pounds onto your belly, make you grumpy and kill your sex drive. But studies ha\e shown that yoga can help. Yoga can ease the symptoms of menopause from hot flashes to night sweats - e\en memory loss.

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Yogic Exercises for Psycho Physical Fitness of School Children

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Abstract

Children have lots of energy and active mind. To channelize their energy and bring about focus in their mind, yogic exercise is better for them. Because of modern science and technology, school boys have become lazy through luxurious life style, not putting much effort in sports and physical fitness. According to Ayurveda, human body consists of three **gunas; rajas, tamas and sattav.** These gunas are some time activated in our self. So some boys behave in different manner in their self image, attitude, personality. Each **gunas** have different function that is **rajas- hyper active, passionate, greed, attachment, tamas- confusion, stupidity, anger, vulgarity, pain, sattav- fondness for comfort, intellectual, simplicity, steadiness, love, truthfulness**.

Two groups participated in this study. The design followed in this study was parallel group design, classifying the subjects in to experimental and controlled groups. The fitness variables tested were; Sit and reach test for flexibility, Shuttle Run for Agility, Emotional Maturity, and Anxiety. The asanas given were Bhujangasana, Dhanurasana, Halasana, Padmasana, Pashchimottanasana, Tarasana, Trikonasana, Sarvangasana, Veerasana, and Shavasana.

From the analysis of the data available it was found that variables like Sit & Reach and Anxiety showed significant improvement at 0.01 level whereas Shuttle Run and Emotional Maturity did not show improvement significantly.

Introduction

So many school children are rushing towards gym, doing yoga, participating in sports to become fit and healthy. Today children have lots of energy and active mind. To channelize their energy and bring about focus in their mind, yogic exercise is better for them. The ever increasing expectation and the need to consistently perform, puts every individual under mental stress, thereby leading to multiple health related problems. According to Ayurveda, human body consists of three **gunas; rajas, tamas and sattav.** These gunas are some time activated in our self. So some boys behave in different manner in their self image, attitude, personality.

According to Yoga, concentration is holding the mind on to some particular object. Meditation is the most powerful mental & nerving tonic. The divine energy freely flows like the flow of Oil from one vessel to another. Meditation for half an hour will be able to face daily battle of life with peace & spiritual strength. Yogic practices are supposed to reduce the high activation level and psychophysiological disequilibrium and also contribute to steadiness, psychomotor coordination and emotional stability (Bhole, 1983; Digambarji & Kokaji, 1970; Karambelkar, 1981). In fact, Yoga works at the conscious level for awakening awareness (Bhole, 1989) which, in turn, claims to improve concentration.

The objectives behind the study were:

- To study the effect of yogic exercise on psycho physical fitness level.
- To study the effect of yogic training on emotional balance and physical fitness of school boys.
- To find out the status in which the school boys lacking in psycho physical fitness.

The logical interpretation, stated above, and available research literature help to hypothesize that the selected yogic exercises may be useful in improving the psycho and physical fitness variables of school children.

H_1: Yogic exercise with regular schedule in daily training programme would contribute to improve physical fitness variables of school children.

H_2: Yogic exercise with regular schedule in daily training programme would contribute to improve psychological variables of school children.

- The study is delimited to male school children only.
- The study has been conducted on age group of school children aged 14 to 16 years.
- The study has been delimited to the basic physical fitness.
- The study has been delimited to the selected psycho fitness components.
- Specific 'training schedules' of exercises on the basis of the principles of yoga have been specifically designed.
- The total duration of experimentation was restricted to 6 weeks only.

Methodology

Two groups participated in this study. The design followed in this study was parallel group design, classifying the subjects in to experimental and controlled groups. The researcher selected 60 male students from school in Mumbai district. Researcher selected fitness components like; flexibility, and Agility whereas psychological variables were Anxiety and Emotional Maturity. Training of selected asanas were given to the subjects of experimental group only. They were Bhujangasana, Dhanurasana, Halasana, Padmasana, Pashchimottanasana, Tarasana, Trikonasana, Sarvangasana, Veerasana, and Shavasana.

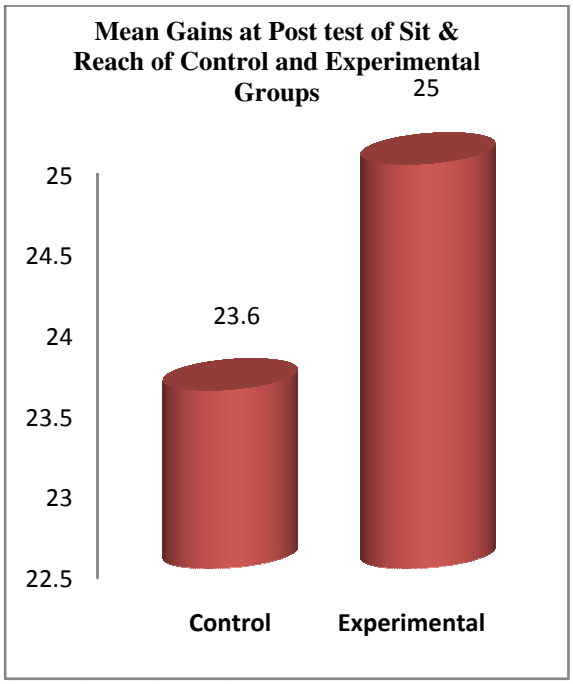
The data were analyzed using the 't' test as suggested by Mc Guigan for significance of differences between the control and experimental groups. The analysis was done by SPSS 11.5 (a software statistical package).

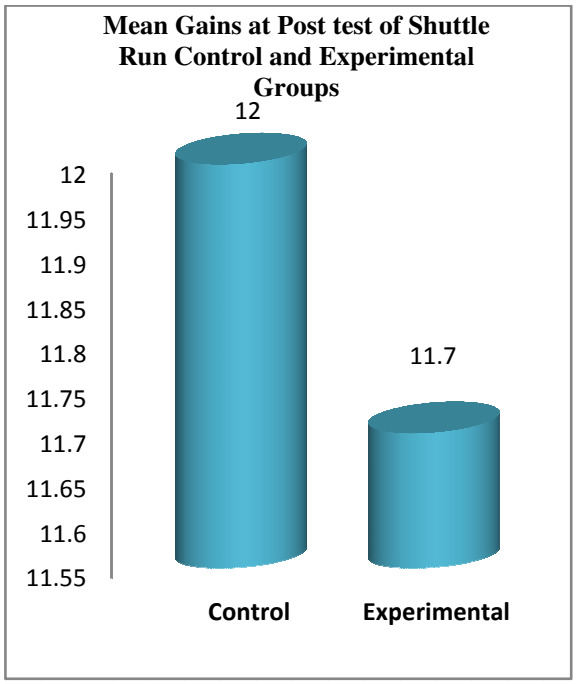
MEAN GAINS IN POST TEST OF SELECTED FITNESS COMPONENTS OF CONTROL AND EXPERIMENTAL GROUPS

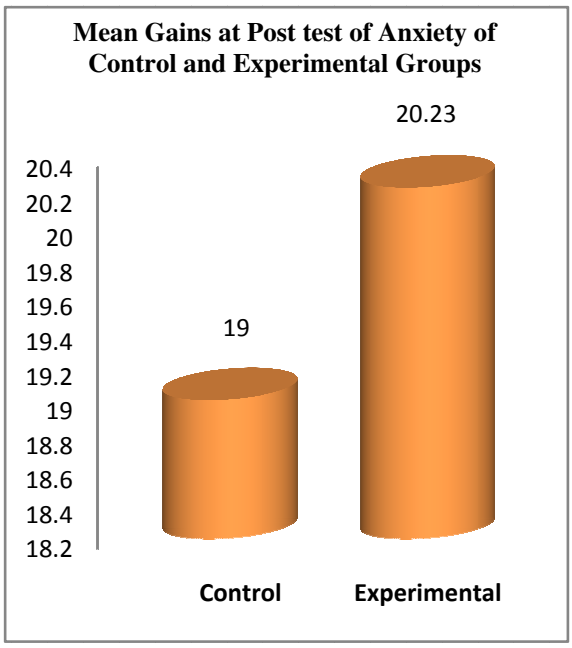
VARIABLES	GROUPS	MEAN GAIN	DIFFERENCE	SEm	t'	Significance
Sit and Reach	Control Vs Experimental	23.6/25.0	1.40	0.46	3.04	p<0.01
Shuttle Run	Control Vs Experimental	12.0/11.7	0.30	0.26	1.15	p >0.05
Anxiety	Control Vs Experimental	19.0/20.23	1.23	0.49	2.51	p<0.01
Emotional Maturity	Control Vs Experimental	20.4/21.2	0.80	0.63	1.27	p>0.05

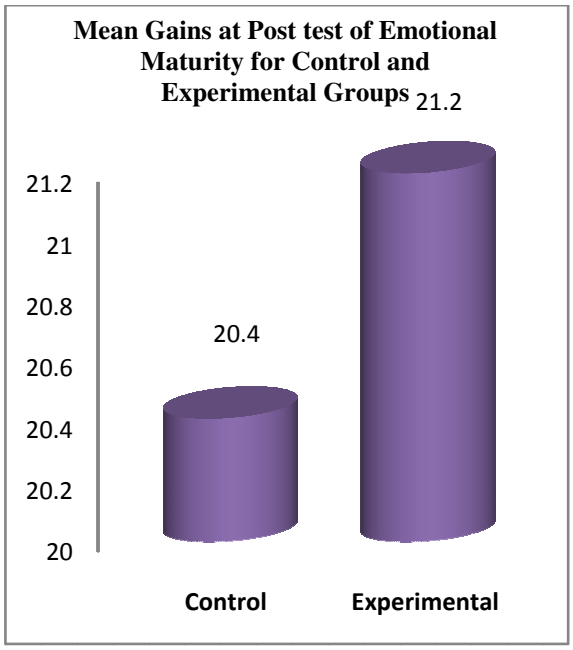
Findings

It can be seen from the table that when the mean gains at post tests for control and experimental groups were compared and analyzed, only Flexibility (Sit and Reach), and Anxiety (Questionnaire) showed significant improvement at 0.01 level. The other two variables Agility (Shuttle Run), and Emotional Maturity (Questionnaire), improved but not significantly. This can be presented graphically also.









Conclusion

It is clearly seen from the graph that flexibility and Anxiety have shown significant improvement which means that selected set of yogic exercises have shown some effect on flexibility and Anxiety, whereas Agility and Emotional Maturity did not show significant improvement which shows that further research can be undertaken by changing the yogic exercises.

Therefore it is recommended that selected set of yogic exercises are useful only for flexibility and anxiety which can be included in the training schedule for fitness of school students, also further study can be conducted on female students as male and female differ from each other in physical as well as psychological fitness.

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Yoga for Physical Fitness

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Introduction :

Invadic Sanskrit, the all the more ordinarily utilized, strict significance of the Sanskrit word yoga which is "burden", "to join", "to join together", or "to append" from the root Yuj, as of now had a significantly more metaphorical sense, where the burdening or outfitting of bulls or steeds goes up against more extensive implications, for example, "work, utilize, application, performance"(compare the non-literal employments of "to bridle" as in "to put a remark utilize"). Every further improvement of the feeling of this word are post-vedic. More dull temperaments, for example, "effort", Endeavor", "enthusiasm" and "diligence"are likewise found in Epic Sanskrit.

Importance of Yoga

Yoga is a conventional strategy for contemplation created by the holy people of old india. They honed yoga as a successful technique for controlling their psyche and substantial exercises. Yoga in Daily life is an arrangement of work on comprising o eieht levels of improvement in the zones of physical, mental, social and otherworldly health.When the body is physically solid, the brain is clear, centered and push is under control. This gives the space to associate with friends and family and keep up socially solid connections. When you are sound you are in contact with your internal identity, with others and your surroundings on a much deeperlevel, which adds to your otherworldly wellbeing. Yoga builds the adaptability of the spine, enhances bodys physical condition and increased attention to the significance of relaxion. It was been accentuated that each activity be rehearsed gradually, organizing development with the breath, pusing still in each position and dependably with full fixation.

Games people require grouping of psyche to perform talented exercises. As of now No activity consolidates the upside of mental and physical exercise. Along these lines a solid interrelationship amongst yoga and games should be produced. An endeavor is being made to move towards this action. For instance: Carrom, Archery, Chess, Billiards and so forth.

Benefits of Yoga:

The benefits of yoga are extensive. Not only does yoga affect the physical aspect of the body, it addresses the mind and sprit as well. Daily exercise are a great way to help relieve the stress of your day and can bring a sense of well being to your life. Here are the benefits of yoga :-

- Preventing bodily injuries.
- Weight Management
- Flexibility
- Total body awareness
- Better Posture
- Better Breathing
- Increased Strength
- Anxiety and depression levels decreases
- Increases concentration
- Improved Circulation

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- Inner Peace
- Greater mind control Cardiovascular Conditioning
- Stress Relief
- Pain Relief

Conclusion:

In Vedic Sanskrit, the more commonly used,literal meaning of the Sanskrit word yoga which is "yoke", "to join", "to unite", or "to attach" from the root yuj, already had a much more figurative sense, where the yoking or harnessing of oxen or horses takes on broader meanings such as "employment, use application, performance". All further developments of the sense of this word are post-vedic. More prosaic moods such as "exertion", "Endeavour", "Zeal" and "diligence"are also found in Epic Sanskrit. The benefits of Yoga are very far reaching indeed. There is no one other exercise avenue you can take that will address all of these issues in one simple session. For those of you that think yoga is too easy, I encourage you to try one class. You may find it is just what you are looking for.

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Application of Marketing in Sports Industry in India

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Abstract

The subject matter of this paper is to focus mainly on application of marketing with reference to the sports industry in India. As it is pretty difficult to study all marketing practical's which have been utilized by this sports industry in particular, the scope of this paper is confirmed to general marketing application have been used in sports industry. The objective of this paper is to address the development of marketing in sports industry in India. This needs to trace the history to begin with and the whole journey since independence period of Pre-1991 era and Post 1991 era up to date. To facilitate the reason and objective of this paper writing, the study is divided into two parts i.e. marketing of sports equipment, materials, gears, apparels etc and the atmosphere of sports in India

Introduction

If we trace back the history of sports industry in India one will be surprised to know that India has been producing, exporting and marketing sports equipment and utilities since last century. Indian producers had introduced the stitched football to the world. Since then we have been producing and marketing, exporting sports goods such as football, field hockey, cricket bats and balls, sports wears. Well we were not the only producers in Asia countries like China, Japan and Pakistan had also started to make impression in the sports industry. This led to the quality competition amongst the nation. Along with these Asian countries there were Western counties also made the competition tuff. This led to the importance of marketing in sport industry worlds wide. In this 20th century it is very important to remember that product of high quality and marketing must be even better.

Marketing

Marketing is an art and science too. Production, Advertising and Selling are activities marketing. In fact marketing is a wide concept in which many activities are under taken. Marketing essentially starts with knowing the need and connect to the customer. Therefore marketing is a complex phenomena but obviously a key to success especially in this digital and cutthroat competitive world.

Sports Marketing Structure

The first step in marketing is to know your probable customer and the need of the customer and then go back to production and produce the product according to the requirement of the customer.

Tools- ***Techniques to Implement the Principles***
Principles- ***General rule and guide line of sports marketing***
Process- ***The series of steps to complete a sports marketing plan outline in sport marketing frame work***
Philosophy- ***Satisfy the needs of the sports consumers Cultivate the relationship between the sports brand and the consumers***

Sports Marketing Frame Work

1. Identifying Sports Marketing Opportunities ***Analyse Internal and External opportunities*** ***Analyse Organization*** ***Analyse Market and Consumer***
2. Develop a Sports Marketing Strategy ***Develop Strategic Marketing Direction*** ***Develop Sports Marketing Strategy***
3. Plan The Sports Marketing Mix ***Product*** ***Price*** ***Plan*** ***Promotion*** ***Sponsorship*** ***Service***
4. Implement and control sports marketing strategy ***Implementation Strategy*** ***Control Process*** ***Sports Marketing Ethics***

Sports Marketing Principles

1. Marketing is more than promotion, advertising, personal selling or sales gimmicks.
   Marketing aims to create an exchange where the customer gives up something for a product or service.
2. Sport marketing is the process of planning how a sport brand is positioned and how the delivery of its products or services are to be implemented in order to establish a relationship between a sport brand and its consumers.
3. Sport marketing has two angles: one is the marketing of sport products and services, while the other is marketing through sport.
4. The philosophy of sport marketing is to satisfy the needs of sport consumers.
5. The process of sport marketing is the series of steps required to find opportunities, devise strategy, plan the tactics, and implement and evaluate a sport marketing plan.
6. Sport marketing can be described as a philosophy (an attitude towards marketing), a process (a series of activities), a set of principles (general rules and guidelines) and tools (recommended techniques).
7. The principles of sport marketing provide the rules and guidelines for the implementation of the Sport Marketing Framework process, while the tools of sport marketing are specific activities designed to help execute the principles.
8. The Sport Marketing Framework provides a detailed explanation of the four stages of the sport marketing process:

(i) identify sport marketing opportunities;
(ii) develop sport marketing strategy;
(iii) plan the marketing mix
(iv) implement and control the strategy

Conclusion

We can conclude herewith the opinion that this industry has been growing and will grow further and as India, because of its population and best investment avenue for world investor's our country is at centre stage and point of focused; sports marketing and sports industry will increase and flourish in the future in India and Worldwide

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Drug Addiction and Yogic Practices

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What is drug addiction?

Addiction is a chronic, relapsing brain disease defined by a physical and psychological dependence on drugs, alcohol or a behavior. When an addictive disorder has formed, a person will pursue their toxic habits despite putting themselves or others in harm's way. It is considered a brain disease because drugs change the brain they change its structure and how it works. These brain changes can be long lasting, and can lead to the harmful behaviors seen in people who abuse drugs. When people take substances, they're seeking a certain experience, whether it's escapist or transcendental or just wanting a different psychological state, to get away from whatever is making them unhappy. Addiction is a lot like other diseases, such as heart disease. Both disrupt the normal, healthy functioning of the underlying organ, have serious harmful consequences, and are preventable and treatable, but if left untreated, can last a lifetime.

What Is Addiction?

An addiction heavily impacts the way a person thinks, feels and acts. Many individuals with addictive disorders are aware of their problem, but have difficulty stopping on their own.

While it can be tempting to try a drug or addictive activity for the first time, it's all too easy for things to go south especially in the case of drug and alcohol abuse. When a person consumes a substance repeatedly over time, they begin building a tolerance. A tolerance occurs when you need to use larger amounts of drugs or alcohol to achieve the same effects as when you started. Prolonged substance abuse can result in a dangerous cycle of addiction where a person needs to continue using drugs or alcohol in order to avoid the uncomfortable symptoms of withdrawal. By the time a person realizes they have a problem, drugs or alcohol have already seized control, causing them to prioritize its use over everything else that was once important in their lives.

No one ever plans to become addicted. There are countless reasons why someone would try a substance or behavior. Some are driven by curiosity and peer pressure, while others are looking for a way to relieve stress.

Other factors that might steer a person toward harmful substance use behavior include:

Children who grow up in environments where drugs and alcohol are present have a greater risk of developing a substance abuse disorder down the road.

Genetics

Research estimates that genetics account for 40 to 60 percent of a person's likelihood of developing a substance use problem.

Mental health disorders

Teens and adults with mental disorders are more likely to develop substance abuse patterns than the general population.

Addiction and the Brain

Excessive substance abuse affects many parts of the body, but the organ most impacted is the brain. When a person consumes a substance such as drugs or alcohol, their brain produces large amounts of dopamine, which triggers the brain's reward system. After

repeated drug use, the brain is unable to produce normal amounts of dopamine on its own. This means that a person will struggle to find enjoyment in pleasurable activities like spending time with friends or family when they are not under the influence of drugs or alcohol.

Why do people take drugs?

In general, people begin taking drugs for a variety of reasons:

- **To feel good.** Most abused drugs produce intense feelings of pleasure. This initial sensation of euphoria is followed by other effects, which differ with the type of drug used. For example, with stimulants such as cocaine, the "high" is followed by feelings of power, self-confidence, and increased energy. In contrast, the euphoria caused by opiates such as heroin is followed by feelings of relaxation and satisfaction.
- **To feel better.** Some people who suffer from social anxiety, stress-related disorders, and depression begin abusing drugs in an attempt to lessen feelings of distress. Stress can play a major role in beginning drug use, continuing drug abuse, or relapse in patients recovering from addiction.
- **To do better.** Some people feel pressure to chemically enhance or improve their cognitive or athletic performance, which can play a role in initial experimentation and continued abuse of drugs such as prescription stimulants or anabolic/androgenic steroids.
- **Curiosity and "because others are doing it."** In this respect adolescents are particularly vulnerable because of the strong influence of peer pressure. Teens are more likely than adults to engage in risky or daring behaviors to impress their friends and express their independence from parental and social rules.
- **Early Use.** Although taking drugs at any age can lead to addiction, research shows that the earlier a person begins to use drugs, the more likely he or she is to develop serious problems.[8]This may reflect the harmful effect that drugs can have on the developing brain; it also may result from a mix of early social and biological vulnerability factors, including unstable family relationships, exposure to physical or sexual abuse, genetic susceptibility, or mental illness. Still, the fact remains that early use is a strong indicator of problems ahead, including addiction.

Is continued drug abuse a voluntary behavior?

The initial decision to take drugs is typically voluntary. However, with continued use, a person's ability to exert self-control can become seriously impaired; this impairment in self-control is the hallmark of addiction. Brain imaging studies of people with addiction show physical changes in areas of the brain that are critical to judgment, decision making, learning and memory, and behavior control.[7] Scientists believe that these changes alter the way the brain works and may help explain the compulsive and destructive behaviors of addiction.

No single factor determines whether a person will become addicted to drugs.

Why do some people become addicted to drugs, while others do not?

As with any other disease, vulnerability to addiction differs from person to person, and no single factor determines whether a person will become addicted to drugs. In general, the more *risk factors* a person has, the greater the chance that taking drugs will lead to abuse and addiction. *Protective factors*, on the other hand, reduce a person's risk of developing addiction. Risk and protective factors may be either environmental (such as conditions at home, at school, and in the neighborhood) or biological (for instance, a person's genes, their stage of development, and even their gender or ethnicity).

What environmental factors increase the risk of addiction?

- **Home and Family.** The influence of the home environment, especially during childhood, is a very important factor. Parents or older family members who abuse alcohol or drugs, or who engage in criminal behavior, can increase children's risks of developing their own drug problems.
- **Peer and School.** Friends and acquaintances can have an increasingly strong influence during adolescence. Drug-using peers can sway even those without risk factors to try drugs for the first time. Academic failure or poor social skills can put a child at further risk for using or becoming addicted to drugs.

Yoga practice in drug addiction recovery

There are many methods available to treat substance abuse and addiction, from traditional, to alternative. More and more programs are focusing on a "whole person" or holistic approach and variety of methods and tools to help achieve, maintain, and enhance recovery.

Yoga is an alternative, a positive way to generate a change in consciousness that, instead of providing an escape, empowers people with the ability to access a peaceful, restorative inner state that integrates mind, body, and spirit.

Yoga is a complementary, or adjunct, health practice that is often considered a natural form of medicine. Adjunct means "in addition to," and not "in place of." Yoga is often beneficial when used in tandem with other traditional substance abuse treatment methods.

Yoga as the use of physical postures to learn how to connect mind, body, and breath to gain self-awareness and focus attention inward.

Yoga has many potential benefits, including:

- Stress relief
- Increased physical stamina and strength
- Self-reflection and increased self-awareness
- Healthier exercise and eating habits
- Heightened self-confidence and improved self-image
- Pain relief
- Better sleep
- Increased energy levels
- Reduction in fatigue
- Emotional healing
- Overall health and wellness improvement

Yoga is increasingly being used in substance abuse treatment programs and throughout recovery to help prevent relapse, reduce withdrawal symptoms and drug cravings, and provide a healthy outlet to cope with potential triggers and daily life stressors. One of the great things about yoga is that doesn't require expensive equipment or a special location, it can be practiced pretty much anywhere at any time as needed. Yoga is an ancient technique designed to bring mind and body closer together with the use of exercise, meditation, and breathing. Focus on achieving specific postures while controlling breathing in certain ways. By posing the body in a specific way, the flow of energy is said to be opened as the spine and other parts of body are properly aligned. This allows the mind to open up, creating, balance between mind and body.

When someone abuses drugs or alcohol regularly, some of the pathways in the brain are altered, and the pathways related to feeling pleasure, regulating emotions, making sound

decisions, and controlling impulses may be negatively affected. After a period of time without the influence of drugs or alcohol, brain chemistry and circuitry can heal and rebuild itself. Yoga may be able to help with this as well. Yoga has long been used to help relieve stress, and scientific evidence has provided a link between practicing yoga and the reduction of stress by modulation of the stress response. When a person feels stress, heart rate, blood pressure, respiration, and body temperature increase. Yoga may actually act on this system by regulating and balancing some of the stress hormones like cortical and adrenaline,

In meditation technique can learn to sit quietly and calm the body and mind with the breath, and experience feelings of peace and comfort. The goal is to give addicts the skills they need to learn in order to tolerate the uncomfortable feelings and sensations that can lead to relapses.

Yoga is a technique that uses physical postures and controlled breathing to lengthen and strengthen the spine, increase flexibility, calm the mind, improve concentration, and promote patience. Yoga can also contribute to a greater sense of control in more acute states when experiencing cravings, insomnia, agitation, etc. Regular practice is needed to fully experience these benefits.

Yoga is an ancient Hindu philosophy that focuses on and combines physical, mental and spiritual aspects of an individual. This is achieved through different exercises know as yoga poses (asanas). However, the true nature of yoga comprises more than just the physical exertion of the postures and the mental concentration of meditation. Since most meditation practices involve management of the mind's energy and impulses, practitioners of yoga and meditation experience greater mood stability in the face of outside pressures. Having a calm mind and being mentally stable can contribute to the avoidance of self harming behaviors and activities, like substance abuse.

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Sports Marketing and Industry

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Abstract:

Sports marketing is a growing division of the marketing field that focuses on the business of sports and the use of sports as a marketing tool. Sports marketing professionals enjoy a wide variety of employment opportunities, including positions with universities, corporations, media outlets, sporting equipment manufacturers, retailers and public relations agencies. Schools offering Education - Sports Management degrees can also be found in these popular choices.

Sports marketing is a subdivision of marketing which focuses both on the promotion of sports events and teams as well as the promotion of other products and services through sporting events and sports teams. It is a service in which the element promoted can be a physical product or a brand name. The goal is to provide the client with strategies to promote the sport or to promote something other than sport through sports. Sport marketing is also designed to meet the needs and wants of the consumer through exchange processes. These strategies follow the traditional four "P"'s of general marketing Product, Price, Promotion and Place, another four "P"'s are added to sport marketing, relating to the fact sports are considered to be a service. The additional 4 P's are: Planning, Packaging, Positioning and Perception. The addition of the four extra elements is called the "sport marketing mix."

SPORTS MARKETING OVERVIEW: The sports marketing industry has become a billion dollar industry. It now includes such diverse revenue streams as sports equipment manufacturing, advertising, ticket and concession income, athlete endorsements and product merchandising.

Important Facts About Sports Marketing:

Possible Careers	Event coordinator, public relations assistant, marketing representative
Key Skills	Creativity, ability to meet deadlines, communication and interpersonal skills
Degree Levels	Associate's degree, bachelor's degree
Degree Fields	Sports marketing and management, business administration
Common Courses	Facility management, event planning and promotion

Education for Careers in Sports Marketing: Many schools across the country offer undergraduate programs in sports marketing or a concentration in this field through a business or marketing program. Along with core business courses, students can expect to take field-specific classes like sports marketing research or sports law and ethics. Most programs also offer opportunities for internships, independent study and community projects that reflect the student's individual career goals and interests.

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Potential Career Industries in Sports Marketing

Careers in sports marketing can follow hundreds of different paths. In this field, it may take quite a while to progress from entry-level to advanced positions. Businesses that employ sports marketers include the following:

- Corporate sponsors
- Sports facilities
- Media outlets
- Sporting goods retailers
- Marketing and public relations agencies
- Sports equipment manufacturers
- Schools, colleges and universities
- Government tourism offices
- Leagues, teams and sports associations

Sports marketing is an element of sports promotion which involves a wide variety of sectors of the sport industry including broadcasting, advertising, social media, digital platforms, ticket sales, and community relations.

Sports marketing is divided into three sectors. The first is the advertising of sport and sports associations such as the Olympics, Spanish Football league and the NFL, as well as sport teams like Real Madrid and the New York Yankees. The second concerns the use of sporting events, sporting teams and individual athletes to promote various products. The third category is the promotion of sport to the public in order to increase participation.

In the first case, the promotion is directly related to sports. In the second case, the products can but do not have to be directly related to sports. When the promotion is about sports in general, the use of this kind of strategy is called "Marketing of Sports." When the promotion is not about the sports but sports events, athletes, teams or leagues are used to promote different products, the marketing strategy is denominated "Marketing through sports." When the promotion is about increasing participation among the public, it is called "Grassroots Sports Marketing."[3] To promote the products or services, the companies and associations use different channels such as sponsorships of teams or athletes, television or radio advertisement during the different broadcast sports events and celebrations, and/or advertisement on sporting venues.

"Street marketing of sport" considers sport marketing through billboards on the street and also through urban elements (street lighters and sidewalks, etc.) to help promote and gain publicity during major worldwide sporting events such as the Football World Cup, the Olympic Games, or the Super Bowl.

Sports Fans: Sports fan are crazy! Like all sectors of business, sports relies on market segmentation to effectively market itself. Sport fans differ according to a number of attributes including motivations to attend sporting events, emotional attachment, economic attachment, identity, and loyalty. These attributes also make sports different than other forms of entertainment as sport fans behave differently than consumers of other products and services.

Types of sports: With such an array of differences of sports fans, different types and levels of sports are found across the globe. For example, in many countries cricket and soccer are extremely popular while in the United States football, baseball, and basketball are most favored while college sports are also preferred. In addition to the classification of sports by levels, sports have also been classified as either mainstream or non-mainstream, also known as niche.

Fans also hold different expectations of different sport types and levels of sports, which is essential for sport marketers to understand. For example, fans attending a minor league baseball game will compare their experience to previous games attended at minor league baseball games, or even other minor league sports if they have little experience with minor league baseball.

Sport differentiation is also important concerning sponsorship. Companies who sponsor niche sports place the most importance on attributes including cost effectiveness, spectator demographics, and the company fit with the sport image. Niche sports often allow companies who cannot afford to sponsor mainstream sports a channel to market their companies. Also, with niche sports shown to attract a different type of consumer, these companies desire to increase their public awareness within a specific target market. Other attributes important to companies sponsoring niche sports are enhancing both their image and community involvement, which may be easier to do through niche sports than mainstream sports.

Benefits of sport marketing: The benefits of sports marketing are wide-ranging. Stakeholders involved in sports include leagues, teams, athletes, and fans as well as cities and countries hosting sporting events. The media and businesses who promote their products and services through sports also receive benefits. Direct benefits to leagues, teams, and athletes include revenue from tickets, media rights, and sponsorships. Cities and countries also receive revenue from taxes, and all of the stakeholders gain from the exposure provided through sports**.**

New challenges for sports marketing: With millennials switching to new platforms to access sport, the role of traditional media and sports marketing is changing. Outmoded inflexible contracts can leave little budget for the all-important activation, and with fans choosing rival unofficial channels for gossip and insider information, the rewards can be hard won. New and accessible ways to view sports, from mobile to social to VR, means there is less incentive for fans to attend events in person, while more expectation is placed on sports stars to pull off an authentic natural voice for their brands.

The marketing of sports teams and events: According to different authors and organizations the marketing of sports events and teams is defined as "Designing or developing a 'live' themed activity, occasion, display, or exhibit a sporting event to promote a product, a team, cause, or organization. Which in other words it can be defined as follows: The marketing of sports events and teams is the marketing strategy which is designed or developed a "live" activity, which has a specific theme. Mostly this kind of strategy is used as a way to promote, display or exhibit different things, such as a sports team, a sport association among others. There are different events that can clearly exemplify this concept, such as the Super Bowl, the Olympic Games, the UEFA Champions League, the World Marathon Majors, and the FIFA World Cup.

Major sports brands compete to link up with the best marathons in the world, the test for excellence in 'running', in what is a genuine showcase for strengthening its marketing strategy to its target audience. Adidas, Asics and Nike are dividing the market into the 'World Marathon Majors', the international athletics competition created in 2006 that brings together the most prestigious marathons on the planet. They are not title but technical sponsors, but these runs are popular and are not to be missed events for these brands, which create specific advertising campaigns to one of the few competitions that brings together professionals and amateurs under the same chrono.

The marketing of products through sport: 'Marketing through sport' is a concept that's been used since the 1980s, but has increased in importance in the last two decades due to the growth and expansion that the different types of sports have enjoyed since then. "Marketing through sports" it is a marketing strategy that can be used in sports in two different ways. First, the use of marketing and promotion can be carried out through the sport or through the sports club. In the first case, the use of marketing is under responsibility of the different sporting associations, while in the second case, the responsibility falls on the different sports clubs. In this manner, marketing and promotion through the sport and through the club involve sponsorship, corporate events and boxes, licensed merchandise, names and images also known as "endorsement", advertising through broadcaster, advertising such as advertising as ground signage/clothing/equipment advertising, promoting games, promoting using players/club/league or developing 'business opportunities.' The peculiarity of sports is that "sport is the only entertainment where, no matter how many times you go back, you never know the ending." This singular fact is used by marketing companies as an advantage: every time the audience attends an event it will see the advertisements again and again, providing a wide range of opportunities for the different companies which operate on this field.

The promotion of sport to the public to increase sport participation: Grassroots sport marketing is part of the field of marketing known as social marketing. This refers to marketing something that is of benefit to the public, and is normally done by government or charities rather than private sector organizations. It is normally done with a much smaller budget than marketing of sports teams and event or marketing of products through sports as it does not bring any direct financial benefit. Although this marketing normally drives people to clubs where they will pay to play sport it still needs to be subsidized in order to be run. The money therefore comes from local councils with a remit to increase participation or from public health sector which wants to decrease the cost of disease.

Examples of the promotion of sport to increase participation is the United States Golf Association's initiatives to increase golf participation as well as MLB's One Baseball campaign, which attempts to unify baseball organizations at all levels with the overall goal of increasing youth participation and consequently creating new fans.

Relationship Marketing in Sport: Relationship marketing encompasses the notion of preserving customers through the success of long-term reciprocated contentment by an organisation and their customers. Sport businesses need to communicate and participate in discussion with their customers in order to create, sustain and improve relationships. Existing studies offer insightful information into relationship marketing and the general consensus that sport businesses can benefit from its use. In many situations, sports marketing affairs include some sort of relationship marketing, where clubs, organisations, fans and athletes have relationships with one another that are dependent on the successful management of those relationships. In order for sport businesses to be successful in their goals, they should view their customers as partners for life rather than here and now consumers, and attempt to understand their ever-evolving needs, desires and values. By doing so, sport businesses are able to maintain and enhance their fan base easier than through the more commonly used short-term transactions such as merchandise and ticket sales, with the use of social media enabling this to be practiced much more effectively.

Social Media and relationship marketing in sport: Used as global communication and interaction channel, social media has changed the conventional offline business to

customer relationship into a tool that enables customers' engagement into an instantaneous and active back-to-back conversation. Customers are increasingly incorporating social media within their daily lives and using it as part of their communication mix. Today, sport businesses can use social media to actively listen to their customers, recognise and follow their specific needs and wants rather than use out-dated methods of data collection such as surveys and focus groups, which do not provide rich information to better understand customers. It allows sport businesses to keep their customers updated on the latest news and information as well as interacting with them on an individual basis.

As well as sport businesses benefiting from the use of social media in the context of relationship marketing, customers also experience the same level of benefits. Social media enables sport businesses to involve customers in the marketing process by receiving feedback and ideas, which can then be implemented in future products and services. By doing so, sport businesses emphasise the engagement between organisation and customer, and reinforces the importance that customers hold in the brand building process.

Sport marketing through social media: Professional leagues, teams, and athletes have begun using social media as part of their marketing strategy in recent years. The most popular social media platforms are Facebook and Twitter, but athletes and teams have begun using sites including Instagram and Snapchat. Like all business, the advantages of social media use in sports include building brand awareness, reaching a large audience in an easy and cost-effective way as well as creating brand advocates and engaging passionate sport fans. Numerous examples exist within sports of athletes and teams using social media well to execute their strategy.

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Effects of Global Warming on Sports

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Abstract:
Sports and recreation are vulnerable to the impacts of climate change and extreme-weather events. Millions of athletes, from children to professionals, play sports that are directly impacted by weather and climate. A number of athletic facilities and infrastructure are in low-lying, flood-prone regions. Extreme weather and climate change can affect the health and performance of athletes and pose risks to spectators and event staff.

The effects of weather on sport are varied, with some events unable to take place while others are changed considerably. The performance of participants can be reduced or improved, and some sporting world records are invalid if set under certain weather conditions. While outdoor sports are most affected, those played indoors can still be impacted by adverse or advantageous weather conditions.

Keywords: Global warming, sports, physical education, climate change, extreme weather events.

Global warming-

The temperature of the earth is rising at nearly twice the rate it was 50 years ago. This rapid rate and pattern of warming, scientists have concluded, cannot be explained by natural cycles alone. The only way to explain the pattern is to include the effect of greenhouse gases (GHGs) emitted by humans. There are several greenhouse gases responsible for warming, and humans emit them in a variety of ways. Most come from the combustion of fossil fuels in cars, factories and electricity production. The gas responsible for the most warming is carbon dioxide, also called CO2. Other contributors include methane released from landfills and agriculture (especially from the digestive systems of grazing animals), nitrous oxide from fertilizers, gases used for refrigeration and industrial processes, and the loss of forests that would otherwise store CO2.

Different greenhouse gases have very different heat-trapping abilities. Some of them can even trap more heat than CO2. A molecule of methane produces more than 20 times the warming of a molecule of CO2. Nitrous oxide is 300 times more powerful than CO2.

Other gases, such as chlorofluorocarbons, or CFCs (which have been banned in much of the world because they also degrade the ozone layer), have heat-trapping potential thousands of times greater than CO2. But because their concentrations are much lower than CO2, none of these gases adds as much warmth to the atmosphere as CO2 does.

The greenhouse effect

Earth's climate is the result of a balance between the amount of incoming energy from the sun and energy being radiated out into space.

Incoming solar radiation strikes Earth's atmosphere in the form of visible light, plus ultraviolet and infrared radiation (which are invisible to the human eye), according to NASA's Earth Observatory.

Ultraviolet (UV) radiation has a higher energy level than visible light, and infrared (IR) radiation has a lower energy level. Some of the sun's incoming radiation is absorbed by the atmosphere, the oceans and the surface of the Earth.

Much of it, however, is reflected out to space as low-energy infrared radiation. For Earth's temperature to remain stable, the amount of incoming solar radiation should be roughly equal to the amount of IR leaving the atmosphere. According to NASA satellite measurements, the atmosphere radiates thermal IR energy equivalent to 59 percent of the incoming solar energy.

NATURAL CAUSES VS. HUMAN CAUSES

Earth's historic climate changes have included ice ages, warming periods and other fluctuations in climate over many centuries. Some of these historical changes can be attributed to changes in the amount of solar radiation hitting the planet. A drop in solar activity, for example, is believed to have caused the "Little Ice Age," a period of unusually colder climate that lasted from about A.D. 1650 to 1850, according to NASA. However, there is no evidence that any increase in solar radiation could be responsible for the steady increase in global temperatures that scientists are now recording, according to the National Oceanic and Atmospheric Administration (NOAA).

Heat stress from the environment can be detrimental to sporting performance, challenging the limits of the human cardiovascular system, temperature regulation and altering body fluid balance. As the world warms, one often overlooked issue is climate change's influence on sports and recreation. While not as life-threatening as extreme weather or as costly as droughts, the impact on sports is something that's becoming increasingly common. Athletes are uniquely aware of the connection between health and performance, and how conditions impact health. Players win when they push their bodies to the limit, which makes them more susceptible to changing environments. Heat can affect you pretty badly. It can cause dehydration and this will impact sporting performance largely. Another thing is that heat can make you feel really tired and can sometimes give players the drive to give up. Dehydration is a big problem as you get headaches, dizziness and sometimes loss of consciousness. Humidity and heat can cause this if you don't get enough electrolytes or water. Dehydration is a big problem in sport. It can cause severe headaches and dizziness. This can be caused if too much water or electrolytes are lost. Heat and humidity are major causes of this So heat can be a large factor, but not as big as the next one. Lightning is one of the biggest problems in sport. This can cause the sport to be cancelled therefore affecting sporting performance as athletes aren't able to compete in the first place. This doesn't seem like a big one but this can affect sailing, open water swimming and most other water sports. If an athlete is open water swimming and there is a current, then it can be either very easy or very hard depending on the direction. If they are swimming with the current, they don't really have to do anything but if it is against them, only the best could finish the race. Pollution is a buildup of unwanted materials. It can be a problem but in a lot of sports, doesn't bother anyone or isn't even there. In AFL games, there isn't much pollution as they are pretty vigilant when it comes to litter. They have a lot of bins but people litter anyway. The only way it could affect the players is if something got onto the field but the security won't let things into the stadium that could be thrown onto the field such as cans and plastic bags. The only big problem on pollution would be in the water. If there are nasty chemicals then it can cause disease or even death among athletes. This is the main problem within pollution. Latitude has an average amount of impact on athletes. It depicts how hot it is and all the other weather conditions. If you are below the equator which we are, depending on how far down you are, you may have extreme heats or snow. This is measured on the latitude lines. Landforms are natural forms in the land. They don't play a huge role in affecting performance. One role, however, is if you

are on a mountain let's say. As the altitude increases, the air gets thinner so breathing becomes harder. So if an athlete was playing sport or climbing a mountain at altitude, they will have trouble breathing so will not perform at their best.

THE NEGATIVE EFFECTS OF COLD TEMPERATURE ON PERFORMANCE-

Low temperatures put a greater load on your metabolism - As temperatures fall, so blood pressure increases as blood is taken away from the skin surface increasing the amount in the core. This puts extra strain on the heart. Think of it as the same volume of fluid flowing through narrowed pipework.

As the body loses more heat, it has to work harder to maintain a stable temperature by generating more heat. The most easily and quickly metabolized fuel, glucose, is used for heat generation first over use for muscular contraction.

COLDER MUSCLES ARE LESS EFFICIENT MUSCLES –

It's a simple case of the effect of temperature on chemical reactions, when it is cooler, reactions take place more slowly, the rule of thumb is a halving of reaction rates for a 10C (18F) fall. Muscular contraction is a series of chemical reactions. When we think of our "normal body temperature" this actually means the core temperature, brain, heart and major organs, this is what we keep constant. The rest of the body works on a "nice if we can" basis. Ideally the whole body is kept at "body temperature" but as the temperature falls it becomes increasingly difficult to do this for all parts and so those parts furthest from the core cool down most as they are losing the most of the valuable heat. Arm and leg muscles in particular are affected by falling temperatures.

Too much fast twitch activity and not enough slow twitch leads to extra lactate production.

Muscles have a mix of fast-twitch and slow-twitch fibers, in normal aerobic exercise the slow fibers which have much greater stamina do most or all of the work. For short bursts of energy, the fast fibers get brought in for extra speed and/or power. When muscles operate less efficiently due to colder temperatures it's a case of "all hands on deck" for the muscle fibres. Fast twitch muscle fibers that wouldn't be needed much of the time at higher temperatures have to help out to generate the required power at lower temperatures. These fast twitch fibers produce lactic acid that the slower ones wouldn't if they were working more efficiently. Lactic acid means an increased metabolic load on the body which means less efficiency and getting into oxygen debt which has to be paid at some point, either by stopping or reducing output. Colder muscles mean less efficient, weaker muscles with less stamina.

INCREASED DANGER OF PULLING MUSCLES –

Warming up before exercise is important to prevent pulling muscles, low temperatures mean that muscles cool down faster and are more difficult to warm in the first place.

SLOWED REACTION TIMES DUE TO COLD NERVES –

Nervous impulses in a similar manner to muscle contraction are the result of a string of complex chemical changes. As the temperature falls those chemical changes take place more slowly and so reactions (responses) are slower.

CARBOHYDRATES ARE USED UP MORE QUICKLY, SO STAMINA DECREASES–

Carbohydrates are the body's preferred fuel, readily and quickly metabolized and mobilized from stored glycogen in the liver and muscles. As energy consumption increases in cold conditions, so these energy stores are used up more quickly. Fat and protein oxidation for energy are not increased in the same manner as carbohydrates, taking longer to be mobilized.

The net result is that available energy stores are depleted more quickly in cold conditions so decreasing stamina.

Hydration - When it's warm and you sweat, it makes you feel thirsty as a reminder to replace the lost fluid. In the cold, this mechanism doesn't work so well and counter-intuitively it can be more likely to become dehydrated when exercising in cold than hot conditions. It doesn't help that cold drinks in cold conditions aren't that tempting, especially when compared to a refreshing cold drink in the heat.

There is usually significantly less water loss from sweating in the cold. Water loss from breathing however is significantly increased. Warm air holds much more water vapor than cold air, so when warm air is breathed in it has a lot of moisture already. When you breathe in cold air, it has less moisture of its own on the way in, even if external conditions are quite damp. It's nice and warm inside your body and so the air gets warmed up and topped up with moisture from your respiratory system. The net result is a much less obvious loss of water and less immediate desire to drink to top up. You should be aware of this and make sure you hydrate during exercise in the cold as you would when it is warm.

Exercising in very cold conditions especially below freezing point can pose problems with cold related injuries such as frost nip, frost bite and hypothermia.

Research consistently shows how many different types of sporting performance can be negatively affected due to warm-hot environmental temperatures. Whilst the detriments to performance may seem slight, in many cases it is these very small decreases in sport performance that can see someone come 2nd rather than winning or missing out on a well-earned personal best by a few seconds.

Revised climate projections released last week by CSIRO and Bureau of Meteorology predict that by 2030, temperatures could be 1.3C above the average for 1986–2005. By 2090, temperatures in Australia could be 2.8C to 5.1C higher if greenhouse gas emissions remain high, while the frequency of days above 35C and 40C is set to increase.

Since 2001, the number of extreme heat records for daytime maximum temperatures in Australia have outnumbered extreme cool records by almost three to one, and very warm months have increased fivefold over the past 15 years. 2013 and 2014 were Australia's hottest and third-hottest years, respectively.

Effect of heat

Heat is lethal for people exercising

The heat risk from exercise is affected by weather conditions such as temperature, humidity, wind speed and sun exposure, and by other factors including exercise intensity and duration, fitness level, and acclimatisation. Problems arise when the body generates more heat than it can offload to the external environment, causing core temperature to climb.

Almost 80% of energy produced by muscles is heat, and intense physical activity can increase heat generation tenfold. At rest, the body's normal core temperature is between 36.2C and 37.2C. Physiologists warn that if the body reaches beyond 39.2C, exercise must be stopped and cooling initiated, although body temperatures of 40C have been recorded in elite athletes.

Acclimatisation and fitness increase heat tolerance, but not indefinitely. Ultimately, hyperthermia results in reduced heart performance, low blood pressure, and the risk of organ damage and death.

During a football match heat is lost through the evaporation of sweat however. Whilst performing there is constant competition between the muscles and the skin for a limited blood

supply to provide oxygen to the muscle and facilitate heat loss at the surface of the skin, therefore meaning that the body has a reduced ability to decrease and maintain its temperature.

Football players, athletes, cyclists, and other sport performers can reduce the effects of a hot climate by consuming an adequate amount of fluid before, during and after competition or training to avoid the unpleasant consequences of dehydration. Acclimatisation should be a major part of the athlete's plan up to a game or competition so that the individual can adapt to the environment adequately. It is recommended that 10-14 days of acclimatisation is needed for a good adaptation period. Usually this is done by going to the actual place the competition will be held and performing shorter and easier training sessions at the beginning and building upon it in time for the main event. Roy Hodgson however, likes to take his own spin on things by having the players wear three layers of clothing during practice and doing gruelling exercise bike sessions in a heat chamber to mimic the heat and humidity of the forthcoming matches.

If you look at the science, Isner is right. In very dry conditions, humans can be physically active outdoors in temperatures of up to 104°F, but in humid conditions, the cutoff drops below 86°F because it is harder for the body to cool itself through sweating and evaporation. When the combination of heat and humidity becomes too high, continued exposure to heat leads to heat illness. As climate change drives temperatures higher and makes heat waves more frequent, we can expect to see more risks to athletes, from professionals to high schoolers.

As long as the temperature remains within a reasonable range, our body can counteract an increase in body temperature by producing sweat. Through the evaporation of sweat, heat is then transferred to the environment. The regulation of increased heat production is also made possible through blood distribution. In this scenario, heat is transported by the blood to the outer surface of the skin, allowing it cool.

For non-compensible heat stress, it is no longer possible for the body to compensate for the increase in heat production, via necessary heat dissipation. This creates an increase in body temperature, which ultimately leads to the loss of our athletic performance. No matter how hard you try, you will simply not perform at your best under such conditions.

Conclusion

- We are biologically predisposed to provide for our offspring and may try to ensure that this provision continues after our death. However, our interactions with other members of society are wide-ranging and many people leave legacies to benefit the wider community.
- All species alter their environment to some extent because they do not live in isolation from one another. The study of the interactions between plants, animals and their environment is known as ecology.
- The relationships between plants and animals can be expressed as food chains and food webs. In both cases the primary producers are plants and they provide all the energy within the system (chain or web) by a process called photosynthesis. The systems can support fewer carnivores than herbivores because energy is lost from one trophic level to the next. This idea is shown diagrammatically as the pyramid of numbers. Because relationships within a food web are variable and complex we cannot accurately predict the effect of losing one species from the web.
- Human activity has been responsible for some extinctions and other deleterious changes to habitats. These changes have not always been the result of thoughtless or selfish

behaviour; often intentions were worthy but outcomes were not as predicted. The importance of genetic diversity is demonstrated here in relation to Dutch Elm disease. The need to retain genetic diversity in plants, used for food and medicine, is recognized in such initiatives as the Kew Millennium Seed Bank Appeal.

Pollution damages organisms, including ourselves. The link between air pollution and health is hard to quantify. It has to be extrapolated from epidemiological studies and is complicated because susceptibilities vary. Many pollutants are produced by industrial processes and it is expensive to reduce their emission into the environment. There are also difficulties in predicting the long-term effects on climate of airborne pollutants such as CFCs and carbon dioxide. These scientific uncertainties, together with the financial constraints, make it difficult to obtain international cooperation to reduce emissions. Not all pollutants are byproducts of industry; some, such as pesticides and certain plastics, were developed to improve the quality of life.

We humans need to "heal" the earth. Global Warming have causes many problem for human but we human who make global warming happens. Many people have died because of disease or disaster. It also affects the economics of the country. However, we need to be reduce the global warming by using less gasoline, recycle and human should help to reduce global warming instead of making the earth temperature increased. Our generation should start taking care of the earth because in the next generation they will suffer if we do not do reduce global warming. Therefore, global warming is a serious issue now. As a business student we are learning it because we need to understand the effect of climate change that will affect us when we have our business and we can start saving the earth.

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Career Opportunity for Women in Physical Education & Sports

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Abstract

Women's opportunities for competitive physical activity were limited became law. It required society to recognize a woman's right to participate in sports on a plane equal to that of men. Prior to 1870, activities for women were recreational rather than sport-specific in nature. They were noncompetitive, informal, rule-less; they emphasized physical activity rather than competition. In the late 1800's and early 1900's, women began to form clubs that were athletic in nature. Efforts to limit women's sport activity continued as they became more involved in competitive sports. A history of women's involvement in sport prior to the federal legislation enacted to eliminate sexual discrimination in education and sport.

Certainly, women engaged in sport and physical education three millennia ago. Homer, c 800 B.C., relates the story of Princess Nausicaa playing ball with her handmaidens next to a riverbank on the island of Scheria. "When she and her handmaids were satisfied with their delightful food, each set aside the veil she wore: the young girls now played ball; and as they tossed the ball…" (Homer, lines 98-102). Odysseus was awakened by the shouts of the girls engaged in their sport. Thousands of years later, the shouts of girls playing ball finally awoke the United States to the need for sport-specific opportunities for women. The recent years, the department has also focused on Human Rights Education and Health and Physical education. The department undertakes multifarious activities such as development of syllabi, textbooks other instructional materials like handbook, training manuals and supplementary readers with the objective of making social science learning interactive and enriching. Physical education is highly supported by Yogic practice.

In yoga all the physical movements that you need for superb overall physical health, and all the relaxation and meditation techniques to assure mental fitness and health with a minimum of time, effort and expense. Many people do not realize that yoga is an exercise. Yoga is most the exercises are based on natural movements of the body and are for everyone from eight to eighty.

Key words: Physical activity, Women participation, Sports, Career etc.

Introduction

Physical education and sport should be recognized as an integral part of quality education and should be a national priority.

It should be mandatory for every school to provide all students with at least 120 minutes of Curriculum physical education and sport time each week and in the longer term 180 minutes. The public, private and voluntary sectors are available for the general public. The Bangkok conference invites all countries to establish a ten-year strategy starting in 2006 to enhance quality physical education and sport.

The term career refers to a person’s life time sequence of occupations, activities, responsibilities and services performed. Career planning is a step-by-step process that should certainly begin as soon as one gets the first opportunity for educational choice. (Page6-7,)

Purpose Prepares students for various careers in the fitness industry,

including personal training, group exercise instruction, coaching, athletic training, pre-physical therapy, wellness coaching etc.

To understand sports as a career, one needs to take primary cognizance of how sports are viewed in a particular society. Traditionally, sports have been concerned with developing qualities of good citizenship, character- building, and inculcating right attitudes. But in general, sports do not offer an encouraging picture of a 'happy life' in our society, primarily, because academic qualifications are considered more dependable than sports. Second sports have a limited life-span due to its being directly related to one's physical health and energy. The retirement age in active sports is much earlier as compared to the other field. Thus a tendency exists in the society either for an early migration from sports or to give secondary preference to it. Sports in India provide limited career opportunity and thus people refrain from taking any risk. Above all, the major difficulty in finding the right career seems to stem from a significant lack of awareness of job opportunities in today's rapidly changing society. In the background of the present scenario, it is important to examine the total career opportunities that may be available to the individuals having an interest in sports, with or without advanced training or higher education. It is an attempt to identify opportunities for professionals in sports. Whereas an attempt has been made to identify opportunities for professionals in sports some of the essential elements that may help in choosing a career in sports and physical education specially for the women are discussed (Page, 8- 15, professional preparation and career development.)Below:-

1. **Motivational Dynamics: -** The first factor which needs tobe considered is what motivates one to take up sports.
2. **Self-Assessment:-** Every individual is unique characteristically. No matter how much of talent, interest and values one may share with other members. What kind of a person one would like to be some kind of self-assessment is required.
3. **Course of study: -** Choice of career is also dependent on the type of courses available. **Higher secondary level**: - C.P. Ed. A) **Graduate level**: - B.P.Ed, B. Ed. (Physical education), B.Sc. (Physical Education) B) **Post-graduate level**:- Master of Physical Education, M.P. Ed/MPE (Sports Psychology/ Sports sciences/Physiotherapy/Sports medicine etc. There are few more diplomas/degrees also offered leading to other sports careers like **NIS SPORTS COACHING**.

   Till very recently ,careers in sports was mainly focused on teaching and coaching in schools, colleges and universities, but now in view of the special efforts being made by the government and the increasing social consciousness towards sports, greater interest has been generated among the republic. Besides teaching and coaching careers as popular choices, other areas like sports management, sports medicine, sports administration ,sports media, fitness and health recreation, health and fitness management etc. In urban India, the desire to be physically fit and an awareness of concomitant health benefits have stimulated a sizeable portion of society to embark on fitness programmes and engage in a variety of physical activities. Status of sports and Physical education activities in educational programmes stands enhanced; it enjoys the state patronage as an integral part of education.

Professional Experience and Aspiration:- All professional programmes have been designed to teach and coach especially, under informal and non-formal educational settings. As a result, majority of physically active people enter Physical education and sports career mainly with background of sports education for numerous sports-related jobs.

Exploring the Sports world for Career Opportunities:- Developed countries provide a fairly good amount of information with regard to career opportunities through various governmental, non-governmental and professional agencies.

Decision-Making:- Selecting one's career and its objective is one of the major decisions of life. Each individual has the final and sole responsibility for his choice of career, but it need not be a solitary process. One should always be urged to reach out for help.

Counseling and guidance:- Caring people are a magnificent resource. There are always people who are interested in the welfare of upcoming youngsters. Parents, counselors, elders, adults and teachers seem to be pushing the young ones to improve their study and play habits in the right direction, to make better use of time, and to be better prepared to take advantage of career opportunities.

Potential of a career:- After acquiring considerable understanding and factual information concerning one's vocational choice in addition to introspection of one's interest and aptitude ,its most valuable to finalize one's selection of a career in the light of the following criteria:

(1) Sustain interests in the initial choice of a career is must to make it success.
(2) Health status and physical capacities to undertake the duties of the sports careers.
(3) Employment potential and specialization needed needed for sports career must be properly scanned.
(4) Nature of employment for the being temporary, permanent, contractual or part time also affect the information of tentative choices.
(5) Opportunities for professional development and in-service education is a consideration to be taken in to account, since it contributes towards one's life planning for example in sports S
(6) Social acceptability and dignity attached to a particular career should be assessed in reference to its present status and future potential.

INTER –RELATED CATEGORIES OF SPORTS CAREER

International Olympic committee (1999) has presented the following list of sports careers:-

Science and Medicine:

Massage Therapist, sports medicine specialist, Nutritionist, Physiologist,

Sports Psychologist, Personal Trainer/fitness Instructor, and Sports Administrative director.

High Performance:

National team director, Coach, Assistance Coach, Technical Director.

The Business of Sports:

Sports travel/Tours Co-ordinator, Owner/sports manager, Reporter,

University and college athletics:

Athletic director, Budget Officer, Sports and Information Officer, Sponsorship manager, coaches, Trainer/ Athletic Therapist, Strength/ Conditioning coach, Physical Education, Business and Sports, Teacher training.

Recreation, fitness and lifestyle:

Personal Trainer, Fitness Centre director, Aerobics/fitness instructor, Recreation administration.

Sports administration:

Executive director, Program Director, Marketing Director, Communication Director, Sports Consultant.

Professional Sports:

President and CEO, Executive and vice- president, Vice- President, finance-Broadcasting, General Manager, Director of Operations, Team trainer, Professional athlete, Manager marketing and Special events, Umpire/ Referee, Equipment manager.

Sports marketing and Event management:

Sports marketing, Sports personality, director of Public relationship, Manager/ Director Sports.

Career Specific Categories:

Sports as a profession represents two major areas of careers i.e. teaching and non-teaching.

1) **Performance**
2) **Teaching and coaching**
3) **Administration**
4) **Fitness, rehabilitation and therapy**
5) **Sales and business management**
6) **Communications**

EMPLOYEMENT OPPORTUNITIES

Training and coaching:- Teacher, Researcher, coach,

Fitness, Rehabilitation and Therapy:- Fitness leader, Exercise Physiologist, Physician(sports medicine),Athletic trainer, Therapist (corrective, Physical, Dance, Recreation, cardiac.

7) **Adapted Physical Education** :- Sales, management, Performance ,Administrator-General Manager, Director Sports ,Recreation, Intramural/Extramural , Business Administrator .

ELIGIBILITY REQUIREMENTS AND JOB DESCRIPTION

Sports performer, Sports official.

TEACHING AND COACHING CAREERS:-

TEACHING:- Teacher up to High school /Secondary/Sr. Sec.School, Special Physical Education in School/Colleges.

Lecturer/Assist. Prof./Professor in college and University.

Coaching: - School, College, University/ Professional Sector

ADMINISTRATIVE CAREER:-

Sports Director School level, Physical education Director/ Supervisor, School level, Director sports University level, Physical Education Director/ Head of the Departments,

Sports officer/ Services at Arm forces Sector, Government Careers. Etc.

FITNESS CAREER: -

Leader/ Instructor, Sports and Exercise Physiologist, Health/ fitness centers Managers/ director

SPORTS MEDICINE CAREER:-

sports medicine physician, Athletic trainer, Sports nutritionist, Salesperson, Business manager.

COMMUNICATION RELATED CAREERS:-

Sports writer, Sports editor, Sports publisher, Sports photographer/Artist/ Painter, Broadcaster, Sports information Director/ Public Relations Officer, Sports statistician. Yoga

Instructor/ Teacher. Yoga for women can be understood as a set of behaviors that encourages a holistic experience of the body, heart, and mind. It is a process of fully inhabiting ourselves. Mindfulness is an attitude we adopt in which we let go of all motivations to manipulate the moment, and develop the capacity to observe without willful interference. When we include both in our practice, we learn to easily come home to our bodies and minds, regardless of what is happening in us or to us, opening us to a refreshingly authentic intimacy with our lives and ourselves.

As more women sought to become involved in physical activity, they became more competitive. In the late 1800s and early 1900s, e special efforts women began to form informal athletic clubs. Tennis, croquet, bowling, and archery were popular in clubs from New York to New Orleans. Many men's clubs allowed women to become associates and to participate in separate activities, though without according them full status. Parallel clubs in colleges began to appear during this time, but a major difference between the social metropolitan clubs and the college clubs was that the

Latter frequently sponsored coed competition as occasions for social gatherings (Gerber, et al., 1974).

Early college sports for women have been largely unrecognized by historians because competition was within college between students (intramural) rather than between the institutions (extramural). Competitions included intramural, club, and sorority matches, in addition to 'play days'. These were special dates when women competed in sports and activities against students and teams from their schools. By 1936, 70% of colleges surveyed used this as a predominant form of sport participation for women (Hult, 1994).

Women's physical educators were aware of the problems and criticism surrounding men's intercollegiate athletics. They were determined to keep athletics in an educational environment for women. In the early 1900s, the Committee on Women's Athletics (CWA) and the American Physical Education Association (APEA) endorsed programs of broad participation for women (Park & Hult, 1993). This occurred just as the Carnegie Foundation for the Advancement of Teaching produced its 1929 report, *American College Athletics*, reporting that amateurism was being eliminated or modified from athletics at the college level as colleges turned athletics into big business. The report argued that there should be a way to give "athletics back to the boys" (Thelin, 1994). These views were uppermost in the minds of many women's physical educators as they met to organize a governing organization for women's sports. In the 1920s, the Women's Division-National Amateur Athletic Federation (NAAF) was formed to organize intercollegiate competition among women (Park & Hult).

Women were not active in intercollegiate sport until basketball was introduced at Smith College in 1892 (Gerber, et al., 1974). Basketball quickly spread to other colleges, and students began to clamor for intercollegiate play. Women's physical educators opposed such competition because they were not ready to lose control over their programs (as they perceived the men had) (Gerber, et al.). The first intercollegiate competition among women was a scheduled tennis tournament between Bryn Mawr and Vassar. It was canceled because the Vassar faculty did not allow their women's athletes to participate in competition between colleges (Hult, 1994). The honor of being the first teams to compete in women's intercollegiate athletics belongs to the basketball teams of the University of California, Berkeley vs. Stanford and the University of Washington vs. Ellensburg Normal School; they played in 1896 (Gerber, et al.).

Competitive events for college women increased in the early 1900s. The nature of

varsity competition was in conflict with the philosophy of women's physical educators in the 1920s and 1930s, so these events were still uncommon. This philosophical conflict contributed to a lack of support for women's varsity athletics. The NAAF provided a forum for women's physical educators and leaders of women's sports to formalize their beliefs regarding competition for girls and women by issuing a policy statement of the organizations goals for women. The goals were established to "play for play's sake," limit awards and travel, protect the participant from exploitation, discourage "sensational" publicity, and place qualified women in immediate charge of athletics and other physical activities (Gerber, et al., 1974). The motto was "every girl in a sport and a sport for every girl." This position was interpreted by many as negative to competition and, as a consequence, virtually all forms of competitive sport for college women decreased in the early 1900s (Gerber, et al.).

The women's suffrage movement in the late nineteenth and twentieth century resulted in the passage of the Nineteenth Amendment in 1920. The right to vote for women renewed emphasis on women's freedoms. The first feminist movement resulted in modest gains for women in sports and intercollegiate competition, but these gains were negated by the depression in the 1930s. They would remain dormant for almost fifty years (Gelb & Palley, 1987). The depression left millions of Americans out of work, and the resulting campaign to keep women home and out of the work force left the women's movement for broadened equal rights stagnating. The expectations of society were that a woman's place was 'in the home,' which pushed aside the idea that there were psychological and physiological benefits to be gained from involvement in sport. This view remained largely unchanged until the events of the 1940s (Lucas & Smith, 1982).

The 1940s brought war to the United States and millions of men entered the military. Many women joined the military service or left their positions as homemakers to fill the void left in the work force, earning the moniker, "Rosie the Riveter." They demonstrated that they were equal to the task. The self-esteem and self-confidence gained by women during these critical times propelled the movement for women's equal rights. Many women believed that if they could compete successfully in the work force, then they could certainly compete on the athletic fields (Chafe, 1972). World War II also saw the advent of the first woman's professional athletic team. The All-American Girls Baseball League was started in 1943 as an attempt to replace Major League Baseball, which had been canceled due to the war. When World War II ended, organizations for women in sport began to increase as sport became more competitive and intercollegiate and interscholastic competition spread (Gerber, et al., 1974).

In the 1950s and 1960s, the social conscience of America was changing. The push for Civil Rights, which culminated in the passage of the Civil Rights Act of 1964, helped increase the status of women and minorities. A wave of feminist activism was born (Gelb & Palley, 1996). Feminist activism propelled the movement for women's rights forward. The United States became embroiled in the debate for an Equal Rights Amendment. This debate raised the consciousness of those involved in women's sport. Collegiate women seeking greater athletic opportunities moved closer to their goals in 1957, when the long-entrenched official position statement of the Division for Girls and Women in Sport (DGWS) was amended to state that intercollegiate programs "may" exist. In 1963, the DGWS view of women in sport evolved further to state that it was "desirable" that intercollegiate programs for women exist (Gerber, et al., 1974).

In 1966, the DGWS appointed a Commission on Intercollegiate Sports for Women

(CISW) to assist in conducting intercollegiate competitions. In 1967, it was renamed the Commission on Intercollegiate Athletics for Women (CIAW). The women's movement in sport was rapidly moving toward a status more in line with men's athletics. In 1969, a schedule of national championships for women's sports was announced that included gymnastics and track and field. Swimming, badminton.

(AIAW) in 1971. This set the stage for the struggle to control women's athletics in the 1970s between the AIAW and the NCAA (Gerber, et al., 1974).

The increasingly positive attitude toward women in sport carried over into the 1970s (Hult, 1994). The AIAW began the 1971-1972 academic year with 278 charter institutions. By 1981, their membership exceeded 800. Their mission was to "lead and conduct" programs at the collegiate level that were competitive for women (Hulstrand, 1993). The AIWA focused on the female student-athlete's education, not on athletic performance, and thus rejected the 'win or die' attitude of the NCAA. Instead, the AIAW emphasized participation in sport as the most important aspect and de-emphasized winning (Sperber, 1990).

To conclude, it is a fact that today the only thing constant is the ever-changing environment due to technological, political, economic and other such global factors. Hence it is recommended to be well aware of the events affecting the world of sports and Physical Education which has a significant impact on employment and career avenues for women. Such events are usually reported in news papers and news magazines. Planning career for women in sports and Physical Education and Yoga is no doubt difficult, but exciting for all the reasons. This process can change one's entire life.

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Women's Fitness through Yoga

Dr. Pandurang S. Ranmal: Director of Sports,Vasundhara Mahavidyalaya, Ghatnandur, Beed (Maharashtra)

Abstract:
The art of practicing yoga helps in controlling an individual's mind, body and soul. It brings together physical and mental disciplines to achieve a peaceful body and mind; it helps manage stress and anxiety and keeps you relaxing. It also helps in increasing flexibility, muscle strength and body tone. It improves respiration, energy and vitality. Practicing yoga might seem like just stretching, but it can do much more for your body from the way you feel, look and move.

Yoga asanas build strength, flexibility and confidence. Regular practice of yoga can help lose weight, relieve stress, improve immunity and maintain a healthier lifestyle.

Keywords: health, women fitness, yoga.

Introduction:

"Yoga is an invaluable gift of India's ancient tradition. This tradition is 5000 years old. It embodies unity of mind and body; thought and action; restraint and fulfilment; harmony between man and nature; a holistic approach to health and well-being. It is not about exercise but to discover the sense of oneness with yourself, the world and the nature. By changing our lifestyle and creating consciousness, it can help in well being . Let us work towards adopting an International Yoga Day." —Narendra Modi, UN General Assembly, September 2014.

Equally on the shoulders of man and woman. Both desire good health, mental peace and poise in life. Yoga is beneficial to both man and women. Women need Yoga even more than men as the responsibilities thrust upon them by nature are greater than men. They have to undergo three important stages in life-menstruation, pregnancy and menopause.

In these stages physiological changes occur and in each of these a woman has to face problems and internal conflicts. This affects her physical and physiological organs as well as her mind and much of her energy is lost in coming to terms with life during these periods of change. If she chooses to adopt Yogasana and Pranayama as part of her way of life, she can bring perfect balance in body and mind and she will get to know how to conquer obstacles and fulfil her tasks more efficiently without getting disturbed.

The ultimate goal of yoga is, however, to help the individual to transcend the self and attain enlightenment. As the Bhagavad-Gita says, "A person is said to have achieved yoga, the union with the Self, when the perfectly disciplined mind gets freedom from all desires, and becomes absorbed in the Self alone."

Some aspects of yoga are especially supportive for women. In addition to improving how you feel day in and day out, it can also ease symptoms related to hormonal shifts and health crises, such as breast cancer. Yoga also bolsters your mental health and can ease the stress that often comes with the multiple hats women wear at home and at work.

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might seem like just stretching, but it can do much more for your body from the way you feel, look and move.

Why Yoga Is Beneficial For Woman-

Yoga is highly recommended for women in their adolescence. This tumultuous period shapes the entire lifetime of young girls as they undergo major changes in their body and mind. Various asanas of yoga are designed for women at this stage to ensure they adapt to these multiple changes easily and painlessly. For instance, the practice of Pranayama and meditation help calm the restless, fearful and confused teenage mind. The wandering and wavering mind is a result of the physical changes the adolescent body goes through. Asanas such as Dhanurasana and Vajrasana are among those yogasanas that are ideal for women to help them develop a regular and healthy menstrual cycle. Practising these asanas regularly will ensure that women develop muscular strength, avoid obesity and develop healthy reproductive organs by keeping their hormones in balance.

Hormonal Help

It's no secret that hormones can wreak havoc on how you're feeling. Depending on where you are in your cycle, you may have high energy, low energy, mild cramps or be incapacitated with fatigue.

Yoga helps you navigate the most unpleasant feelings of your cycle and ease contractions of the uterus that cause cramps. Moves such as a Reclined Spinal Twist, Seated Twist or Pigeon provide a salve. A restorative practice supports you in times of low energy, while a vigorous flow gets you moving when energy is high

During menopause, yoga can help you deal with the changes your body is going through. It'll teach you to breathe through hot flashes and ease discomfort with restorative poses such as Bound Angle or Reclined Hero. A regular yoga practice helps other unpleasant side effects experienced during this hormonal shift, including insomnia, anxiety, depression and mood swings. Your practice helps with mental focus, so you're less forgetful and may even calm you enough to help level out an erratic menstrual cycle.

Health Crises

Reach out to yoga during a health crises. In addition to easing anxiety and worry caused by poor health, it can actually improve symptoms and help with healing.

Take breast cancer, for example. Women suffer more than 99 percent of the breast cancer cases reported. A yoga intervention during all stages of cancer, from diagnosis to recovery, offers healing and solace. A 2009 study published in the International Journal of Yoga showed a significant correlation between a regular yoga practice and improvements in breast cancer and treatment symptoms, such as vomiting, stomach distress, pain and constipation.

A 2012 study in Cancer showed that breast cancer survivors suffering from persistent fatigue experienced greater energy and less malaise after a 12-week yoga intervention. Yoga can't stop the disease, but it sure can offer assistance if you're afflicted.

Yoga - Perfect for women's peak productive period

Women go through various physical changes during the years of conception and motherhood. Yoga helps optimise productivity for women. Women experience various 'alien' feelings during their pregnancy time; it is important that they achieve and maintain good physical and mental health. It is a difficult task given the various hormonal changes that are sometimes not under their control. Experts have recommended some of the asanas of yoga for women to keep them in peak shape physically and emotionally. Yoga also keeps women

flexible and fit to be able to deliver normally. It ensures that they give themselves an optimal chance to tide over any complications that may occur during pregnancy or delivery.

Yoga in the transitional period

This is one of the toughest ages for either sex but for women the complications are singular. Women experience menopause, weight gain, thyroid problems and other such conditions and ailments. The benefits of yoga for women during this time are substantial. Yoga has great healing powers and can help balance hormones, keep weight in check, help menopause pass smoothly and maintain a healthy digestive system. Pranayama and meditation will help women immeasurably in this difficult and rather tumultous time in their lives.

Anxiety and Stress

Women are far more likely to suffer depression than men, showed research published in a 2015 issue of Psychiatry and Neuroscience. Anxiety and feelings of being overwhelmed also afflict women in great numbers, reports the Anxiety and Depression Association of America. Yoga is instrumental in treating these mental conditions as it helps stimulate feel-good chemicals in the brain, changes thought patterns and helps mitigate the stress response.

Yoga's positive effects on depression and anxiety occur after just a few months. A study published in Complementary Therapies in Clinical Practice in 2009 found that just two months of practicing yoga in a class environment twice per week for 90 minutes notably reduced perceived anxiety in women.

Earlier research published in 2007 in the journal Evidence-Based Complementary and Alternative Medicine showed that yoga offers promise in treating depression, too. The rhythmic breathing and chest-opening poses may have a direct impact on uplifting women's moods.

Posture and Appearance

Yoga teaches body awareness and engagement of muscles you might otherwise forget about. As a result, yoga helps you naturally contract core stabilizing muscles and stand taller, so you look more confident and healthy. Good posture also makes you look thinner.

Yoga has a direct correlation to weight maintenance, too. It's not just that it burns calories, but a rigorous style helps. Instead, it seems to create a mindfulness that keeps you making good dietary choices and staying in touch with feelings of satiation, preventing weight gain overtime.

A study published in 2005 by the Fred Hutchinson Cancer Research Institute found that among more than 15,000 people, those who practiced yoga at least once per week for a minimum of 4 years gained less weight in middle age than those who reported little or no yoga practice. Weight gain often hits women hard; yoga may help prevent it.

The golden years of women’s lives brings with it more unique challenges for women. Yoga for women, in this phase, would incorporate their reduced physical activities and hence include less complex asanas. These asanas aim at improving blood circulation. A healthy nervous system will help the body stretch and, eventually, completely relax. As, in all stages, yoga, at this stage, is meant to bring about both physical and mental health, thereby promoting balance and harmony.

The secret for women is to make yoga a part of their life – as much as breathing. With repetition and regularity, the practice of yoga will be ideal for women at any age.

Importance of Yoga

Yoga is not a religion; it is a way of living that aims towards 'a healthy mind in a

healthy body'.

Man is a physical, mental and spiritual being; yoga helps promote a balanced development of all the three. Other forms of physical exercises, like aerobics, assure only physical well-being. They have little to do with the development of the spiritual or astral body.

Yogic exercises recharge the body with cosmic energy and facilitates:

- Attainment of perfect equilibrium and harmony
- Promotes self- healing.
- Removes negative blocks from the mind and toxins from the body
- Enhances personal power
- Increases self-awareness
- Helps in attention, focus and concentration, especially important for children
- Reduces stress and tension in the physical body by activating the parasympathetic nervous system

Conclusion

The endless struggle of being a woman and a mother, one has to prepare for major physical, physiological and psychological upheavals. Stabilization of the physical and mental states is achieved by the science which is called Yoga. All paths of Yoga can bring you peace of mind. Just by learning a few basic Asanas and Pranayamas, you can be of invaluable help to yourself and the community around you which is experiencing the vicissitudes of life. In Samkhya Yoga, woman is compared to Prakrit (nature). Like nature she has to remain ever-active. Then her life blossoms and her home is cheerful.

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Latest Management Trends in Sports

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Abstract:-

Sport is watched and played globally and impacts business management practices in a number of ways, including through sponsorship, recruitment, and manufacturing. Sports mega events across the globe are undergoing transformations in the way they are organised, managed, broadcasted and consumed by audiences. These changes are heavily influenced by different management trends. The aim of this paper is to highlight the latest important management trends in sports worldwide.

Key words:- Sports Management, Sport Industry.

Introduction:-

Sports management is a broad and highly competitive field that incorporates aspects of many different areas, such as business, marketing and accounting. Public interest in health, fitness and spectator sports has also increased over the years, making sports management a multibillion-dollar industry with a variety of job opportunities for those with experience and education. Those who work in sports management may find themselves performing various functions, such as working with the finances of an athletic organization or creating marketing strategies. Professionals in sports management might work on international sporting events or local, amateur ones. Other areas in sports management include college or recreational sports management or sports economics.

Sports events are a great phenomenon of the contemporary world. Sport mega events like Olympic Games or World Cup of Football move the world. For a period of time, not only broad public focuses on these events but they also attract media, fans, VIPs, politicians.

In addition, sports mega events are not only huge social gatherings but they also attract big business. Considerable amounts of money revolve around these events. The organizing committees seek to maximize revenue. Prices for the sale of television rights constantly rise. The willingness of people to watch a live event help to increase ticket prices because the organizers are aware that the viewers are important clients who reflect whether a sports event has been well-organized or not. The above-mentioned sports events are important internationally.

Sports mega events across the globe are undergoing transformations in the way they are organised, managed, broadcasted and consumed by audiences. These changes are heavily influenced by different management trends.

Here are some latest important Sports management trends:

- Sponsors as Partners
- Athletes as Investors
- *Tech-Enabled Sponsorship*
- *Social Media is the New Standard*
- *Augmented Reality*
- Increase of VR application
- *Live Streaming*

- *360-Degree Views As Standard*
- Digital Ticketing
- Better Spectator Services
- Workforce Development
- Advanced Video Technology
- Competitive E-Gaming
- E-Sports has arrived in a big way
- Cutting out the media middleman
- Venue Development
- *Smarter Stadiums*
- Prioritizing Women
- Fan Engagement
- *Fan Generated Content*
- Use of Sports Mobile Apps
- Drones
- More Sports Start-Ups to be founded
- Artificial Intelligence
- The Connected Player
- Connected Data
- Injury Prevention Technology
- Predictive Analytics
- Increased Security
- Sustainability Initiatives
- Management structures are evolving
- Bid Fees
- Third Party Housing
- Legacy Projects
- Bigger Data
- Rise of Wearable Tech

Conclusion:-

Sports management is a global industry that affects many different segments of business. The sport industry is amongst the world's largest industries and places importance on business relationships in order to maintain its competitiveness. The changing business environment has meant that businesses involved in sport need to constantly change and innovate in order to compete better. As sport has a global appeal it is particularly important in today's global economy.

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Effect of Pranayama on Blood Pressure of Female Players

Dr. Satinder Paul: Assistant Professor, Akal College of Physical Education, Mastuana Sahib, Sangrur, (Punjab) India

Abstract:

The purpose of the study was to find out the effect of pranayam on blood pressure of female players. A total of 40 female players were selected for this study. The age group of the subjects ranged between 17-22 years and all the samples selected from random basis. To find out the effect of blood pressure of selected female players, pranayam practice such as Kapalbhati, Anulom-Vilom, Bhastrika, Bhramari and Udgeeth etc.was given through training of four weeks. It takes 35 to 45 minutes to complete the whole process of pranayama. The data were obtained through pre test & post test and were statistically analyzed. The't' test was used to find out the effect of pranayam on blood pressure and the significance was chosen at 0.05 level. The results of the study found that the effect of pranayama practice improve the blood pressure of female players.

Kew Words: Pranayama, Blood Pressure, Female Players etc.

Introduction:

Yoga in Everyday Life is a game plan of work on involving eight levels of headway in the domains of physical, mental, social and significant prosperity. Exactly when the body is physically stable, the cerebrum is clear, focused and pushes is under control. The guideline destinations of "Yoga in Everyday Life" are Physical Wellbeing, Emotional well-being, Social Wellbeing, Profound Wellbeing, Self-Acknowledgment or affirmation of the Awesome inside us. These goals are proficient by Affection and help for each and every living being, respect everlastingly, affirmation of nature and the earth, a quiet point of view, Unadulterated examinations and positive lifestyle, physical, mental and extraordinary practices, strength for all nations, social orders and religions. Yogic frameworks are known to improve one's general execution. Pranayama is a basic, yet negligible known bit of Yoga.

To live in agreement with oneself and nature is the desire of each human. Be that as it may, in present day times more prominent physical and enthusiastic requests are continually put upon numerous regions of life. The outcome: an ever increasing number of individuals experience the ill effects of physical and mental pressure, for example, stretch, tension, a sleeping disorder, and there is lopsidedness in physical movement and appropriate exercise. This is the reason strategies and methods for the fulfillment and change of wellbeing, and also physical, mental and otherworldly agreement, are of incredible significance, and it is precisely in this regard "Yoga in Day by day Life" completely offers a guide to help one's self.

All through the numerous years that I have been dynamic in western nations, I have gotten comfortable with the cutting edge way of life and the physical and mental issues looked by the general population of today. The learning and experience I picked up drove me to build up the arrangement of "Yoga in Day by day Life". It is orderly and graduated, incorporating all regions of life and offering something significant for each period of life. Despite age or physical constitution, this framework opens the traditional way of Yoga to all. In building up this framework to oblige the requirements of the present individuals, much thought was given to the conditions inside current society, without losing the creativity and

impact of the old lessons.

"Yoga" starts from Sanskrit and signifies "to join, to join together". Yoga practices have an all encompassing impact and bring body, brain, cognizance and soul into adjust. Along these lines Yoga helps us in adapting to regular requests, issues and stresses. Yoga builds up a more noteworthy comprehension of our self, the reason forever and our relationship to God. On the otherworldly way, Yoga drives us to incomparable information and interminable euphoria in the union of the individual Self with the all inclusive Self. Yoga is that incomparable, inestimable rule. It is the light of life, the all inclusive inventive cognizance that is constantly wakeful and never rests; that dependably was, dependably is, and dependably will be, a large number of years prior in India, Rishis (savvy men and holy people) investigated nature and the universe in their reflections. They found the laws of the material and profound domains and picked up knowledge into the associations inside the universe. They examined the vast laws, the laws of nature and the components, life on earth and the forces and energies at work in the universe - both in the outside world and also on a profound level. The solidarity of issue and vitality, the root of the universe and the impacts of the basic forces have been depicted and clarified in the Vedas. A lot of this information has been rediscovered and affirmed by present day science.

From these encounters and bits of knowledge an extensive and thorough framework known as Yoga began and gave us significant, viable directions for the body, breath, fixation, unwinding and contemplation. The practices that this book offers have hence officially demonstrated themselves more than a huge number of years and have been observed to be useful by a great many individuals.

The framework "Yoga in Day by day Life" is instructed worldwide in Yoga Focuses, Grown-up Training Focuses, Wellbeing Organizations, Wellness and Games Clubs, Recovery Focuses and Wellbeing Resorts. It is appropriate for all age bunches - it requires no "aerobatic" abilities and furthermore gives the unfit, and impaired, sick and improving individuals, the likelihood of rehearsing Yoga. The name itself demonstrates that Yoga can be and ought to be utilized "in Day by day Life".

The activity levels were worked out in conference with specialists and physiotherapists and can in this way - with perception of the expressed guidelines and safeguards - be polished autonomously at home by anybody. "Yoga in Everyday Life" is a comprehensive framework, which implies it mulls over the physical, as well as the mental and profound viewpoints. Positive considering, tirelessness, train, introduction towards the Incomparable, petition and benevolence and comprehension, shape the best approach to Self-Information and Self-Acknowledgment.

Methodology:

The sample for this study consists of total 40 female players. The age group of the subjects ranged between 17-22 years and all the samples selected from random basis. To find the effect of pranayama on blood pressure of selected female players of experimental group given training of four week under the supervision of yoga expert and researcher. The‘t’ test was used to find out the effect of pranayama practice on blood pressure of selected female players. Blood Pressure was determined through pre test & post test. Systolic and diastolic blood pressures were measured with the help of sphygmomanometer, three readings were taken and their average was recorded. A normal systolic blood pressure is 120 or below. A systolic blood pressure of 120-139 means you have normal blood pressure. A normal diastolic blood pressure number is 80 or less. A diastolic blood pressure between 80-89 is normal but

higher than ideal. A systolic blood pressure of 140 or higher and diastolic blood pressure of 90 or higher, on repeated measurements, is considered to be hypertension or high blood pressure.

Analysis of Data:

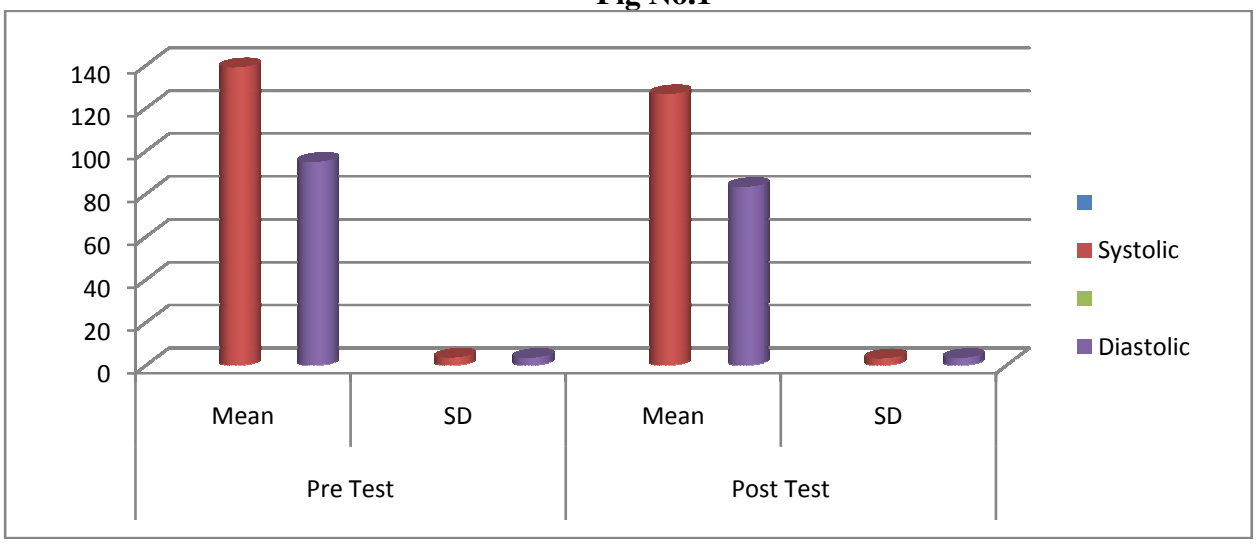
The collected data from the subjects was analyzed by using statistical technique't' test and the results are given in the following table:

TABLE NO.1
SHOWING MEAN VALUE OF PRE TEST & POST TEST OF SYSTOLIC AND DIASTOLIC BLOOD PRESSURE

Variables	Pre Test		Post Test			
	Mean	SD	Mean	SD	MD	't' value
Systolic	138.96	3.52	126.4	3.12	14.56	3.24*
Diastolic	94.86	3.42	83.2	3.34	11.66	4.02*

*Significant at 0.05 level.

Fig No.1



The table no.1, show that there is a significant difference between pre test and post test score on experimental group of selected female players. The't' value during pre test and post test of systolic is 3.24 and diastolic is 4.02, which is greater than the tabulated value, so that indicates the there is a positive improvement in blood pressure of female players.

Conclusion:

It is concluded that after obtaining the results of pre & post test, it was found that the blood pressure decreased in a significant manner of experimental group, which means that pranayama practice helps in improving the systolic blood pressure and diastolic blood pressure of selected female players.

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A Comparative Study of Self Confidence and Achievement Motivation on B.P.Ed and M.P.Ed students

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Abstract

The purpose of this study was to compare the self confidence and achievement motivation level in B.P.Ed and M.P.Ed students. Achievement motivation and Self confidence appears to be one of the important, psychological traits for any person for achievement and success in life. Self confidence enables a person to improve up on his performance.

Knowledge of the results of the study may be useful for athletes, coaches and trainers. The results of the study can help subjects in knowing their self confidence Achievement motivation level and assessing it. Fifty subjects were selected from the Akka mahadevi Women's .University vijayapura. The age of the subjects were ranging from 21 to 25 years. In order to collect necessary data for the present study there was a need for an objective psychological tool that would measure Achievement motivation and self confidence. The Achievement motivation and self confidence inventory developed and standardized by Kamalesh (20 item) and Basavanna (100 item). was used to compare the student's self confidence and achievement motivation level. The 't' test was used to determine differences in students' self confidence and achievement motivation level. It was concluded from the results of the study that the M.P.Ed Students were high in self confidence levels and that there were significant differences between M.P.Ed and B.P.Ed Students in their mean self-confidence scores. Thus the hypothesis formulated in the present study was rejected.

From this study, it is indicated that the achievement motivation level is high in M.P.Ed Students because of the Successes, achievements, Educational experiences and more practice in sports and games.

The findings of the study revealed that there is a possibility to show good performance at intercollegiate competitions, if players have high achievement motivation level.

Keywords: self confidence and, achievement motivation, performance

Introduction

Modern sports training gives greater emphasis on preparing the athletes psychologically than physically, though both play a significant role. Physical educators and coaches believe that without psychological preparation, there is little chance of success at the higher level of competitions. Several investigations have revealed that apart from somatic and psychological variables, higher level of performance depends upon an athlete's psychological makeup. A player is psychologically fit for the game, if he possesses the required preparation, emotional stability, motivation, intelligence and educability to accomplish the task. By creating tension, elevated heart rate, blood pressure and anxiety can become barrier to performance. No player without will to win and self confidence can achieve the required goal. The Psychological preparation of athlete is an important aspect of the total preparation of the athlete for better performance.

Sports are a psycho-social activity. It has both psychological and social dimensions besides physical, physiological and technical aspects. Most of the nations share a common interest in sports competitions especially at certain times during the Olympic Games where people from all nations focus their attention on that drama of competition. But the quality of the participation of the athletes and sportsmen is determined by their psychological factors.

We have considered the role of sport psychology within the overall field of sport and exercise science as a distinct discipline left to more detail. We have described sport psychology as a branch of sport and exercise science that focuses on the psychological aspects of sport and exercise. Sports psychology thus clearly incorporates the theoretical models and approaches of psychology.

The application of psychological principles to the improvement of performance in sports has received greater attention in these days. There are certain accepted psychological principles which have to be applied so that the athletes and players are able to show their performances.

Coaches, physical educationist and sports scientists have always expressed a great need to know more about those psychological principles which are helpful in improving the motor skills of the players.

Achievement Motivation

The meaning of achievement motivation has been a controversial subject and a topic of key interest to psychologists. The concept of achievement motivation appears in almost every theoretical account of behavior. Motivation is a mental event which determines the course of action. Motivation is used to consider any inner conditions of the organism that initiates or directs its behavior towards a goal.

In recent years researchers have become increasingly interested to know whether the personality characteristic is related to athletic performance. An analysis of determinants of athletic performance and discussions with participants in a number of sports from recreational to national competitions, suggest that desire to win/will to win and self confidence are important factors in athletic performance.

Self-Confidence:

According to Dr. KeithBall "confidence come with good goals, good preparation, familiarity with success, prediction of success, re-experiencing past success and giving the appearance of assuredness"

Success or failure of any individual depends not only upon his/her abilities, but also upon his perception about himself. In other words while doing any work how he perceives himself whether the given problem is simple or complex, may attain success or not, all these perceptible factors determine the output, Strictly speaking any kind of failure or success will be determined by the self confidence.

Self confidence is a simple attribute of perceived self. It is neither a part of the self, nor it is independent from the self, nor is it independent from the self. Simply speaking self confidence refers to an individual' perceived ability to act effectively in a situation to overcome obstacles and to attain successes.

Statement of the Problem

The purpose of the present study was to compare the self confidence and achievement motivation level in B.P.Ed and M.P.Ed students.

Hypothesis

There may not be any significant difference in self confidence and achievement motivation between B.P.ed and M.P.ed students

Significance of the Study

The present study undertaken by the investigator may be justified as worthwhile on the following grounds.

Achievement motivation and Self confidence appears to be one of the important, psychological traits for any person for achievement and success in life. Self confidence enables a person to improve up on his performance.

Knowledge of the results of the study may be useful for athletes, coaches and trainers. The results of the study can help subjects in knowing their self confidence Achievement motivation level and assessing it. Knowledge of the results of the study can be used for motivation purposes. The results of the study can be used for feedback purposes.

Selection of Subjects

The subjects for the present study were B.P.Ed and M.P.Ed Students who studying their respective institution in different semester during the year2017-18.

Sample Size

Sample for the present study consisted of fifty (N=50), subjects who were in the age group of 21-25 years. Out of 50 subjects serving as sample for the present study, twenty-five subjects (N=25)) belonged to B.P.Ed and Another twenty-five subjects (N=25) belonged to M.P.Ed Students.

Criterion Measure

The criterion measure selected was Achievement motivation and Self Confidence Inventory.

Selection of the Tool

In order to collect necessary data for the present study there was a need for an objective psychological tool that would measure Achievement motivation and self confidence. The Achievement motivation and self confidence inventory developed and standardized by Kamalesh (20 item) and Basavanna (100 item). was used.

Statistical Procedure

To test the research hypothesis, 't' test for difference of means was used with the level of significance being set at 0.05 percent.

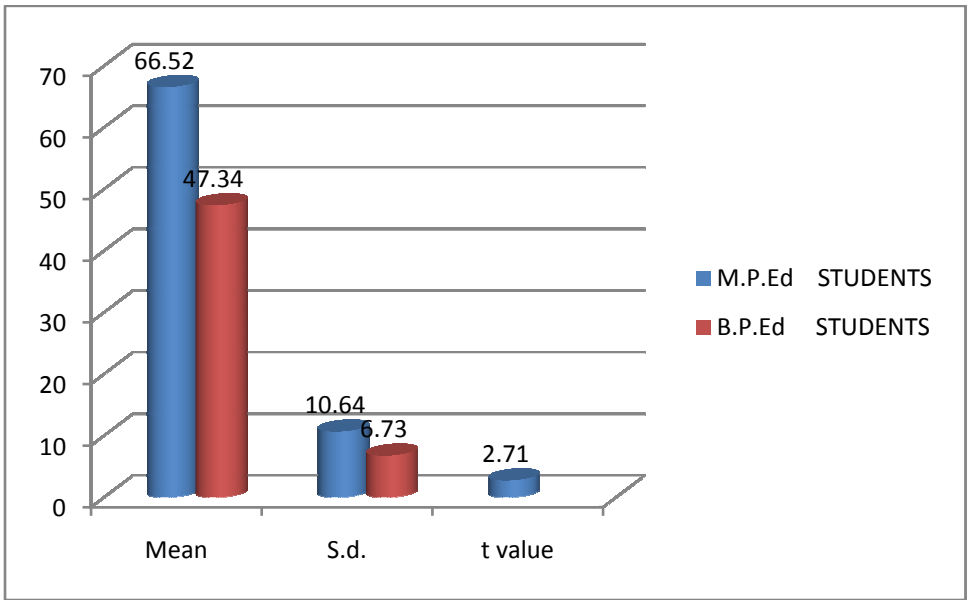
Necessary data relevant to the present study were collected through the responses of the selected subjects to the self-confidence inventory administered to them. Statistical analysis of data then revealed the following findings which have been presented in table 1.

Table I

Self-Confidence of M.P.Ed and B.P.Ed Students

Self-Confidence	N	Mean	S.d.	t value
M.P.Ed STUDENTS	25	66.52	10.64	2.71
B.P.Ed STUDENTS	25	47.34	6.73	

Self-Confidence of M.P.Ed and B.P.Ed Students



The table and graph no;1 shows that, the mean score of self-confidence of M.P.Ed Students was 38.078 with Sd of 6.06 and that the mean score of self-confidence of B.P.Ed Students was 31.06 with Sd 5.73.

From the above table the calculated t value was greater than 2.71. We reject the null hypothesis at 5% level of significance. That is, there exists a significant mean difference in self confidence among M.P.Ed and B.P.Ed Students at 5% level and significance.

It was concluded from the results of the study that the M.P.Ed students were on the high in self confidence levels and that there were significant differences between M.P.Ed and B.P.Ed Students in their mean self-confidence scores. Thus the hypothesis formulated in the present study was rejected.

The factors such as age, training, experience, exposure, and the level of competitions may have been the causes influencing such results. The impact of sports participation over a few years might have been the influencing factors in the subject's high level of self-confidence.

On the contrary, the subjects belonging to the B.P.Ed group, might not have experienced success and may not have greater achievements. They might have some success in their academic life which may not be enough to increase their belief in their own abilities. Successes and achievements in one's life are very important factors that contribute to increase in self confidence levels. Lack of experience and exposure may also be the factors that have a negative effect on the confidence levels of subjects belonging to the B.P.Ed groups.

Hence, there may be a significant difference in self confidence levels between M.P.Ed and B.P.Ed Students

Table I1

Achievement motivation of M.P.Ed and B.P.Ed Students

achievement motivation	N	Mean	S.d.	T value
M.P.Ed STUDENTS	25	34.8	5.05	2.41
B.P.Ed STUDENTS	25	29.06	4.37	

Achievement motivation of M.P.Ed and B.P.Ed Students

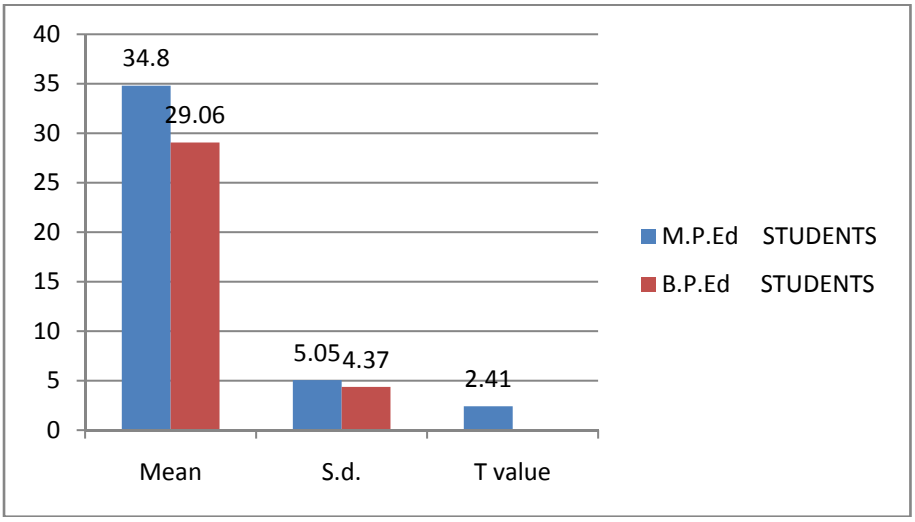


Table and Graph 2 reveals the mean, SD and 't' values of Achievement Motivation Level of M.P.Ed and B.P.Ed Students of K.S.W. University. The mean score of M.P.Ed and B.P.Ed Students on Achievement Motivation Level is 34.08 and 29.6 respectively. This difference in their mean score suggests that the M.P.Ed Students are moderate in their Achievement Motivation Level when compared to the B.P.Ed Students, who are have more Achievement Motivation Level . The obtained 't' value 2.41 which is highly significant at 0.05 level suggest the fact that, there is a significant difference of Achievement Motivation Level between the M.P.Ed and B.P.Ed Students of K.S.W. University. Therefore, the hypothesis that there is a significant difference in the Achievement Motivation Level of M.P.Ed and B.P.Ed Students is confirmed.

Summary, Conclusion and Recommendation

The main purpose of the present study was to compare self-confidence and Achivement Motivation in M.P.Ed and B.P.Ed Students of A.M.W.University.

To achieve the main purpose present investigation the investigator administered Basavanna's self-confidence inventory and Dr. M.L. Kamalesh to Fifty subjects (N=50) in the age group of 18-24 years who had Studying in the A.M..W. University during the year 2016-17. The sample included twenty-five B.P.Ed (N=25) and twenty-five M.P.Ed (N=25). Necessary data relevant to the present study were collected through the responses of the selected subjects to the self-confidence and Achivement Motivation inventory administered to them. Statistical analysis of data then revealed the following conclusions.

Conclusion

The mean score of self-confidence of M.P.Ed Students was was 66.52 with Sd of 10.64 and that the mean score of self-confidence of B.P.Ed Students was 47.34 with Sd 6.73.

From the above table we infer that the calculated t value was greater than 1.96. We reject the null hypothesis at 5% level of significance. That is, there exists a significant mean difference in self confidence among M.P.Ed and B.P.Ed Students at 5% level and significance.

It was concluded from the results of the study that the M.P.Ed Students selected as subjects for the present study were on the high in self confidence levels and that there were significant differences between M.P.Ed and B.P.Ed Students in their mean self-confidence

scores. Thus the hypothesis formulated in the present study was rejected.

The findings of the study revealed that there is a possibility to show good performance at intercollegiate competitions, if players have high achievement motivation level.

From this study, it is indicated that the achievement motivation is high in M.P.Ed Students because of the Successes, achievements, Educational experiences and more practice in sports and games .

Recommendations

1. Scope of the study may be enlarged to include a larger number of subjects.
2. Self confidence levels of elite sportsmen may be studied and compared with subjects from other sports groups.
3. Studies on self confidence of sportspersons based on training age may be considered for further research.
4. Influence of different kinds of sports activities in self confidence levels may be studied.
5. Encouragement from the countered authority is a must still to have higher level of performance at inter university tournament.
6. The parental and institutions support play major role in motivating the Students .
7. To improve the standard of the game there should be a regular organization of tournaments, coaching camps etc., at the colleges.
8. Similar type of the study can be conducted on male players
9. Similar study can be conducted for different levels.
10. Similar study can be conducted for different game players.

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Effect of Selected Physical Exercises and Yogic Practice on Biochemical Variables among College Women Students

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Abstract:

The combination of proper diet and a fair amount of physical workout ensure good health. One who fails to do enough exercise to his body, he fails to maintain his fitness. So, it's necessary that the individual has to participate in specific program of exercise to develop the overall fitness.

Physical exercises are very effective in balancing fitness of the body. The sufficient amounts of physical exercise are needed to maintain adequate health.

In general, physical exercise improves and strengthens the muscles, joints, tendons, and ligaments and improves the blood circulation, lessens the blood pressure, lowers the heart rate.

Practice of yoga brings a perfect balance in body and mind. It makes the body healthy to cooperate with the mind, so that steadiness, composure, and firmness are developed. Patanjali explains that the practice of yoga enables one to avoid the pain which may be in store in the future.

Introduction

Physical fitness is fundamentally important to all human beings, a man cannot move even an inch without proper amount of physical fitness.

Physical fitness is one of the goals of education, since an appropriate level of fitness is essential to meet the needs of the individual and the society. Physical education can make an important contribution to fitness, which cannot be accomplished by any other curriculum area, physical fitness is the ability to carry out tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure time pursuits and meet unforeseen emergencies. It is the ability to last, to bear up, to withstand stress and to preserve under difficult circumstances where an unfit person would quit. (Sidentop, 1984).

The combination of proper diet and a fair amount of physical workout ensure good health. One who fails to do enough exercise to his body, he fails to maintain his fitness. So, it's necessary that the individual has to participate in specific program of exercise to develop the overall fitness.

Physical fitness is one's richest possession, it cannot be purchased, and it has to be earned through a daily routine of physical exercise. Physical fitness is the basic requirements for most of the tasks to be undertaken by an individual in his daily life. (Reet, 1994).

Physical exercises

Physical exercises are very effective in balancing fitness of the body. The sufficient amounts of physical exercise are needed to maintain adequate health.

In general, physical exercise improves and strengthens the muscles, joints, tendons, and ligaments and improves the blood circulation, lessens the blood pressure, lowers the heart rate.

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Physical exercise is an organized activity that involves continuous movement of the body through participation. Exercise occupies a continuous a leading role in keeping a person fit. It will quite difficult to adjust one's life in terms on stress, diet and sleep so on without proper exercise. (Singh, 2005).

Exercise are helpful to maintain organically sound body, to enjoy an optimum state of health and physical fitness, exercises are quite inevitable. Exercise is referred to physical activity ranging from light to fairly vigorous nature. Regular exercise produce increased strength, endurance and other characteristics associated with good health, physical fitness is not an end in itself but means to an end.

Yoga

Patanjali the profounder of yoga philosophy describes yoga as "chitta vritti nirodhaha", meaning to retain the mental modifications or suppressions of the fluctuations of the consciousness.

Practice of yoga brings a perfect balance in body and mind. It makes the body healthy to cooperate with the mind, so that steadiness, composure, and firmness are developed. Patanjali explains that the practice of yoga enables one to avoid the pain which may be in store in the future.

The word yoga means to join or unite. In the yoga sutras Patanjali described yoga as the means by which our mind can be made still quiet and free from all distractions. (Chanchani and Chanchani, 2010)

The word yoga is derived from the Sanskrit root Yuj meaning to bind the yoke. It is the true union of our will with the will of God. (Sharma, 1998).

The regular practice of yoga stables the autonomic nervous system, decreases in pulse rate, respiratory rate, and blood pressure. It also Increases the immunity, resiliency, steadiness, balance and endurance, energy level, strength, endurance, cardiovascular efficiency, respiratory efficiency, musculoskeletal flexibility, joint range of motion, breath holding time. Normalize in gastrointestinal function. Improves in excretory functions, sleep, eye-hand coordination and reaction time, and decreases the glucose, sodium, triglycerides, cholesterol, and LDL cholesterol. Increases the HDL cholesterol, haematocrits, haemoglobin, and total serum protein.

Differences between Physical Exercise and Yogic Asanas

Gore (1984), makes a study on difference between asana and physical exercise is as follows: -

The movements are slow, steady and smooth to attain and to release in any asana.	Exercises are performed in a fast or speedy manner leading to exercise and fatigue.
The effect of asana is more on trunk part proprioceptive and viscероceptive mechanism are given free scope.	Movements of extremities are more prominent and also important while exercise to the trunk is secondary in exercise.
Movements of the spinal column are made in almost all directions and with their possible range of movements.	In exercise, only a particular movement is repeated to develop strength, and skill of some part of the body.

There is no purpose of muscle building in asana.	Heavy muscle masses are built through exercise for more and more muscular strength.
The muscular tensions are reduced to a minimum, thus there is no strain on the muscle and nerves.	The voluntary efforts in the stretching of muscles increase the tension in muscles and give rise to painful sensations.
After a session of asanas, one feels fresh, relaxed and energetic with the sense of well being	When the exercises are finished, one feels tired and need rest.
As the voluntary efforts are withdrawn in the final stage of asanas, the activity of the motor cortex and gradually reduced or even withdrawn completely. Now a proper inner awareness and automatically developed. Where one can observe or experience various sensory inputs coming from proprioceptor and visceroceptors	In an attempt to achieve the goal in exercises one makes a lot of voluntary efforts. The activity of the motor cortex dominates the entire lower centre and even exceeds limitations of the body one remains aware of the external things since the reaction is too measured outside the body with the judgment of extroceptor.

Hypothesis:

1. There would be significant difference in the selected biochemical variables due to physical exercises among college women students.
2. There would be significant difference in the selected biochemical variables due to yogic practices among college women students.
3. There would be better improvement in the selected biochemical variables due to physical exercises than yogic practice among college women students.

Review of Related Literature:

Durstine and Haskel (1994) investigated that, the regular physical activity increases high density level cholesterol, particularly the cholesterol content of the HDL-2 sub fraction, and may also increase apolipoprotein A -1. Among subjects with elevated cholesterol levels regular physical activity is occasionally associated with decreases in total cholesterol and LDL Cholesterol as well as in apolipoprotein in B. An increase in lipoprotein lipase activity with regular exercises may contribute to the argumentation of the HDL cholesterol level, particularly HDL-2 sub fraction. In addition the reduction in lepatic lipase activity may be one of the mechanisms favoring the high levels of HDL-2 observed in active individuals.

Saravanan et.al., (2010), did a research on "Effect of yogasana and pranayama exercises on selected biochemical and physiological variables". The study contains the following. Sixty male students studying B.P.Ed., in Department of Physical Education and Sports Sciences, Annamalai University were selected randomly as subjects and their age ranged between 25-28 years. They were divided into four groups of fifteen each. Group I served as a control group, Group II as Asana, Group III Pranayama and Group IV Yogasana (asana and Pranayama). Yogasana practices were given to all the selected subjects except the control for three months (4 days/week). Biochemical and physiological variables were

analyzed before and after the training moderate the lipid levels and blood pressure then other groups. The study also reveals that combined work of asana and pranayama significantly improves HDL concentration and decrease blood pressure, cholesterol, triglycerides and LDL level.

Methodology

The purpose of the study was to find out the effect of physical exercise and yogic practice on biochemical variables among college women students.

To achieve the very purpose of the study, women students from Government First Grade College, K.R. Pete, were selected as subjects at random and their age was 18 to 22 years.

The subjects were divided into two groups namely physical exercise group and control group. Each group consisted of 30 subjects. The duration of the training was 12 weeks. The subjects of the control group were not allowed to participate in any of the training programmes except in their routine activities.

Table 1

The Summary of Mean and Dependent t-Test for the Pre and Post-Tests on High Density Lipoproteins of Control Group, Physical Exercise Group and Yogic Practice Group (Scores in mg / dl)

	Pre-Test Mean	Post-Test Mean	't' Test
Control Group	36.59	36.57	0.371
Physical Exercise Group	35.03	41.54	43.928*
Yogic Practice Group	36.10	38.99	15.279*

* Significant The value required to 0.05 level of Sig with df 29 in 1.699

The table 4.24 shows that the pre-test mean values of control group, physical exercise group and yogic practice group are 36.59, 35.03 and 36.10 respectively, and the post-test means are 36.57, 38.99 and 41.54. The obtained dependent t-ratio values between pre and post-test means of control group, physical exercise group and yogic practice group are 0.371, 43.928 and 15.279 respectively. The table value required for significant difference with 29 at 0.05 level is 1.699. Since, the obtained 't'-ratio value of experiment groups are greater than the table value. It is understood that physical exercise groups and yogic practice groups significantly decreased the level of high density lipoproteins. However, the control group has not decreased significantly as the obtained 't'-value is less than the table value, because they were not subjected to any specific training.

Figure 1
Bar Diagram showing Summary of Mean and Dependent t-Test for the Pre and Post-Tests on High Density Lipoproteins Cholesterol of Control Group, Physical Exercise Group and Yogic Practice Group
(Scores in mg / dl)

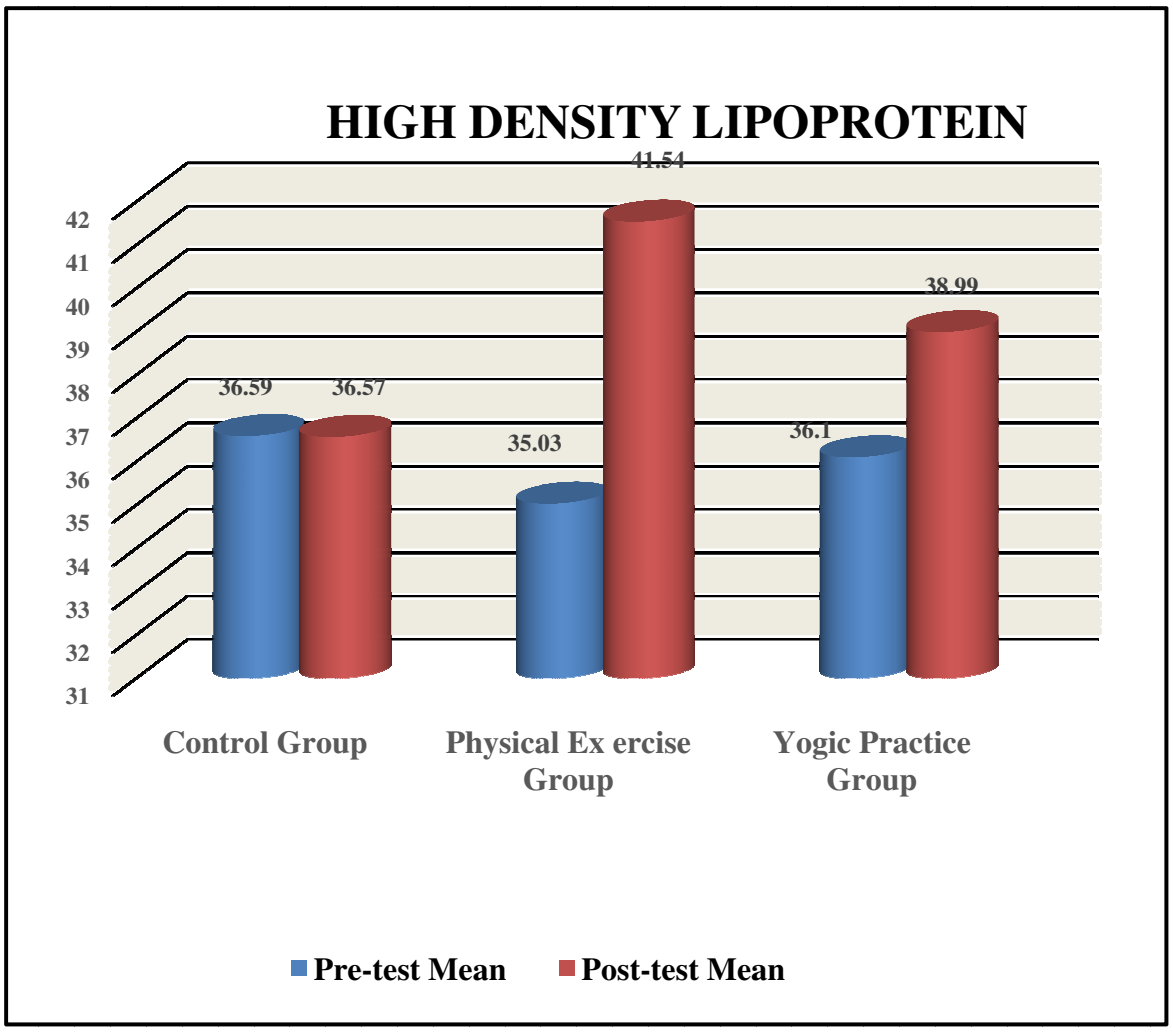

Table - 2
The Summary of Mean and Dependent t-Test for the Pre and Post-Tests on Low Density Lipoproteins of Control Group, Physical Exercise Group and Yogic Practice Group
(Scores in mg / dl)

	Pre-Test Mean	Post-Test Mean	't' Test
Control Group	106.28	106.25	0.839
Physical Exercise Group	107.55	97.55	76.516*
Yogic Practice Group	106.77	101.93	43.231*

*Significant Table value required for 0.05 level of sig with df 29 in 1.699

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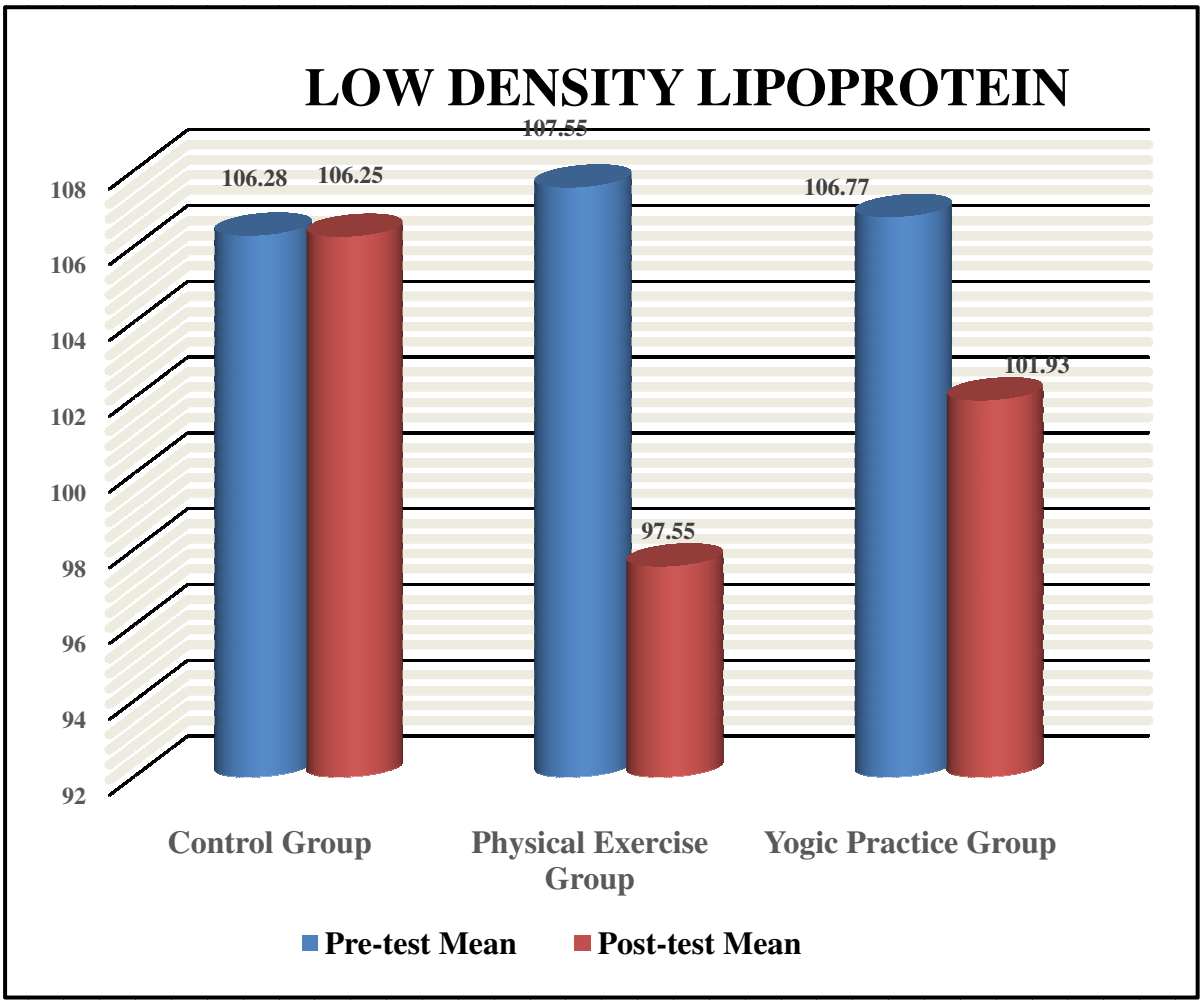
The table 4.27 shows that the pre-test mean values of control group, physical exercise group and yogic practice group are 106.28, 107.55 and 106.77 respectively, and the post-test means are 106.25, 95.55 and 101.93 respectively. The obtained dependent t-ratio values between pre and post-test means of control group, physical exercise group and yogic practice group are 0.839, 76.516 and 43.231 respectively. The table value required for significant difference with 29 at 0.05 level is 1.699. Since, the obtained 't'-ratio value of experiment groups are greater than the table value. It is understood that physical exercise group and yogic practice group significantly decreased the level of low density lipoproteins. However the control group has not decreased significantly as the obtained 't'-value is less than the table value, because they were not subjected to any specific training.

Figure 2
Bar Diagram showing Summary of Mean and Dependent t-Test for the Pre and Post-Tests on Low Density Lipoproteins of Control Group, Physical Exercise Group and Yogic Practice Group
(Scores in mg / dl)



Discussion on Findings of Hypothesis:

1. There would be significant difference in the selected biochemical variables due to physical exercises among college women students.

The findings of the study showed that there was significant difference in selected biochemical variables such as high density lipoprotein and low density lipoprotein due to physical exercises among college women students.

2. There would be significant difference in the selected biochemical variables due to yogic practice among college women students.

The findings of the study showed that there was significant difference in selected biochemical variables such as high density lipoprotein and low density lipoprotein due to yogic practice among college women students.

3. There would be better improvement in the biochemical variables due to physical exercises than yogic practice among college women students.

The findings of the study showed that there was better improvement in selected biochemical variables such high density lipoprotein and low density lipoprotein due to physical exercise than yogic practice among college women students.

Conclusions:

Based on above findings, the following conclusions were made:

1. The high density lipoproteins are increased significantly for the physical exercises group and yogic Practice when compared with the control group.
2. The low density lipoprotein is increased significantly for the physical exercises group and yogic Practice when compared with the control group.

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An Anatalic Study of Motor Fitness Components of Basket Ball and Hand Ball Players

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Abstract:

Motor fitness among Basket ball and hand ball players and the related performance consequences remains an important issue for physical education and sports professionals. Yet, less is known about the report motor fitness among basket ball and hand ball players. This study examined differences between handball and basket ball players in motor fitness components. Somo agility test for agility and 50 yard test for speed were administered as motor fitness tests to a random sample of 60 players selected for state level competitions from Ganderbal districts in 2016. T test of independence examined motor fitness differences between basket ball and hand ball players which differentiated groups. Basketball players were found more fit in both the variables than the handball players.

Key Words: Motor fitness, basket ball, hand ball.

Introduction:

Motor Fitness according to **Barrow (1968)** is "a readiness or preparedness with special regard for big muscle activity without undue fatigue". Although it's a single term, but to understand it and to work out, we need to concentrate on its components - Muscular Strength, Muscular Endurance, Muscular Power, Cardio-Vascular Endurance, Flexibility, Speed, Agility, Reaction Time. All these components can be realized by different body actions. In this manner the physique of a person especially Height and Body Weight plays very important role in his motor fitness status. The puberty phase of human life is found to be most productive one for developing base for different motor abilities. It is believed that motor fitness is trainable factor but the influence of one's physique and body composition seem to play a great role in its determination as achievement of high level performance is only possible in an individual with adequate genetic predisposition and under optimal environment condition. India is vast country with unique cultural, social, geographical, ethnic and climatic differences. The motor fitness of Indian male varies according to regional variations of the country. The B.M.I. also varies from one region to another which ultimately affects growth and development. Fleshman clarifies that the performance of various skills based on some specific motor abilities and multitude of motor performance factor affects an individual ability to perform specific sports skills. Abilities mean the power of mind. In other words we can say that they are same as motor capacity. Everybody has capacity or abilities within his/her limit. It goes beyond one's own ability and reaches to high performance. These positive and negative changes are dependent upon various pertaining factors

Methodology :

Selection of Subjects: For the purpose of the present study, Sixty(N=60), Male state

Level players of Ganderbal district of Jammu and Kashmir between the age group of 16-19 years were selected. The subjects were purposively assigned into two groups: Group-A: basket ball (n1=30): hand ball (n1a=30)

Selection of Variables: A feasibility analysis as to which of the variables could be taken up for the investigation, keeping in view the availability of tools, adequacy to the subjects and the legitimate time that could be devoted for tests and to keep the entire study unitary and integrated was made in consultation with experts. With the above criteria in mind, the following variables were selected for the present study:

Motor Fitness Components: Agility, and Speed,

Statistical Technique Employed: To determine the significant differences of motor fitness components between basket ball and Handball players, unpaired t-test was employed for data analyses. To test the hypothesis, the level of significance was set at 0.05.

Results and Discussion

Results: The results of motor fitness components of basket ball and hand ball players are presented in the following tables and their interpretations are given accordingly. Graphical representation of each variable is also presented for mean comparison. Further discussion of finding is initiated for better understanding of results.

Table-1

Significant Differences in the Mean Scores of hand ball and basket ball players on the Variable Motor Fitness Components

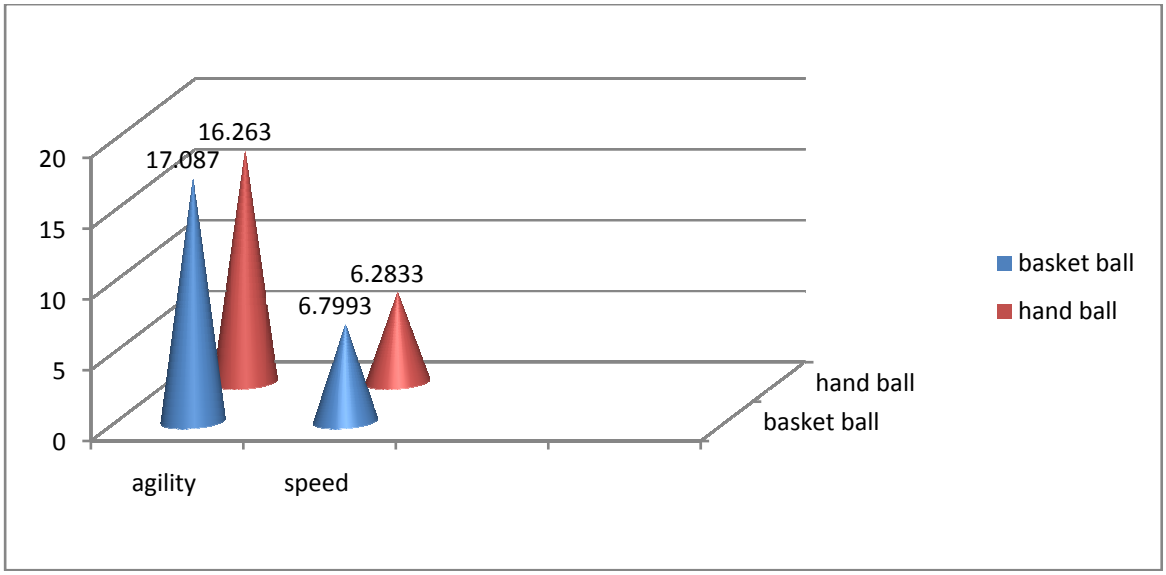
Variable	Mean		S.D		Mean Difference	t- value	p- value
	Basket ball	Hand ball	Basket ball	Hand ball			
Agility	17.0870	16.2630	1.44587	1.53191	.82400	2.145*	.036
Speed	6.7993	6.2833	.22938	..23798	.51600	8.551*	.000

Agility: A glance at table-1 shows the results of basket ball and handball players with regard to motor fitness components. The descriptive statistics shows the Mean and SD values of basket ball players on the variable of agility as 17.0870 and 1.44287 respectively. However, hand ball players had mean and SD values as 16.2630 and 1.53191 respectively. The 't'-value 2.145 as shown in the table above was found statistically significant (P<.05). It has been observed from the above results that basket ball players have demonstrated significantly better on the variable agility than handball players

Speed: The descriptive statistics shows the Mean and SD values of basket ball on the variable of speed as 6.7993 and .22938 respectively. However, handball players had Mean and SD values as 6.2833 and .23798 respectively. The 't'-value 8.551 as shown in the table above was found statistically significant (P<.05). It has been observed from the above results that basket ball players have demonstrated significantly better on the variable speed than the handball players.

Figure-1

Graphical Representations in the Mean Scores of basket ball and hand ball Players on the Variable Motor Fitness Components



Discussion of Findings: The analysis highlighted that some sub variable of motor fitness components of basket ball and handball players differ significantly. It is observed from the results of table- 1 that significant differences were found with regard to motor fitness components of basket ball and hand ball players in the sub-variables; agility and speed. When compared to the mean values of both the groups, it has been found that basket ball players have performed significantly better on agility and speed than their counterparts. The results of previous studies conducted on motor fitness components showed that higher level of motor fitness components i.e. speed and explosive strength give us the one up on our opponents. Saravanan and Singh found significant difference on the diurnal rhythm on speed among groups during different times of the day, while the diurnal rhythm on strength endurance differs among different groups.

Zajac compared the level of general motor abilities and special sport skills, selected anthropometric variables and indicators of aerobic and anaerobic power of elite white and black basketball players of the Polish Basketball League. They found that due to better level of fitness components, black athletes dominate in track and field and in the best league in the world (the NBA).

Conclusion

Based on the findings of this study, the following conclusions were drawn: To conclude, it is significant to mention in relation to Motor Fitness Components that the significant differences occur between basket ball and hand ball players on the sub variable Agility and Speed.

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Gender Differences between Self-concept

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Abstract

The present study aimed of the research was to find out the gender difference between self-concept.

To study by researched variables is gender. The sample is selected 50 medical science students in each 50 male medical science students and 50 female medical science students.

The scale was use for data collection self concept scale by Dr. (Mrs.) PratibhasDeo. Sample design was used and data were analysis by Mean, SD and '+' values results show. There is significant difference of self concept, between male and female science students. Female medical science students' high self concept than male medical science students.

Key words: Self Concept, Gender, Science students.

Introduction:

A milestone in human reflection about the non - physical inner self came in 1644. Rene Descarts wrote principles of philosophy. Descarts proposed that doubt was a principles tool of disciplined inquiry yet he could not doubt. A second milestone in the development of self concept. Theory was the writing of Sigmund fried (1900). Who gave us new understanding of the important of internal mental process.

While fried and many of his followers hesitated to make self concept. A primary psychological unit in their theories fried daughter Anna 1946 gave central important to ego development and self interpretation.

They stated "Self Concept should not be conceptualized as simple, unitary phenomenon but as a complex construct having descriptive evaluative, comparative and affective ascetics which can and should be discriminated.

Scheirer&Krut (1979) suggested that self concept is a multi faceted construct and cautioned against oversimplifying the Teryn. They stated than many of the difficulties associated with self - concept research can be traced directly to the ambiguity of the Torm (Wylie 1974) complication emerge from the interchangeable use of such terms as a self esteem, self worth self identity, self acceptance self regard and self evaluations. In casual and research contexts self concept and self esteem are not differentiated very clearly.

According to Byrne (1984) there is no clear concise and universally accepted operational definition of self concept for purpose of this article self concept will be considered broadly to include the perception of on self including one's attitudes, knowledge and feelings regarding abilities, appearance and social relationships.

Review of Literature:

The Journal of visual impairment and blindness. The self concept and quality of friendship of 40 adolescent with visual impairments (20 in public school and) 20 in residential school) were compared to those of 41 signed adolescent and adolescents with visual impairments all thought. The scores of the participates with visual impairments were higher in all domain except their fathers concept of them. The implication of these finding are discussed.

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D.D. Deshmukh (1994) he found that academic achievement, self concept and adjustment different significantly male and female urban and rural college students.

Pari and waraisth (1979) kifer 1975 pari (1976) have confirmed that people self concept were positively and significantly related to their scholastic achievement.

Objective of Study -

To study of self concept of medical science students male & female medical science students.

Hypothesis of the study -

These are no significant difference between male and female medical science students with self concept.

Operational Definitions -

The medical science students learning from BHMS Class first to last years.

Self Concept scale -

The test is constructed and standardized by Dr. MrsPratibhaDeo. The tests consist of 90 questioners. This highly reliable and valid tool for measuring cast prejudice.

Methodology of the study -

Sample -

The sample size of the study is 50 (25 male and 25 female) BHMS medical science students selected from Aurangabad city the stratified random sampling technique has been follow in selecting the sample medical science students from MGM College Aurangabad.

Variables of Study -

Independent Variable - Gender

1) Male
2) Female

Dependent Variable - Self Concept Scale

Research Design -

Simple research design used in the present study.

Tools Used -

Self concept rating scale was constructed by Dr. (Mrs) PratibhaDeo (Pune). It consisted 90 items all these items cover the six aspects of self concept scale of medical science male and female students. It is 4 point rating scale measuring the self concept scale of medical science students. This test had a fairly high content validity and its reliability is found to .89 and reliable measure of self concept.

Procedures of Data Collection -

The following research methodology was used in the present study. Medical science students. The primary information was gathered by giving personal information from each student. The students were called in small groups 25 - 25 male and female medical students. To fill the inventories subjects were given general instructions subject were given general instructions belongs to each test. The students provided the self concept scale. Data were obtained by using particular.

Statistical Techniques -

The statistical techniques used by investors in the present study mean standard deviation and '**+**' test.

Analysis and Interpretation of Data -

The objectives of the present study were to compare the self concept scale medical science students in relation demographic variables i.e. gender. To achieve the objective of

study the data were subjected to '**+**' test.

The mean scores for the job self concept of medical science students with respect to their gender have been presented in the figure.

	Gender	Mean	SD	N	Df	Mean Diff	'T' Value	Sign
Self concept	Male	21.64	3.82	25		1.23	0.98	
	Female	23.24	5.20	25	1.60			

Critical value of '**+**' with *df***-** 1.60 at 0.01 = 1.23 and at 0.05 =

Observation of the table indicted that the mean value of two classified groups seems to differ from each other on self concept scale. The mean and SD value obtained by the male medical science students SD 3.82 and female medical science students was 23.24 SD 5.20 but on the basis of mean observation it would than mean difference 1.60. Both group '**+**'value was 1.23 at a glance those female medical science students shows high mean score than male medical science students.

Gender variation was found that '**+**' rated was significant as the '**T**' 0.98 was less than the table value of '**+**' at 0.01 levels at 0.98 degrees of freedom.

Therefore the null hypothesis that there is no significant difference between male and female medical science student with self concept scale.

Conclusion -

There is significant difference between male and female medical science students with self concept. Female medical science students' high self concept than male medical science students.

Limitation of Study -

1. The sample was restricted to urban areas of medical science students.
2. The sample was restricted to areas private and governments' medical colleges.
3. The study was restricted to very small sample.
4. The study was restricted to male and female medical science students (18 to 26 years) only.
5. The phenomenon of self concept scale has studies gender variables only.

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Benefits of Physical Fitness

Irfan Hussain Malik: PET, DYSS (J&K)

"Physical fitness is not only one of the most important keys to a healthy body; it is the basis of dynamic and creative intellectual activity." **John F. Kennedy**

Physical fitness refers to one's overall condition of bodily health; it is typically made up of things such as cardiovascular endurance and body composition, as well as overall muscular strength and stamina. Fitness is often classified into two categories. These are general fitness, (known as health related fitness), as well as specific fitness, (known as performance, or skill related fitness).

General fitness refers to one's overall levels of health, such as those measures mentioned above, including overall endurance. Specific fitness, on the other hand, refers to one's ability to perform specific physical tasks, as related to one's occupation or when playing sports. There is no standard definition for fitness, whether one is referring to general or specific fitness, and different measures or skill levels might lead to different conclusions. Cardiovascular measures as well as body composition measures are some of the most commonly used definitions for determining whether or not someone is physically fit.

The American College of Sports Medicine (ACSM), the largest exercise science association in the world, defines fitness as both related to your ability to maintain physical activity and related to your health (people who become more fit reduce their risk for heart disease). According to ACSM, four types of fitness help to bolster health:

Cardio respiratory fitness:-This refers to the fitness of your heart, lungs, and blood vessels. The better your cardio respiratory fitness, the better your stamina, the lower your risk for a host of diseases like heart disease, diabetes, and cancer. Your ability to move without feeling winded or fatigued is measured by your VO2max (maximal oxygen uptake), a technical term that indicates how efficiently oxygen enters your lungs, moves into your bloodstream, and is used by your muscles. The more fit you become, the more efficiently your body transports and uses oxygen, improving your overall VO2max.

Muscular fitness:-This refers both to muscle strength (how heavy an object you can lift) and muscle endurance (how long you can lift it). Without exercise, all of us lose muscle mass as we come of age, which can eventually result in weakness and loss of balance and coordination. Because muscle is such active tissue, it also plays an important role in regulating your metabolism, with every pound of muscle burning about 35 to 50 calories a day.

Flexibility:-As most people age, their muscles shorten and their tendons, the tissue that connects muscles to bones, become stiffer. This reduces the range of motion, preventing optimum movement of your knees, shoulders, elbows, spine, and other joints. Loss of flexibility may also be associated with an increased risk of pain and injury. Tight hamstrings, for example, pull down on your pelvis, putting pressure on your lower back. In general, tight muscles increase the likelihood you'll suddenly move past your safe range of motion and damage ligaments, tendons, and the muscles themselves.

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Body composition:-Your body composition refers to the percentage of your body made up of fat instead of muscles, bones, organs, and other nonfat tissues. Though the use of body composition as a fitness and health indicator has come under fire in recent years by those who argue that it's possible to be both fat and fit, the ACSM and many physiologists continue to assert that too much fat and too little muscle raises your risk for disease and makes movement less efficient

Experts have long recommended that we do at least three different types of activity to achieve optimum cardio respiratory and muscular fitness, flexibility, and body composition. For example, the ACSM recommends building cardio respiratory fitness by exercising at an intensity that raises your heart rate to at least 55 percent of your maximum heart rate (the highest rate you can maintain during all-out effort, generally estimated as 220 minus your age); muscular fitness by targeting each major muscle group with eight to 12 repetitions of weight-bearing exercise; and flexibility by stretching.

"Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it." *– Plato*

Following are the benefits of physical fitness.

1: Reduces risk of disease

People who participate in regular exercise have a decreased risk of developing:

- heart disease
- diabetes
- metabolic syndrome
- colon cancer
- lung cancer
- breast cancer

2. **Development of physical fitness components**:- Development of physical fitness components cause improvement such as muscle strength and endurance, cardiovascular endurance, flexibility, agility, speeds, bone density etc.
3. **Provide better health:**- Regular physical exercise increases both the size and strength of the heart. It can pump more blood with less effort and becomes more efficient. This will lower pulse and lower the blood pressure which can increase lifespan. The circulatory system is also improved because of increased blood volume providing more oxygen to the muscles. These effects will reduce the risk for heart disease, heart attack, and stroke. Significant cardiovascular health benefits can be attained with long-term participation in cardiovascular exercise.
4. **Lower your Cholesterol levels**:- The benefits of physical fitness will improve your ability to help you control your cholesterol. They raise your levels of 'good' cholesterol and drop your levels of 'bad' cholesterol.
5. **Builds stronger Bones, Joints and Ligaments:**- Physical activity results in the strengthening of our bones and muscles. It can substantially reduce the risk of arthritis and other bone diseases. Weight bearing exercise is shown to increase bone density and also prevent bone loss as we get older. This can reduce the onset and severity of osteoporosis. Resistance training does a great job. The strain that it puts on your body

helps build bigger, stronger bones.

Different kinds of strength training put strain on your joints. This actually helps your body strengthen connective tissue in those joints. These tissues become stronger, more flexible and less prone to injury. Increased blood supply means better nutrition for the tissues and better removal of waste products which helps improve the health and durability.

6. **Maintenance of Optimal Body Weight**:- Physical activity increases the muscle mass, reduces fat and thus controls weight. It is proven that physical fitness can control your body weight and prevent obesity and other weight-related problems. By combining the right physical workouts with a proper and balanced diet, you can expect weight loss, reduced body fat and a more firm and fit body. Aerobic exercise burns calories during the duration of the exercise and strength training burns calories in the 24 hour period following the training
7. **Improves your sleeping habits**:- One of the benefits of physical fitness is that it provides you sound sleep and improves your sleeping habits. Studies show that people who exercise regularly and are physically fit - fall asleep more easily and sleep longer than those who do not exercise and are physically unfit. Because of cooling off after exercise, your body temperature drops leading to deeper sleep.
8. **Boost in energy level:**- Exercise improves the blood flow in the body and promotes better sleep, both of which boost energy. A regular exercise program, especially in the mornings, will give you energy and drive for the rest of the day. This effect is related to the increased metabolism associated with a fitter body.
9. **Improved Appearance:**- Physical activity builds muscle mass and burns excess fat. It tones body muscles helping you to look fit and healthy. Healthy active people almost always have great skin tone and look fresh, less fatigued.
10. **Relaxation and Stress relief**:- There are so many stress factors in our day to day life. Because of lifestyle changes, change in the environment, people live under extreme stress in this competitive world. Regular physical activity releases the hormones which have "feel good factor."It helps in reducing your stress levels and gives you more strength to fight life's challenges.
11. **Fights Depression**:- Effects of physical activity and exercise on mood are immediate. Blood flow to the brain is increased, endorphins are released and your mood becomes finer. These endorphins make you feel better and fight stress and depression.
12. **Causes Delayed Aging**:- Among the several benefits of physical fitness, delayed aging leading to positive thinking and improved self perception is the most sought factor. Regular physical activity reverses the natural decline in the metabolism of the body. Daily exercise is found to keep a person productive and energetic for a longer period of the day. Regular physical activity postpones the process of aging and increases the longevity of life.
13. **Makes you feel happier**:- Physical activity has important role in keeping your body fit. Exercise causes your body to release endorphins which has a "feel good factor". Because of these endorphins you feel happier.

14. **Postpones fatigue:**- The benefits of physical fitness include the postponement of fatigue and reduced recovery time after vigorous activity.
15. **Boost your Confidence**:- Physical fitness provides correct posture, figure, body image, and good appearance along with increased energy levels. It gives you a sense of accomplishment, which is a boost to confidence.
16. **Utilization of Time**:- Through Participation in physical fitness program, leisure (free) time is properly utilized and makes you fit and healthy.
17. **Improve your overall health**:- Physical fitness provides you the optimum physical health, general well being and mental stability. In other words it improves your overall health and you can live your life to the fullest.
18. **Healthier, longer Life:-** All together, the benefits of physical fitness give you healthy and more efficient body. Thus it increases your chance of leading a healthier, longer and more fulfilling life.

    These are some of the more prominent benefits of physical fitness. Everyone can and should participate in a fitness program to improve one's quality of life. Living an active and healthy life will make your overall lifestyle much better.

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Physical Education and Sports, Challenges in the Practial Field

Irshad Maqbool Malik: PET, DYSS J & K

Physical Education including games and sports plays a tremendous role in the development of our youth. It enables an individual to live a healthy life in an ever-changing world. Physical Education makes the children psychologically, physically and physiologically active. It helps in the development of character building, reduction of rowdiness, and serves on the basis of group unity and solidarity. It introduces team work, self-discipline, sportsmanship, leadership and socialization among the youth.

According to U.S. Deptt. Of Health and Human Services (2000):- Participation in physical activity and sports can promote social well-being, as well as physical and mental health, among young people, Sports and physical activity programs can introduce young people to skills such as teamwork, self-discipline, sportsmanship, leadership, and socialization. Lack of recreational activity, on the other hand, may contribute to making young people more vulnerable to gangs, drugs, or violence.

It is also available in the literature that participation in physical education activities including sports have been considered very important rather essential to build up body strength (physical fitness), social, emotional and spiritual integration and good health. This fact is very clear from the "evaluation theory" which throws some light on the nature and type of activities man does for his progress. Commenting on this ill health and physical education activities, Swami Vivekananda, a great Saint of India, pointed out in 1948:-

"Physically weakness is the source of one-third of our misery. First of all, our young men must be strong. Religion and other human activities will come after words. You will be nearer to heaven through games and physical activities than through the study of the Gita…… You will understand Gita with your biceps, strong muscles.

An Urdu poet has expressed the idea of weakness leading to early death in the following verse, *HAI JURM-E ZAIEFI KI SAZA MARG-E MUFAJAT*

India is no stranger to sports. Physical activity has always been a prominent feature of Indian society, during the Vedic, Mughal and Maratha eras. Today, I ndian sports is a mix of traditional games such as kho –kho, Gilli Danda and sports introduced by the British such as cricket, football, and hockey , however sports is no longer viewed in india as essential to the holistic development of its citizens. It is considered either as luxaryor leisure persuits leading to systematic underinvestment in sports infracturestructure and culture.

"Sports include all forms of physical activity that contribute to physical fitness, mental well being and social interactions such as play, recreation, organised or competitive sports, indigenous sports or games." (United Nations Interagency Taskforce on Sports for Development and Peace)

For implementation of physical education and sports programmes for their universalization. We have some challenges to face which can be highlighted and achieved by the co-operation of media. Which are as follows?

1. Religion: - the religion has been considered as some worships like chanting of mantras, counting of beads of malas and keeping fasts. This leads the person isolation and physical idleness. Such interpretations of religion have proved a barrier for physical activities. We shall have to introduce the religion as a way of life full of vigour and enthusiasm which involves our body, mind and soul, so that physical and cognitive energies are put to work.

2. Gender: - old people used to say, to the earth he and to the hearth she'' our ancient social leaders have a tendency to keep the females within the walls. Though it is a fact that there is a difference in physiological and anatomical potential between the sexes. Which has hindered the participation of females in physical activities? Which made her a weaker gender?
3. Environment:- physical activities have always been affected by environment. Sun and rain; wind and storm are there to control the movement of man. Topography of a place has a bearing human behaviour. There are a few sports persons who can play ice hockey but common people cannot move on the ice grounds. International tournaments have been stopped due to rains or wet grounds. We cannot construct sports fields on the sharp peaks of hillocks. But due to advancement in the technology we can overcome some of our environmental barriers.

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Comparative Study of Self-confidence between Kabaddi and Kho-Kho Intercollegiate Players of Akkamahadevi Women's University, Vijayapur

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Abstract

The Purpose of the present study was to compare the psychological variable namely self-confidence between Kabaddi and Kho-Kho intercollegiate fefemale players of A W University. To achieve the purpose of the study sixty subjects (n-60) out of thirty players from Kabaddi and thirty players from Kho-Kho discipline who were participating in intercollegiate tournaments were selected. The purposive simple random technique was used for selection of subjects. The age of the subjects chosen for this study were ranging from 18-25 years. The study focused on psychological variable namely self-confidence. The standardized Sports competition self-confidence questionnaire prepared by Gayton and Richmond was used to assess the level of self-confidence among kabaddi and kho-khofefemale players of A W University. The collected data was statistically analysed by using percentage values. Result: The result reveals that there is a significant difference between Kabaddi and kho-kho intercollegiate fefemale players of A W University in the level of self-confidence. Compared to kho-kho players, Kabaddi players were found better in the level of self-confidence.

Keywords: Self-Confidence, kabaddi, kho-kho

Introduction

In modern competitive sports, the Self confidence in sportsmen has affected their performance. As the physical load during the training of sportsman for international competitions is also intensified, the sportsmen like other athletes are anxiety prone while participating in competitive sports (Sigh, 5 July 1982). Each self is unique as it develops on the basis of unique organism, and the reactions to the various forces in the physical and social environment. There is a constant and continuous activity of adjustment and re-adjustment to the changing conditions. Thus, there is stability as well as change in the self. Right through the growth processes, in all the physical, physiological and psychological aspects, the self is a constant but ever-growing organization. Change in self is revealed in the change in the ways one sees one self and the world as one acquires knowledge, skills, attitudes and various roles. Self-confidence plays a central role in the development and adjustment of self; it is through confidence that meanings are acquired and meaningful interaction between the individual and the environment take place. There is an increasing awareness of one's self as the child grows up into adolescence and mature adulthood. Hence the study focuses on to know the level of self- confidence of the Kabaddi and Kho-Kho players of Akkamahadevi Women's University.

Self confidence

Self Confidence refers of one's perception about oneself. It is an individual's perceived ability to act effectively and proficiently to surpass inhibitions and obstacles and to achieve success. Therefore , any performance, especially, sports performance is strongly mediated by self confidence. A highly confident player is imbued with lot of zeal and spirit and is nearer to highly accomplishment. Hence self confidence, as a psychological factor exerts its greatest impact on performance of athletes.

Statement of the Problem

Comparative study of self-confidence between Kabaddi and kho-kho inter collegiate players of AkkamahadeviWomen's University, Vijayapur

Objective of the Study

The main objective of the study was to compare the psychological variable that is self-confidence between Kabaddi and Kho-Kho female players.

Hypothesis

there may be significant difference in self-confidence between kho-kho and kabaddi players

Methodology

For this study the investigator was selected sixty subjects (n-60) out of thirty players from Kabaddi and thirty players from Kho-kho discipline who were participating in intercollegiate tournaments for the year of 2017. The purposive simple random technique was used for selection of subjects. The age of the subjects chosen for this study were ranging from 18- 25 YearsThe study.

The standardized sports competition self-confidence questionnaire prepared by Gayton and Richmond was used to assess individual differences in competitive self-confidence or the tendency to propose competition situation on threatening andor to respond to these situations with elevated self-confidence.

Scoring

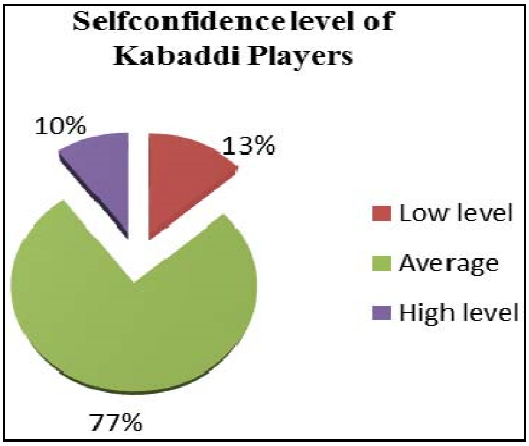
The rating scale of self-confidence is as follow soused on psychological variable namely self-confidence.

Table 1: showing the Self Confidence Level of Kabaddi and Kho-khoFefemale Players

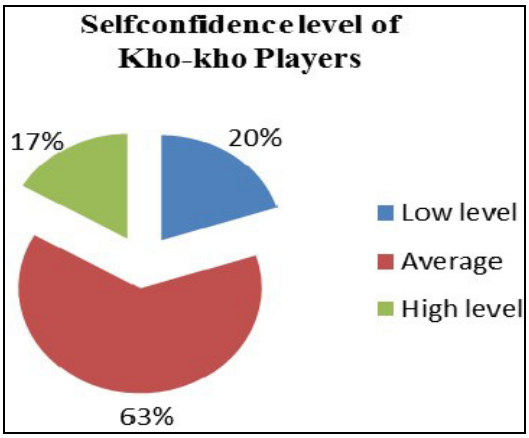
Self-confidence of Kabaddi Players	No. of Players	%	Self-confidence of Kho-kho players	No. of Players	%
Low level	04	13.3%	Low level	06	20%
Average	23	76.6%	Average	19	63.3%
High level	03	10%	High level	05	16.6%

The perusal of table 1 depicts that four Kabaddi and six Kho-kho players in low level of self-confidence. Twenty-Three Kabaddi and nineteen Kho-kho players showed medium self-confidence level and three Kabaddi and five Kho-kho players having high level of self-confidence.

The levels of self-confidence in respect of Kabaddi and kho-kho players are depicted diagrammatically in following pie charts respectively.



Pie chart graphical representation of level of self-confidence, the Kabaddi players have 10% of high level and also 76.6% of average level and finally 13.3% have low level in self-confidence.



Pie chart graphical representation value of self-confidence, the kho-kho players have 16.6% high level confidence and also 63.3% average level and 20% will very low level of self-confidence among Kho-Kho players.

Sl. no	Score	Self confidence level
1.	10-35	Low level self confidence
2.	36-65	Medium self confidence
3.	66-90	High self confidence

Analysis of Data

The data thus collected was statistically analysed by using Percentage values. The results pertinent to self-confidence were compared with the use of percentages and pie-charts.

Result and Dissections

The results in respect of self-confidence levels of Kabaddi and kho-kho players seems to be moderate specially that of Kabaddi players, whereas the kho-kho players lack confidence level (20% - low level self-confidence). Over all the Kabaddi players are better in self-confidence when compared to kho-kho players. High level self-confidence is seen only in five kho-kho players and three Kabaddi players respectively.

Conclusions

Based on the results following conclusions were drawn:

1. There is significant difference between Kabaddi and kho-kho intercollegiate female players ofAkkamahadevi Women'sUniversity in the level of self-confidence.
2. Compared to kho-kho players, Kabaddi players were found better in the level of self-confidence.

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Effect of Yogic Asanas on Physical and Mental Ability of Sports Girls

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Abstract

The aim of the present paper is to find out the effect of yogic asanas on physical and mental ability of sports girls. For achieving this aim twenty (20) sports girls were taken as subjects and given training programme of ten yogic asanas. Abdominal and shoulder strength, speed, endurance, agility and power were taken as components and AAPHERD physical fitness test battery was used for measuring physical ability. To measure mental ability, a group test of general mental ability by S. Jalota was used. The yoga training programme was scheduled for 12 weeks and t-test was applied to find out the difference between pre-test and post-test mean scores of sports girls on physical and mental ability. The results of the present paper depict that sports girls significantly improved their abdominal and shoulder strength, endurance, agility, power and mental ability after the training of yogic asanas, whereas no significant improvement was found in speed.

Keywords: yogic asanas, physical ability, mental ability

Introduction

Human beings are magnificent creatures but they have added many complexities to their life. A healthy and fit person is an asset to humanity while an unfit individual is a curse for himself or herself as well as a burden to the society. Neglect of the body creates physical, physiological and psychological problems. In Bhagavad-Gita Yoga is defined as 'yog karamsu koshalam' which means yoga is an art to do the work skillfully. Today, the focus is more on Yoga's practical benefits. Yoga is a process, contributing to the concept of focusing on one's awareness, while performing specific postures. Yoga believes in total health, aiming at physical and mental well- being and higher spiritual attainments. Physical health and mental health often go hand-in-hand. Asanas are special positions of the body that strengthen, purify and balance the endocrine nervous and circulatory systems. Kuvalayananda and Vinker (1963) [7] have rightly pointed out that the yogic practices, particularly asanas, are supposed to reduce the high activation level and psycho-physiological disequilibrium and also contribute to steadiness, psychomotor co-ordination and emotional stability. Yoga has been studied and found to have positive effects on physical fitness, mood, anxiety level, and cognitive functioning (Abadi & Venkatesan, 2008; Berger & Owen 1992; Netz & Lidor 2003; Prakash, Dubey, Abhishek, Gupta, Rastogi, & Siddiqui, 2010; Ross & Thomas, 2010) [2, 3, 9, 10, 11]. According to shelley wu, a yoga therapist "Asanas promote clear thinking, when doing asanas the yogi must exercise intense concentration and precise body control, which also contributes to freeing the mind from mental disturbances, reduction of nervousness, irritability, confusion, depression and mental fatigue". The need of yoga is of immense importance for sports girls as sports persons undergo variety of physical and mental variations

during practice as well as competition. Yoga helps a sports person to feel and understand the body processes more accurately, thereby learning what the body needs. By understanding this, an athlete can work on areas that need attention withconfidence. Yoga is useful for all types of sports to help prevent injuries. One gets extra agility which helps to avoid damage, provides more strength and improves a player's ability to react to a situation (Khanna, 2011) [6].

AIM OF THE PAPER

To find out the effect of yogic asanas on physical and mental ability of sports girls.

HYPOTHESIS

There will be no statistically significant effect of yogic asanas on physical and mental ability of sports girls.

MATERIALS AND METHODS

To find out the effect of yogic asanas on physical and mental ability, twenty (20) sports girls were taken as subjects and given training programme of ten yogic asanas i.e. Padamasana, Vajrasana, Paschimottanasana, Sarvangasana, Halasana, Bhujangasana, Dhanurasana, Shavasana, Vrkshasana and Trikonasana. Abdominal and shoulder strength, speed, an durance, agility and power were taken as components for measuring physical ability and AAPHERD physical fitness test battery (1976) [1] was used to measure physical ability which included Flexed Arm Hang, Sit ups, 50 Yard Dash, 600 Yard Dash, Shuttle Run and Standing Long Jump as test items. To measure mental ability, a group test of general mental ability by S. Jalota (1984) [5] was used. The duration, load and intensity of the training was based on the results of the pilot study. The yoga training programme had been scheduled for 12 weeks. It was given six days a week except Sundays in the morning from 7.00 a.m. to 8.00 a.m. Before giving training of yogic asanas, five minutes for warming up were given. In the same way after the training programme, five minutes cooling down period was added to the training programme. The number of repetitions and duration of the training programme was gradually increased.

STATISTICAL PROCEDURE

The data obtained was compiled and tabulated variables-wise and. t-test was applied to find out the difference between pretest and post-test mean scores of sports girls on physical and mental ability

Table 1: Significance of difference between pre-test and post-test score of sports girls on physical ability

	N= 20	PRE-TEST		POST-TEST				
S. No	**Test items**	**M1**	**SD1**	**M2**	**SD2**	**MD**	**SEDM**	**t-value**
1.	Sit Ups	13.70	3.70	17.20	04.51	03.50	0.866	4.04*
2.	Flexed Arm Hang	13.95	6.51	24.60	12.53	10.65	2.228	4.65*
3.	Standing Long Jump	57.55	6.33	60.40	07.06	02.85	0.969	2.94*
4.	Shuttle Run	13.55	0.82	12.75	00.96	00.80	0.186	4.30*
5.	50 Yard Dash	10.90	1.68	10.65	01.56	00.25	0.190	1.31
6.	600 Yard Run & Walk	206.70	36.23	173.60	23.39	33.10	7.207	4.59*

* Significant at 5%, t > 2.10

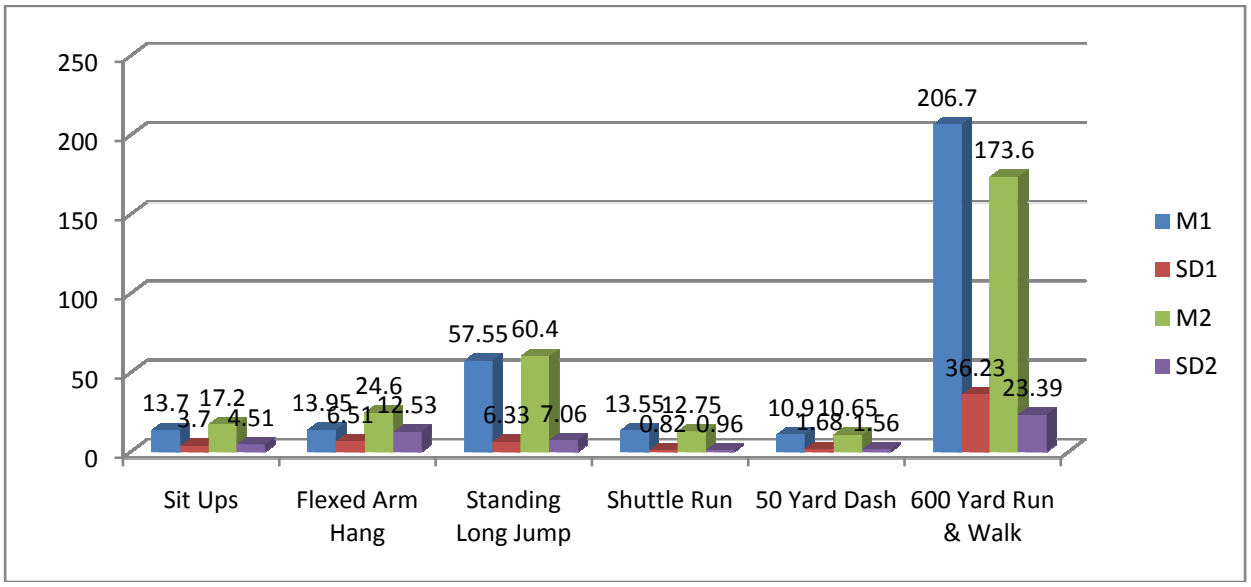
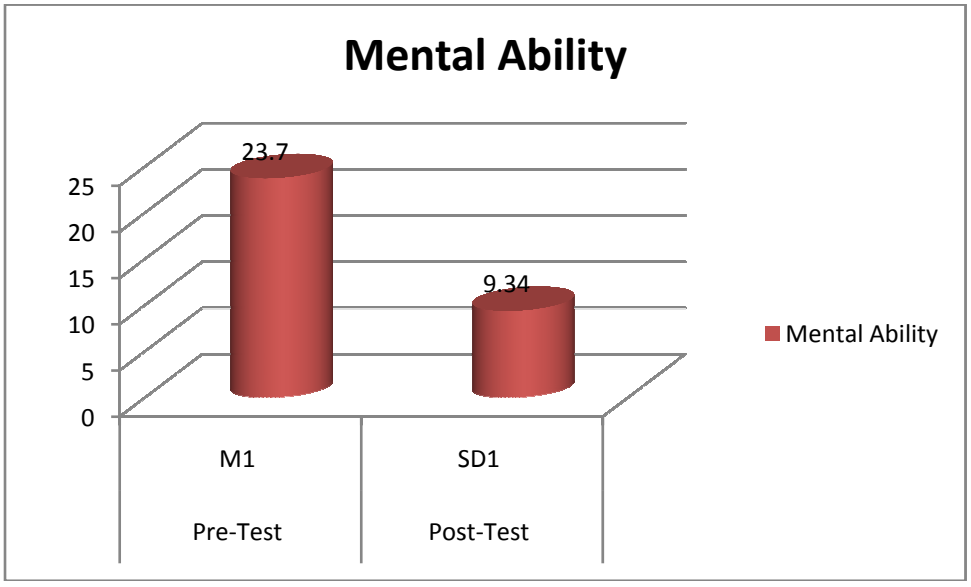


Table 2: Significance of difference between pre-test and post-test score of sports girls on mental ability

	N= 20	Pre-Test	Post-Test			
S. No	Test item	M1	SD1	M2	SD2	MD
1.	Mental Ability	23.70	9.34	30.55	11.25	06.85



* Significant at 5%, t > 2.10

RESULT AND DISCUSSION

The results of the present experiment have been presented in the following tables:

RESULT

In table 1 and 2 comparative results of pre-test and post-test mean scores of sports girls on all the selected variables are presented. The results presented in table-1and 2 show that the post-test mean score of sports girls on sit ups, flexed arm hang, standing long jump and mental ability are 17.20, 24.60,60.40 and 30.55 respectively which are higher than that of pretest mean scores i.e. 13.70, 13.95, 57.55 and 23.70respectively. Whereas the post-test mean scores of shuttle run,

50 yard dash and 600 yard run and walk i.e. 12.75, 10.65173.60 respectively has been found less than the pre-test mean scores i.e. 13.55, 10.90 and 206.70. The results also indicate statistically significant improvement has been found between pre and post-test mean scores of sit ups, flexed arm hang, standing long jump, shuttle run, 600 yard run and walk and mental ability with t= 4.04, 4.65, 2.94, 4.30, 4.59 and 4.72respectively. In the case of 50 yard dash no statistically significant difference has been observed between pre-test and post-test scores as the obtained t-value (1.31) is less than the required table value of t=2.10 to be significant at five percent level.

DISCUSSION

The results of the table 1 and 2 reveal that the sports girl has shown significant improvement at post-test stage in their performance on almost all the variables. Although the mean score of subjects on shuttle run, 50 yard dash and 600 yard run and walk has decreased. This decrease is in timing indicates betterment in performance level of speed, endurance and agility. So the training of yogic asanas to the subjects has been found to be significant in the improvement of physical ability as well as mental ability for sports girls. The findings of Gharote (1976) [4] also lend support to the present findings according to which yogic asana improve various components of physical fitness such as flexibility, strength, endurance, speed, balance and cardiovascular fitness.

FINDING

The results of the present paper depict that sports girls significantly improved their physical ability components namely abdominal and shoulder strength, power, agility and endurance as well as mental ability after the training of yogic asanas whereas no statistically significant improvement was found with regard to their speed.

CONCLUSION

It can be concluded from the findings of the present paper that yogic asanas are beneficial for improving physical and mental ability of sports girls. Hence training of yogic asanas can be of immense value for the development of physical and mental ability of sports girls. As enumerated in various research studies the findings of the present paper are in line with the results of research study done by Malathi and Damodaran (1999) [8] which indicate a tranquil state of mind during routine activities, accompanied by increased attention during stressful situations by the practice of yoga. It also improves the general well-being of an individual and strengthens mental resolve.

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Effect of Selected Yogic Exercises on Balance and Depression Level among on College Students

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Dr. D. M. Jyoti: Research Guide, Dos in Physical Education Sports and Sciences A.W. University Vijayapura.

Abstract

Yoga asana (postures) and breathing deal with the physical body, but due to their effect on the brain, they also effect the mind. All the wonders of modern science will not bring happiness, peace of mind, health or a long life. Although wonders have been achieved in our external environment – space travel, computers, etc. our internal environment has been neglected. Thousands of years ago the ancient yogis turned their minds inwards and discovered their true nature. Yoga asana (postures) and breathing deal with the physical body, but due to their effect on the brain, they also affect the mind. This section along with the rest of this website will continue to grow. In the rat race of life, most people are enveloped in highly demanding jobs that leave them mentally as well as physically exhausted. The more sedentary your professional life gets, the higher is your anxiety. So, how do you combat such stress? The answer is inculcating yoga in your day-to-day life. Various research studies have assessed the efficacy of yoga in improving one's mental health, and have concluded that yoga does have an array of psychological benefits.

KEYWORDS: Yogic Selected Exercises Balance On Depression Level Among On College Students.

Introduction:

Balance is The ability to maintain equilibrium when stationary or moving (i,e .not fall over) through the coordinated action of sensory functions (eyes, ears, and the proprioceptive organs in our joints) yogic practices and physical exercises both. There is no significant difference in yogic practices and physical exercises. it is concluded form the results that the level of balance is increased by combined activities is greater than the yogic practices. It is concluded form the results that the level of balance is increased by combined activities is greater than the physical exercises. This study revealed that all types of training groups increase balance. Every students has a right to learn and develop himself as per the need of life, even they may be special students or physically challenged.

Depression (major depressive disorder) is a common and serious medical illness that negatively affects how you feel the way you think and how you act. Fortunately, it is also treatable. Depression causes feelings of sadness and/or a loss of interest in activities once enjoyed. It can lead to a variety of emotional and physical problems and can decrease a person's ability to function at work and at home.

METHODOLOGY:

The methodology adopted in the present study related with selection of subjects, selection of variable, and selection of test.

Selection of subjects:

The purpose of the study was to find out **"Effect Of Selected Yogic Exercises On Balance And Depression Level Among On College Students**" To achieve this purpose 60 female students in the age group 18-22 years studying in Smt. Bangaramma Sajjan Arts and Commerce College for Women, Vijayapura Karnataka state were selected as subjects.

Selection of variables:

- paschimottanasana padmasan,vajrasan, (Sitting Asanas)
- Tadasana, Vrikshasana Garudasana(Standing Asanas)
- Halasana Naukasana, Shavasana.(Sopine Asanas)
- Makarasana , Bhujanagasana, Shalabhasana(Proline Asanas)

Selection of Test

SL.NO	Test	Measurement
1	Balance	Administration of the test One-leg standing test

Depression Status Scale:

Depression status of the subjects the present study was estimated with the help of Depression status scale developed by Pallavi Bhatnagar manifest Depression scale. The response categories are true or false. The responses are scored with the help of manual.

ANALYSIS AND INTERPRETATION OF DATA

The purpose of the study was to measure the **"Effect Of Selected Yogic Exercises On Balance And Depression Level Among On College Students**" To achieve this purpose the date collected for the study were put into analysis and results of which are presented in the Table 1.1.Table

Table no1.1 showing the pre-test and post-test performance of Balance.

Group	test	mean	SD	t value
Experimental group	Pre test	13.36	2.53	2.108
	Post test	15.54	3.08	
Control group	Pre test	10.96	1.28	1.005
	Post test	10.77	2.24	

The level of significant is 0.05

Table No 1.1 Shows that the experimental group's mean performance value of Balance of pre test is 13.36 and the post test is 15.54 the post test Balance performance is less than pre test Balance performance and also the t value is more than the table value. Hence it indicates significant development of Balance .Whereas the control groups mean of Balance performance of pre and post test values are 10.96 and 10.77 respectively. The t value is less than the table value. Hence the pre and post test values indicate insignificant.

Figure : showing the pre test and post improved the Balance Training of girls performance

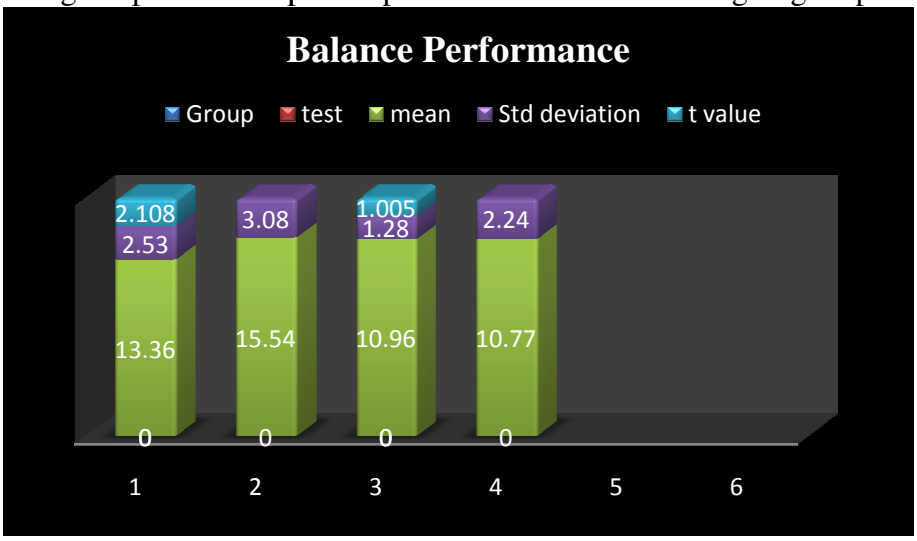


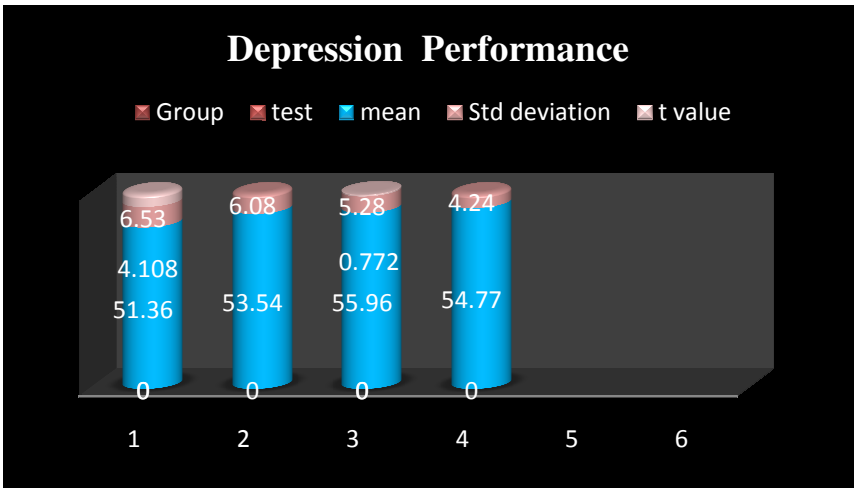
Table no1.2 showing the pre-test and post-test performance of Depression.

Group	test	mean	SD	t value
Experimental group	Pre test	51.36	6.53	4.108
	Post test	53.54	6.08	
Control group	Pre test	55.96	5.28	0.772
	Post test	54.77	4.24	

The level of significant is 0.05

Table No 1.2 Shows that the experimental group's mean performance value of Depression Level of pre test is 51.36 and the post test is 53.54 the post test Depression Level performance is less than pre test Depression Level performance and also the t value is more than the table value. Hence it indicates significant development of Depression Level performance of pre and post test values are 55.96 and 53.77respectively. The t value is less than the table value. Hence the pre and post test values indicate insignificant.

Figure : showing the pre test and post improved the Depression level performance of girls.



SUMMARY

The purpose of this study was to find out the "Effect Of Selected Yogic Exercises On Balance And Depression Level Among On College Students " To achieve this purpose 8 weeks yogasanas training was given to selected female subjects. To know the Effect of yoga training on the physical fitness performance Level of the Balance was used for pre test and post test of the subjects. The result shows that 8weeks yogasanas training develops Balance. yogasanas training on the Depression level training reduces Depression level performance.

CONCLUSION

On the basis of the results it was concluded that 8 weeks of yogasanas training significantly improved the Balance performance of subjects. All the asanas were very much benificial for improving the balanceing agility of the strength .Hence all the asans as Sitting Asanas, Standing , Sopine, and Proline asanas influvere on balancing agility of the same group of asanas helps in redeing the Depression level of the strength all the asanas will reflect dirating on breathing agility of the subjets.Hence breating directly reflection varies systems of the body.so of is conclusion that all the above mentiads asanas will help in redaeing the Depression level of subjets.

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A Comparative Study of Emotional Intelligence Between Sports Women's and Non Sports Women's of Karnataka State Women's University, Bijapur.

Kum.Tayamma Nagappa: Research Scholar, DOS in Physical Education & Sports Sciences, Karnataka State Women's University Vijayapur

Abstract

Emotional intelligence is concerned with the awareness, appraisal and utilization of emotions for individuals and for teams. Emotional intelligence can be altered through training that focuses on the role of emotions in our behavior. Emotions such as anxiety can be positive and negative. It is the combination of emotion, and the thoughts that are linked eith these combinations that determines whether these emotions are motivational or demotivational. In a recent study we looked at emotional states associated with success and failure in sport competition and academic examinations (3). The expansion of sport science as an academic study academic study means that growing numbers of students experience the dual stresses of taking examinations and participating the results of this study are depicted in figure 1 which shows that a) emotions are strongly associated with success, and b) emotional profiles linked with success are somewhat different between sports and an examination.

Key Word : A Comparative study of Emotional Intelligence Between Sports Women's and Non Sports Women's of Karnataka State Women's University, Bijapur**.**

Introduction

Emotional intelligence is concerned with the awareness, appraisal and utilization of emotions for individuals and for teams. Emotional intelligence can be altered through training that focuses on the role of emotions in our behavior. Emotions such as anxiety can be positive and negative. It is the combination of emotion, and the thoughts that are linked eighth these combinations that determines whether these emotions are motivational or demotivational. In a recent study we looked at emotional states associated with success and failure in sport competition and academic examinations (3). The expansion of sport science as an academic study academic study means that growing numbers of students experience the dual stresses of taking examinations and participating the results of this study are depicted in figure 1 which shows that a) emotions are strongly associated with success, and b) emotional profiles linked with success are somewhat different between sports and an examination. The concept of emotional intelligence is relatively new and there is still confusion about its exact definition. Like the definition of the traditional intelligence (IQ) it has got several definitions. (e.g., bar-On, 1997, Golerman, 1995, 1998, Mayer and Salovey, 1997 Salovey and Mayer, 1990). It was Saloyey and Mayer who first gave this formal concept of emotional intelligence in 1990 in their model of emotional intelligence but the Emotional intelligence is a relatively new concept that has emerged over the last decade, which to date has principally been studies in business setting (1). It is defined as 'the capacity to recognize and utilise emotional states to change intentions and behavior'. Emotional intelligence can be measured pen and paper tests (2); in such tests, the responses to statements such as 'when I experience a positive emotion, I know how to make it last' and 'I motivate myself by imagining a good outcome to tasks I take

on' are recorded and assessed. Emotional intelligence besummarized thus: emotional states in others in the sporting context is clearly desirable, and the skill of raising the emotions of the team is a potentially priceless asset. ina recent study, we looked at emotional states associated with success and failure in sport competition and academic examinations (3).the expansion of sport science as an academic study means that growing numbers of students experience the dual stresses of taking examinations and participating in competition. The results of this study are depicted in figure 1 which shows that a) emotions are strongly associated with success and b) emotional profiles linked with success are some whet different between sports competition and an examination

Statement of the Problem

A comparative study of Emotional intelligence between Sports Women's and Non Sports Women's of Akkamhadevi Women's University, vijayapur

Limitations

Emotional intelligence is only chosen for this research study.

Delimitations

Data collection is restricted to the Sports Women's and Non Sports Women's of Akkamhadevi Women's University, vijayapur

1. The Sports women's are participation in any games Sports women's are not participation any games
2. The sample age is any 14-16 years

Hypothesis

1) There would be significant difference between Sports Women's and Non Sports Women's in their emotional intelligence.
2) There would be a positive correlation of Emotional intelligence with participation of sports and non participation.
3) There would be sex difference between male and female emotional intelligence.

Significance of the study

In view of competitive sports gaining significance, so the study of emotional intelligence variables among the Sports Women's and Non Sports Women's assumes importance in the context that,

1. The study of emotional intelligence behavior of Sports Women's and Non Sports Women's help the trainer and coaches to understand the emotional abilities of sportsperson which demands to control and manipulate in game situation.
2. The know the extent of help in providing guideline to physical Education Teachers and Coaches for selecting and preparing players for their psychological preparation.
3. To know the complex of physical, intellectual, emotional and social developmental patterns and success in sport is an integral part of this pattern. Thus, an understanding of behavior in sport will aid us in helping people to better fulfill their lives.
4. To study the important factors for future selection and coaching of Sports Women's for national and international events.
5. To study the most important aspect of sport- a means of promoting interpersonal, national and international understanding. It would provide clue whether sports are truly fulfilling this much- publicized purpose or the differences in their adjustment are defeating the fundamental purpose of sports promotion.

METHODOLOGY

In the review of literature it has been presented a resume of all the studies conducted in the psychology of sport in general, and its impact on psychological factors in particular. It is appropriate that although a number of studies are available both in the field of socio-cultural status and socio-psychological correlation but there is no integrated picture of participation of sports activities and its impact on the personality dimension of sportsperson. At the same time it also became clear that what is needed is a comprehensive picture of the relationship between physical and sports activities and its impact on the personality dimensions like emotional intelligence of the women Sports Women's and Non Sports Women's students. Many research studies in the psychology of Sports student and Non Sports student studies separately not shown much interest and has not focused on the participation of sports and physical activities, which plays a major role in determining the personality factors of the sportsmen, which could play a important role in their performance. The present investigation pertaining to "A Comparative study of emotional intelligence between women Sports students and Non sports women student " is in the framework of ex-post-facto research. The Particulars of samples, tools, collection of data and statistical techniques are given as under;

Table No-1 showing Sample size of the study.

Sports Women's	Non Sports Women's	Total
30	30	60

To collect the data pertaining with research problem Thimguzam scale was administered on the Sports student and Non sports student of women's university students. Samples age ranging from 21-25 Years. Scoring pattern as indicated in below paragraph.

Tools:

The Emotional Intelligence Scale developed by Thimgujum and Ram (1999) has been applied in present study. While scoring the emotional intelligence scale, the respondent feeling strongly agree would be awarded 1, for agreeing 2, for undeceiving 3, for disagree 4 and finally for strongly disagreeing 5 would be awarded to the respondents.

Statistical Technique:

1. To know the nature of correlations exist between the independence and dependent variables, The person productive correlation technique is applied.
2. To assess the influence of sex and nature of activity on emotional intelligence "t" test is applied.

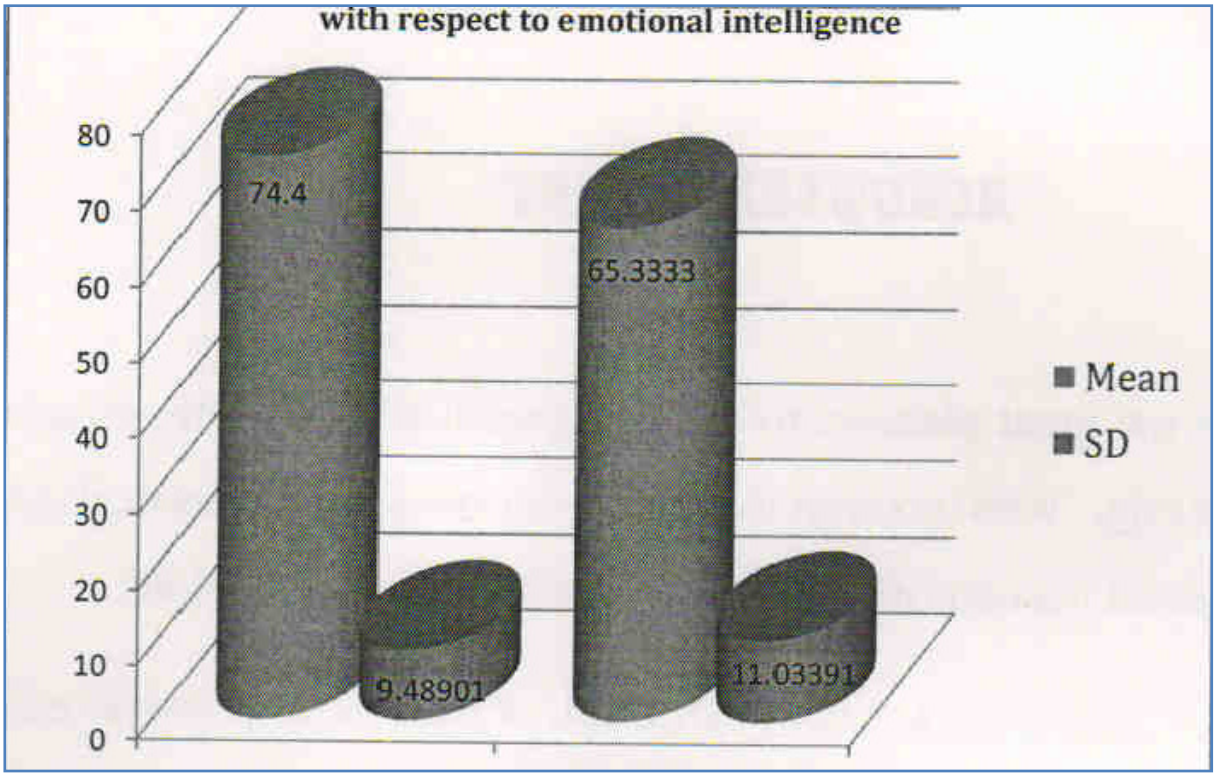
ANALYSIS AND INTERPRETATION OF DATA

The study was carried out to see the influence of physical activities on the development of emotional intelligence of the sportsman and also attempt see the influence of demographical variable in moldings the emotional condition of the sportsman. Because various research studien reveals that participation of sports bring the tremendous changes and plays significant role in moldings the personality and emotional health of the sportsman. Hence researcher made here an attempt to explore the relation and significant influence on physical activities and sports on emotional intelligence of the Sports Women's and Non Sports Women's players.

Table No-1 Showing the mean and SD and 't' value of Sports Women's and Non Sports Women's

SL.NO	Variables	Mean	N	SD	t-value	Df	p-value	Remark
1	Sports women	74.4000	30	9.48901	3.4292	29	.002	sigh
2	Non sportsman women	65.3333	30	11.03391				

Significant or at 0.005-leavel



Mean SD Mean SD
SPORTSMAN NON SPORTSMAN

The Table-1 showing the mean SD and 't' value of the Sports Women's and Non Sports Women's players, The formulated hypothesis that there would be significant differences between Sports women's and Non Sports Women's players in their emotional intelligence. The calculated data was tested, and mean score of the Sports Women's is 74.4000 and SD is 9.48901 and 65.3333 and 11,03391 respectively and calculated 't' value is 3.4292 it reveals that Sports Women's mean score is higher than Non Sports Women's and its also reveals that there is significant difference in emotional intelligence of Sports Women's and Non Sports Women's players. Hence formulated hypothesis that there would not be any significant difference is rejected and there is difference is accepted. It may generalized that participation of Sports Women's provides ample opportunity to participate and express their emotional freely and cultivate emotional skills and to get mastery to produce, regulate,

manipulate, and control emotional stress among the student in respect of life and game situation frequently occur in the competition. Whereas Non Sports Women's get less opportunity to participate and control and manipulation of stress.

Conclusion

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

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Socio-Biological Aspects of Women's Participation in Sports: An Analytical Study

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Abstract

Women's sport is expanding rapidly in recreational sports in local communities, or at national and international competitions. But, in many societies women do not enjoy enough equal opportunities to fully engage in sports especially when comparing South Asian with Euro- Americans. Women in sports have now become an effective force in world competitions, and the domination by men of world-class sport is threatened. This paper will not give solutions to all major problems, but it will identify them and endeavor to provide a better insight in the athletic potential of all women. It is believed that inherent biological factors limits female performance potential such as height, body composition, muscle mass and cardiovascular endurance capacity which constitute biological differences between the sexes. The delayed menarche, which is often found in female athletes who train at high levels, and is associated with estrogen-a necessary hormonal trigger for increasing bone density in adolescence. The social conditions prevalent in the society and their roles in sport have developed to this orthodox view and are said to be justified, to great extent. The highly trained male and female athletes have more similarities than differences in these physiological and physical parameters. Physically fit women sweat less and have smaller rises in rectal temperature under strenuous conditions, and assumed that women may be better suited physiologically to long-distance running than men. The biological factors a highly trained female athlete, as manifest in physiological functioning and physical characteristics change, and develop similar capacities equivalently as compared to trained male counterparts.

Introduction

Since centuries women have participated very little in athletic and various sports competitions. In fact, in the early 20th Century women were excluded from the Olympic Games because participation in sport was thought to be too vigorous and stressful to women Athletes. In 1972, American Congress passed a federal law prohibiting sex discrimination in federally funded educational institutions (J.Coaklay, 2001), in other words women Athletes were allowed to have the same opportunities as men have for participation in sports and exercise. Consequently, by 1990's approximately 2.4 million girls were playing high school sports, more than 800% since the law was introduced.

Many studies have shown the importance and positive impact of regular exercise on the individuals of the society, and explored that women who exercise at least 4 hours a week reduce their risk of pre-menopausal??? and breast cancer by 50% and women who exercise 1-3 hours a week reduce their risk by 30%. It is observed that women who participate in sports and fitness programs are healthier and have higher self-esteem as compared to non participants (Brownell et al., 1987). Sports may also have academic benefits as some studies have revealed that high school girls who participate in sports have higher grades than non-athletes do. Furthermore, high school athletes are more likely than non-athletes of Euro-

American states aspire to become leaders or dominant figures in their communities as other adults. India and Pakistan, to some extent, are no exception to it. Many outstanding sportsmen and film industry actors have occupied seats in the national parliament and provincial assemblies in India and Pakistan due the recognition in the society for their out standing performance.

It is historical fact and comparatively undesirable experience that sport has always been a male domain of both developed and developing nations from the time national and International competitions were organized. But since the inception of the women's liberation movement initiated in Europe in the late 1960s, trends towards equality for men and women have developed considerably and entered an era in which many western countries have outlawed sexual discrimination, and introduced legislation to ensure equality of opportunity between the sexes in education, jobs, sports and civic rights, and followed the same suit in this direction to have greater participation of women in competitive sports events. It is observed, when compared with males, female still hold inferior position in sporting achievements. The reasons given in support of the view of female inferiority in sporting performance that there are inherent biological factors that necessarily limit female performance potential. These factors include such as height, body composition, muscle mass and endurance, and cardiovascular endurance capacity which, when grouped together, constitute biological differences between the sexes. In general, men are tall, heavier, stronger, have larger hearts and lungs, and more muscle mass than women. In contrast, women averagely are smaller, weaker, lighter and fatter than men.

Socio-Biological Impact

The environmental conditions of the society and the performance of women in sport is said to be the result of socio-biological differences between men and women, which is not fully justified and challenging, enabling them to take part in sporting activities as female needs to manifest competitiveness, self-assertion, determination, the will to win and the ability to dominate her opponent. But in tradition bound societies parental control becomes more restrictive especially in South Asian countries where conservative communities demand that the girls must behave in a way that conforms to a feminine sex stereotype role prevalent in the society. The social acceptance as a women and her self-esteem depend on manifestations of her femininity and under such conditions a young girl may be unclear about what to do as being a woman, she does respond to one single clear directive, which is to withdraw from what is obviously designated masculine characteristic for them, and in their opinion sports clearly falls into that category. (Carrion et al.,1996), Hence, unless an adolescent girl has the supportive family and conducive social environment to counteract these cultural influences, she will probably choose to opt out of sport at school or college level, using often, as she has her menstrual periods or some other female disease as a reasonable excuse. Perhaps, such attitude of avoiding participating in games and sport is considered normal in teenage girls in India and Muslim states. Thus the collaboration, which is required to receive from their parents and teachers, would be a testimony to the widespread social attitudes that prevail concerning women's sporting participation.

The girls from economically disadvantaged backgrounds and the girls with disabilities face obstacles in relation to physical activity and sport. The poor families cannot afford to invest in health club memberships or purchase exercise machines and equipments for

their daughters. The sports girls belonging to such families often cannot pay fees or transportation costs to bring their daughters back and forth between home and school or college, and it is hard fact that such families consider fitness and sport as unattainable luxuries rather than potential resources; sometimes depend on older daughters to cook or take care of smaller children at home after school, and discourage their involvement in extracurricular activities. The poor working class girls often work part-time jobs to help their families, thereby reducing the amount of time and energy available for exercise or sports. The parental perceptions of the benefits of exercise and sports participation for daughters also vary by the social set up of the society, and depend on environmental conditions of the area where they live. The impact of cultural values and environmental conditions has deep influence on our societal system prevailing in most of the villages, towns and cities of India.

It is unfortunate that most of the South Asian women including India are confronted largely with the conservative socio cultural values, economic depression, and also in relation to physical activity and sport that developed out of the same poverty soil, where physical activity and athletic opportunity is lacking badly. Economically disadvantaged girls are more likely to suffer from that unsafe and unhealthy environment. The simple act of walking or jogging may be problematic in conservative neighborhoods. Poor girls often do not have access to athletic resources, effective coaching and expert training, and lack of basic knowledge about exercise, diet and sport. They are less apt to receive quality physical education and athletic training at earlier ages which, in turn, erodes the foundation for subsequent motor development, and most of the South Asia is good example in this regard.

Physical activity has long been recognized for its effects on maturing the child. However, one of the challenges of interpreting the research work on children is the difficulty of differentiating between the changes in physiological functioning, which may have been affected by regular exercise or strenuous training. It is important that activities in childhood include both the motor and health aspects of physical fitness and such development is believed to be essential as children need a reasonable level of motor skill proficiency to participate in the activities that build endurance, power and strength, and reasonable levels of fitness to engage in exercise and sport activities (K.C. Shekar,2005), which is important to get the benefit of lifetime participation in physical activity, as it has an effective impact on sociological, psychological, biological and the mental health aspects of young female participants.

In the Olympic Games of Rome held in 1960, women competed in only eight sports events, and in Moscow Olympics (1980) they contested in 14 of the 21 sports events which was in a way not in accordance, with the world wide recognition of legislation that had created the environment to provide women' to provide equal opportunities in sports competitions along with other social factors. But still many nations including Pakistan largely amounts to a token gestures rather than a social revolution in terms of equality of opportunity. In sports, as well, the trend towards greater participation of women has only paid lip-services to real equality, for example, women were not allowed to run races further than 1,500 m in the Moscow Olympic Games (1980), even though all the criteria for inclusion of long race event for women right up to the marathon had been satisfied and were up to the mark as per described standards of Olympic competitions. The International Olympic Committee declined to include 3000m race for women on the pretext that it is a little too

strenuous event for women (Anoop Jain, 2004) and in a way built into the notion of lip-service to equality and allied with the long time established attitude that women are inferior in all spheres of physical activities.

During the last two decades, the performance of women has excelled, to great extent, as compared with men and they have set new world standards. For example, two way English Channel swim record is held by a women, Cynthia Nicholas of Canada. Another woman, Bev Francis of Australia set women's world record in men's middle weightlifting competition beating all the men who participated in that event. Many women have also climbed Everest. In Cycling, Beryl Burton of Great Britain, many time holder of the world title, created a new competition record and covered 277 miles, more than her two closest male rivals. Anoop Jain (2004) has further elaborated the performances in sporting events that involve strenuous exertion, such as swimming and running, have revealed that when compared with the men's records, it seems women's performance is improving at a faster rate at almost all distances. The mean percentage difference in these events is diminished from 16.85% in 1948 to 10.46% in 1976; 9.35% in 1986, and 8.74% in 2004. This steady decline in the difference between the sexes is reflected in the world records of all the track events. In some cases, the difference has declined by more than half, for example, in the 800m race the percentage difference was 20.33% in 1976 and 9.98% in 2004. The marathon races are the outstanding examples of this trend; in the 18 years between 1986 and 2004, the percentage difference between the male and female world best times declined by nearly two-thirds from 31.44 to 11.70% and timings reasonably decreased, during international competitions held in 2002 and 2004, whilst the women's record has decreased in marathon by more than 1 hour. That is a great achievement, and rightly challenged the long established notion that women are inferior in sports and physical activities.

The women of developing nations of Asia and many others world over, especially in Pakistan assume a much more sedentary existence owing to the cu1tural and social restrictions placed upon them after puberty. The physical educationists have explored that a substantial reduction in physical activity results in deterioration in the basic physiological components of physical fitness, strength, cardiovascular endurance and muscular endurance all diminish, and body fat accumulates. It is exactly in these features that affect and reduce physiological responses of the athletes the average female differs from the average male. (Fox & Mathews, 1981)

In recent times, the opportunities for girls to play football, cricket, boxing and weight lifting at a young age, as well as through high school and college have increased tremendously. The girls now account for 22% of soccer (Football) players worldwide specially in Europe and South America and close to 40% in the United States; and are able to enjoy the awesome challenge of learning soccer and other games skills that require extensive practice and exercise for improving their physical conditioning strength, and availing the benefits of team competition. It is unfortunate that in Pakistan, in practice, women are not treated equal in sports, but difference is displayed in many aspects of the societal values of the society. In recent times, girls have started playing Hockey, Cricket and soccer games, and need support of the authorities of the academic institutions and the government organizations and the society at large.

However, girls involved in these games are at occasional risk for injury and may

some times develop medical problems. If our girls are provided moral, social and financial support for participating and organizing sporting events to earn laurels for themselves and the nation, they must be encouraged to be physically fit, active and maintain through out their lives to become useful citizens of the society.

If injuries of medical attention develop, knowledgeable professionals, who deal with extensive exercises, (I think better wording will be sports injuries) undertaken by active women in such games, may be consulted immediately for treatment.Normally women Athletes may face three following. Interrelated problems in sports competitions known as female Athlete Triad. The girls who are extremely driven to excel in sports may develop such medical problem.

In this physiological health problem three distinct, but inter related conditions (disordered eating, amenorrhea and osteoporosis) comprise the female athlete triad. Disordered eating is a range of poor nutritional behaviors. Amenorrhea refers to lack of menstrual cycle or women stops having their period. Osteoporosis refers to low bone mass and micro architectural deterioration, which leads to bone fragility and risk of stress fracture. The professional athletes and coaches explore various ways and means to over come this increasing problem in competitive girl-athletes at early stages. Although many believe the female athlete triad is a problem only in sports such as gymnastic and runners; but, this is not true (Yasmeen, 2004). Triad remains a concern for all female athletes, and other competitive games that require extensive exercises for possible desired achievements.

The external and internal pressures may also foster the development of the Triad, as girls may face societal pressure that young girls appear to be lean and smart and for this reason coaches, friends, and parents may encourage weight loss by a female athlete, due to a mistaken belief, that excessive leanness enhances the performance. A young girl who is determined to achieve a lean appearance for athletic success may attempt to excel through dieting and excessive exercise. Such women are believed to be typically goal oriented, perfectionist, and compulsive and that misguided approach may lead to this problem. Female athlete triad is a serious medical illness, as women with untreated chronic anorexia or bulimia may die prematurely from heart problems (Mackinnon, 1994). Christy Henrich, a member of the U.S. gymnastics team died at the age of 21 years from the consequences of anorexia and bulimia.

However, if these disorders are recognized early, treatment may be effective. The women Athlete with disordered eating and amenorrhea may some times deny their nutritional or health problems and are reluctant to seek medical care which is essential for treatment. In fact such individual is more likely to seek medical health if the risks of poor nutrition and amenorrhea are not explained clearly at early stage. The successful coaches' keep the female athletes remind that medical care and proper nutrition is essential to enhance performance. A physician, nutritionist and psychologist may need to work with the women Athletes, coaches, and parents and also close friends to over come this acute problem. In such condition nutritional monitoring, hormone replacement and reasonably reduced training at early stage is recommended to provide speedy recovery. In general, moderate regular exercise is believed to be effective in many ways for women as it promotes health, fitness and longevity. However, for a small portion of susceptible women, some serious medical concerns must be kept in mind, and be consulted with doctor before they under take extensive exercises for competitive events.

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Some girl athletes may experience an energy deficit when they attempt to exceed calorie intake. This deficit may be unintentional resulting from inadequate replacement of the caloric demands of training, or may be a conscious attempt to lose weight or body fat to improve appearance or performance. A study of young elite swimmers revealed that more than 60% of average- weight girls and nearly 18% of under-weight girls were trying to lose weight. The methods for weight loss included decreased eating, vomiting, and the use of laxatives and diuretics as many girls participating in sports emphasize on leanness relating to physical appearance in gymnastic, long-distance running, diving and figure skating were most at risk (Beals, 2000). The comparative studies revealed that highly trained male and female athletes have more similarities than differences in these physiological and physical parameters, and with respect to strength, the traditional view is effective that women are considerably weaker than men. Further it is true that in the upper part of the body female have the lowest body strength and in legs or lower portion when expressed relative to lean body weight, females are actually stronger in the legs than males. It was also found that with a programme of progressive weight training, females can substantially increase their strength, and found that in a relatively short 10 week programme a group of young non-athletic women improved their strength by 30-35% (Wilmore, 1974).

Wiggins et al. (1996) postulates that women are more efficient regulators of their body temperatures because females rely to a greater degree on cardiovascular measures of thermoregulation than on evaporative heat loss, and found that women were apparently able to achieve thermo-regulation in an environment with 80% humidity with a lower sweat rate than the men. Further, Martinez et al. (1998) reported that for work in a moist heat, men had significantly higher sweat rates, where as women had smaller increases in heart rate and rectal temperature. In women despite the usual evidence of acclimatization, several investigators have observed only a slight increase in sweat rate that showed women may be more efficient regulators of body temperature since they achieve the same acclimatization results with the loss of less water.

Conclusion

To summarize, the evidence that exists in many sporting events, women have performed well, and on occasions better than their male counterparts; in running and swimming, female performances are improving at a faster rate than male performances, showing a positive trend in top world class achievements towards equality between the sexes in terms of sports competitions reaching in the very near future. The physiological studies reveal that highly trained female athletes are very similar in their capacities with respect to exercise as compared with to their highly trained male counterparts. Hence, one can reasonably reach the conclusions that firstly, the evidence put forward and discussed deeply undermines the orthodox view of women's inherent sporting inferiority, and suggests that the biological factors are not fixed and immutable; when a female becomes a highly trained athlete, the biological factors as manifest in physiological functioning and physical characteristics change, with the result such women have similar capacities in these respects to equivalently trained men. There are good reasons for anticipating that in certain endurance events, female performance potential is equal or superior to, that of the male. Lastly, if we consider that the female have a more efficient heat-regulating system than the male, and that the highly trained female endurance runner can achieve cardiovascular endurance capacities similar to those of the top male long-distance

runners, it is not inconceivable that a woman could or even beat a man in marathon events in near future by over coming the biological differences and socio-cultural limitations prevalent in the western and Asian societies through effective participation and training in conducive atmosphere and environment.

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A Comparative Study between Effectiveness of Proposed and Traditional Rehabilitation Programs on Some Anthropometric Variables after Knee Joint Surgery of Athletes

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Abstract:

This study aims to comparative between effectiveness of proposed and traditional rehabilitation programs on some anthropometric variables after knee joint surgery. The study sample included 18maleathletes in Aurangabad city, Maharashtra, India, who had undergone knee joint surgeryand unable to return to practice their sports activities within first year after primary ACL reconstruction. The experimental method was used through applying the pre and post measurements for both proposed and traditional rehabilitation programs separately. The results of this study showed that the proposed rehabilitation program had a highly effectiveness more than traditional rehabilitation program in improve thigh and calf circumferences, calf skinfold thickness, but there is no significant difference in knee circumference and thigh skinfold thickness between both rehabilitation programs after knee surgery of athletes.

Key words: Proposed Rehabilitation Program, Traditional Rehabilitation Program, Anthropometric Variables, and Knee Joint Surgery.

Introduction:

Knee joint is the largest synovial joint in the human body and it is a mobile functional anatomical unit which plays a key role in sport and recreation, but its functional anatomical composition makes it a more vulnerable to injury, also the knee joint located between the long bones of the body, femur, tibia and patella in interior surface which provide the injury occurrence possibility in any point contact with each other **(Anderson M. et al, 2000)**.

Knee joint is the second most commonly injured body site after the ankle joint (**Joseph A.et al, 2013)**. Knee injuries are prevalent among a variety of competitive sports and can impact an athlete's ability to continue to participate in their sport or in the worst case, end an athlete's career (**Weiss K., & Chris W., 2015)**. Knee joint the most frequently undergoing to reconstruction surgeries, especially of repair and rebuild an anterior cruciate ligament tear among the most economically costly sports injuries, habitually requiring expensive surgery and rehabilitation **(Joseph A. et al, 2013) (Rosemont I., 2015)**.

Anterior cruciate ligament (ACL) is one of a pair of the cruciate ligaments in the human knee (**Agur A., 2015)**. It is a broad ligament joining the anterior tibial plateau to the posterior femoral intercondylar notch (**Satpathy G., 2005)**. ACL is composed of two bundles - anteriomedial and posteriolateral - and it provides 85% of restraining force against anterior translation and medial rotation between tibia and femur **(Kisner C. & Colby L., 2002) (Ramachandran M., 2006) (Isberg J., 2008)**.

Anterior cruciate ligament reconstruction (ACLR) is an agreed and designed surgical

technique for ACL injuries by arthroscopically and it is becoming now prefered method in treatment of ACL rupture around the world in increasing numbers **(Vaishya R. et al, 2015) (Delincé P.,& Ghafil D., 2012)**. ACLR has remained the current standard among the most common sports medicine procedures of care for treatment of ACL injuries in active patients, particularly for young individuals and athletes who aim to return to high level sports activities **(Kiapour A., & Murray M., 2014) (Hewett T. et al, 2013)**.

ACL reconstruction surgery usually results to occur some complications that may lead to greater functional deficits and delay recovery process such as pain around the knee, loss of range of motion, quadriceps weakness, recurrent injury and associated osteoarthritis **(Kartus J. et al, 1999) (Carneiro M. et al, 2015) (Micheo W. et al, 2010)**. These complications can range from minor and inconsequential to severe, additionally the complication rates are a low with arthroscopic technique that can be performed safely in ACL reconstruction surgery **(Andrés-Cano P. et al, 2015)**. An appropriate postoperative rehabilitation process is so vital to prevent these complications and the key to successful ACL reconstruction surgery **(Manske R., 2006)**.

Rehabilitation process after ACL surgery is a point of crucial importance in the treatment program to achieve desired good functional outcomes that regarded the goals of both nonoperative and postoperative rehabilitation **(Heijne A., & Werren S., 2007) (Görmeli G. et al, 2015)**.

Rehabilitation protocol following ACL surgery must be corresponded with surgical technique results in measurement outcome after surgery and functional recovery to pre-injury **(Dragicevic-Cvjetkovic D. et al, 2014)**.

Rehabilitation after ACL surgery needs to monitor some performance indicators by undertaking some measurements relate to knee functions or some body function which can be used to determine rehabilitation program progression in recovery knee joint and restore athlete's status preinjury for return to participate in sport competitions and daily living activities **(Herrington L. et al, 2013)**.

Current rehabilitation programs after anterior cruciate ligament reconstruction (ACLR) for return to sport is quite disparate and indistinct because depending on personal interpretation and lack of clear empirical standard guidelines aimed to achieve task specific objectives for progression within the rehabilitation literature **(Schmitt L. et al, 2012) (Herrington L. et al, 2013)**.

The magnitude of the problem is clear, as a high incidence of ACL injury, particularly in young athletes. Recent evidence suggests that more than half of athletes who undergo ACL surgery are unable to return to their preinjury level of function after ACLR surgery. Return to sports activities remains a very difficult topic. Thus the research regarding the rehabilitation process of athlete after ACL surgery continues to evolve**(Paterno M., 2015)**.

Although studies have been conducted to investigate in the effects of rehabilitation programs on some anthropometric variables after knee joint surgery, but the rehabilitation process remains controversial issue needs to conduct further studies in order to early return for the injured athletes to high-level competitive sports.

Objective of Study:

This study aims to determine the effectiveness of proposed rehabilitation programafter knee joint surgery some anthropometric variables after knee joint surgery through compared withtraditional rehabilitation program.

Hypothesis of Study:

There is a significant difference between effectiveness of proposed and traditional rehabilitation programs on some anthropometric variables after knee joint surgery in favor of proposed rehabilitation program.

Methodology:

The study used the experimental method through investigate between effectiveness of proposed and traditional rehabilitation programsafter knee joint surgery of athletes.

Subjects of Study:

The study sample was purposely selected to include 18male athletes in Aurangabad city, Maharashtra, India, who had undergone after knee joint surgery and unable to return to full participation in sports activities at same their previous preinjury level within first year after primary ACLR. To verify the homogeneity of the study sample was investigated some demographics represent sharing common characteristics of study sample such as sex, age, height, weight, etc. These characteristics in study sample should be equivalent in order to achieve their homogeneity.

Table (1): Demographic characteristics of both groups (N =18)

Variables	Unit	Proposed Program Group			Traditional Program Group		
		Mean	S.D	Skewness	Mean	S.D	Skewness
Age	**Year**	23.56	3.005	0.196	22.89	3.333	- 0.527
Height	**Cm**	172.78	7.311	- 0.678	172.67	12.639	- 1. 1373
Weight	**Kg**	75.24	7.436	0.179	72.87	19.655	- 1.158

The table **(1)** shows that there is no significant difference in demographic characteristics (age, height, weight) between proposed program group and traditional program group. All skewness values are limited between **-3** and **+3**, which clearly indicated to homogeneity both groups, thus both of them are acceptable to conduct this study.

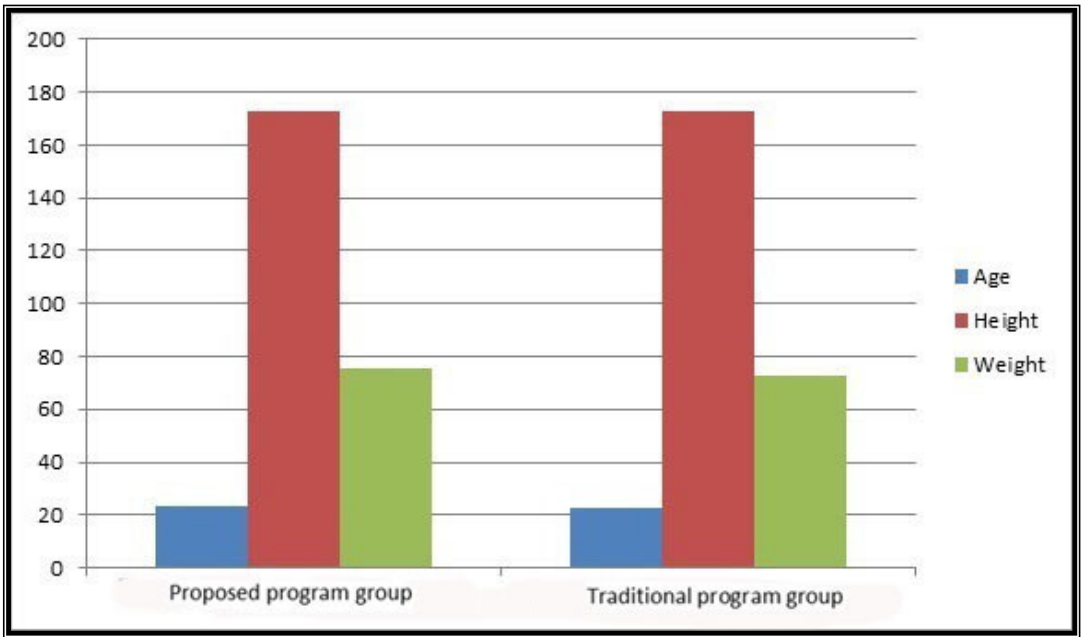

Figure (1) Mean difference of demographic characteristics between both groups (N=18)

Proposed Rehabilitation Program:

The proposed rehabilitation exercises have been designed through review some previous studies in ACL rehabilitation after surgery. The rehabilitation exercises included most commonly exercises in modern standard rehabilitation programs after ACL reconstruction surgery, which divided into five stages for period of twelve weeks. Each week consisted five sessions.

Traditional Rehabilitation Program:

Traditional rehabilitation program originally consists of four stages and usually varies in its total duration, weekly units' number and time and controlled exercises' load and frequency.so this study used traditional rehabilitation program twelve weeks as five units weekly in order to possibility comparative with proposed rehabilitation program.

Tools and Means of Measurements (Materials Used):

The tools and means were tested in the pilot study and were shown to be accurate and reliable, which included the following:

1- Stadiometer to measure the height (cm).
2- Electronic weighing machine to measure the weight (kg).
3- Measuring tape to measure the circumferences (cm).
4- Caliperto measure the skinfold (mm).

Statistical Analysis:

The data of present study were analyzed by using SPSS statistical software package (version 22). Mean values, standard deviations and skewness were calculated to verify the demographic characteristics of study sample, T-test for each group was separately calculated to determine the differences between pre and post measurements after 12 weeks of rehabilitation, and then T-test was used for compared between both groups in post measurements to determine the difference between proposed program and traditional program after 12 weeks of rehabilitation., the ($P \leq 0.05$) level of probability is accepted as a criterion of statistical significance.

Results and Discussion:

Anthropometric Measurements:

Circumferences:

Table (2): Significant differences in circumference variables between pre and post measurements of proposed rehabilitation program (N=9)

Variables	Pre		Post		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Circumference	50.17	5.143	56.86	3.304	6.690	3.2833	0.0047
Knee Circumference	40.10	2.860	34.12	2.553	-5.980	4.6795	0.0003
Calf Circumference	33.54	3.580	38.70	2.129	5.160	3.7165	0.0019

The table **(2)** shows that there is significant improvement in infected lower limb circumferences after **12** weeks of proposed rehabilitation program. The mean difference

between pre and post measurements of proposed rehabilitation program increased circumferences of thigh **(6.690)** and calf **(5.160)**, but decreased knee circumference **(-5.980)** in favor of post measurements. There are statistically significant differences at level **(p≤0.05)** between pre and post measurements of proposed rehabilitation program reached statistical significance in thigh **(0.0047)**, knee **(0.0003)** and calf **(0.0019)**.

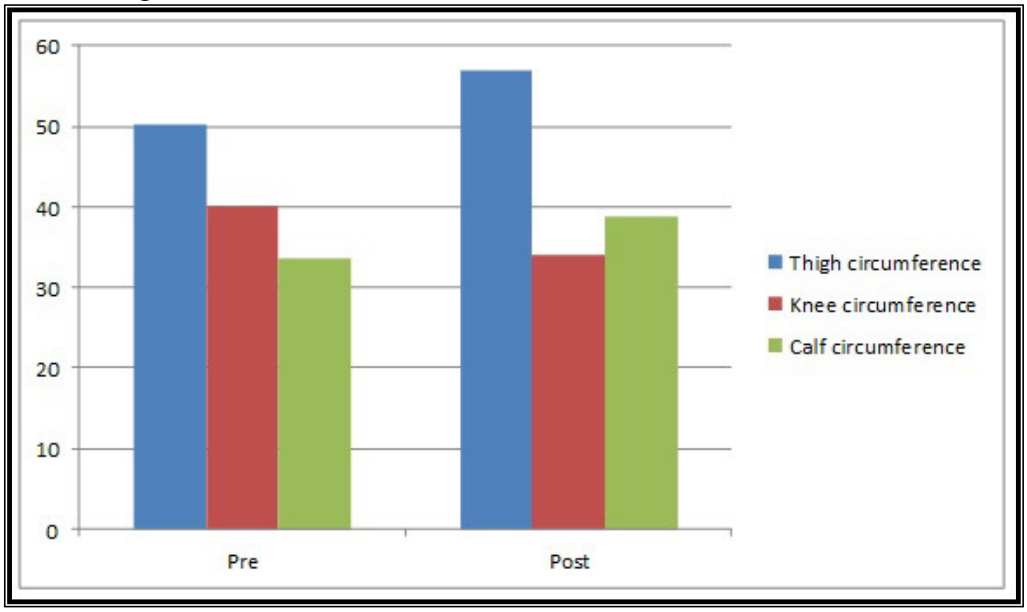

Figure (2) Mean difference in circumference variables between pre and post measurements of proposed rehabilitation program (N=9)

Table (3): Significant differences in circumference variables between pre and post measurements of traditional rehabilitation program (N=9)

Variables	Pre		Post		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Circumference	**49.09**	**5.206**	**52.73**	**4.855**	**3.640**	**1.5340**	**0.1446**
Knee Circumference	**38.90**	**2.906**	**36.43**	**2.190**	**-2.470**	**2.0364**	**0.0586**
Calf Circumference	**33.11**	**3.482**	**35.06**	**3.921**	**1.950**	**1.1156**	**0.2811**

The table **(3)**shows that there is less improvement in infected lower limb circumferences after **12** weeks of traditional rehabilitation program. The mean difference between pre and post traditional rehabilitation program measurements increased circumferences of thigh **(3.640)** and calf **(1.950)**, but decreased knee circumference **(-2.470)** in favor of post measurements. There are no significant differences between pre and postmeasurements of traditional rehabilitation program reached in thigh **(0.1446)**, knee **(0.0586)** and calf **(0.2811)**, all p-values were higher than level (**p≤0.05**).

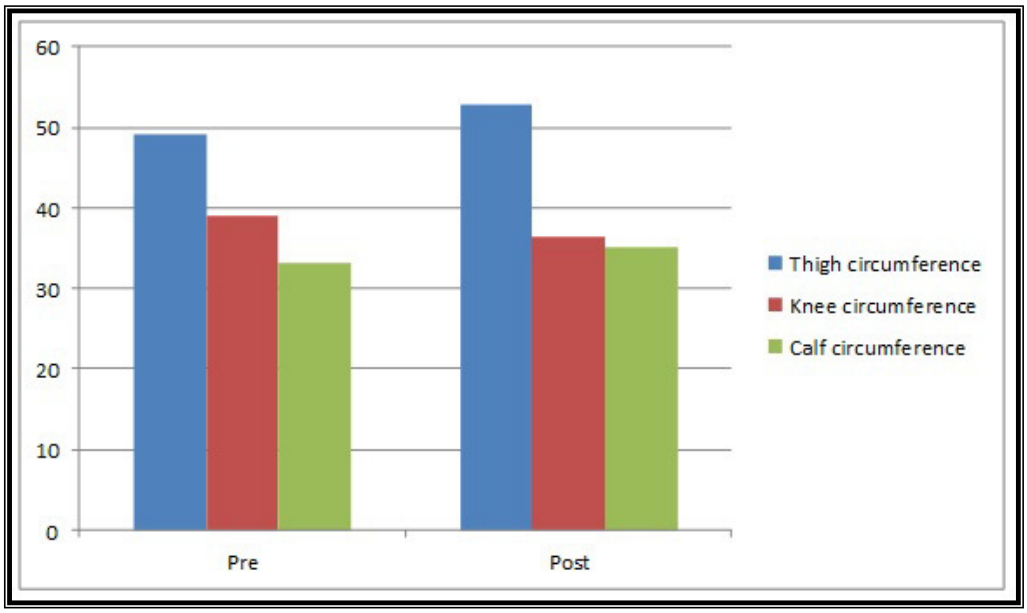

Figure (3)Mean difference in circumference variables between pre and post measurements of traditional rehabilitation program (N=9)

Table (4): Significant differences in post measurements of circumference variables between both programs (N=18)

Variables	Proposed Program		Traditional Program		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Circumference	56.86	3.304	52.73	4.855	4.130	2.1098	0.0510
Knee Circumference	34.12	2.553	36.433	2.190	-2.313	2.0630	0.0557
Calf Circumference	38.70	2.129	35.056	3.921	3.644	2.4502	0.0262

The table **(4)** shows that there issignificant improvement in post measurements between both groups (proposed rehabilitation programand traditional rehabilitation program) in infected lower limb circumferences. The mean difference in post measurements between both programs in circumferences variables (thigh, knee and calf) are**(4.130, -2.313** and **3.644)** respectively in favor of proposed rehabilitation program. There are statisticallysignificant differences in post measurements at level (**p≤0.05**) between both rehabilitation programs reached statistical significance in thigh **(0.0510)** and calf**(0.0262)**, while no significant difference in knee **(0.0557)**.

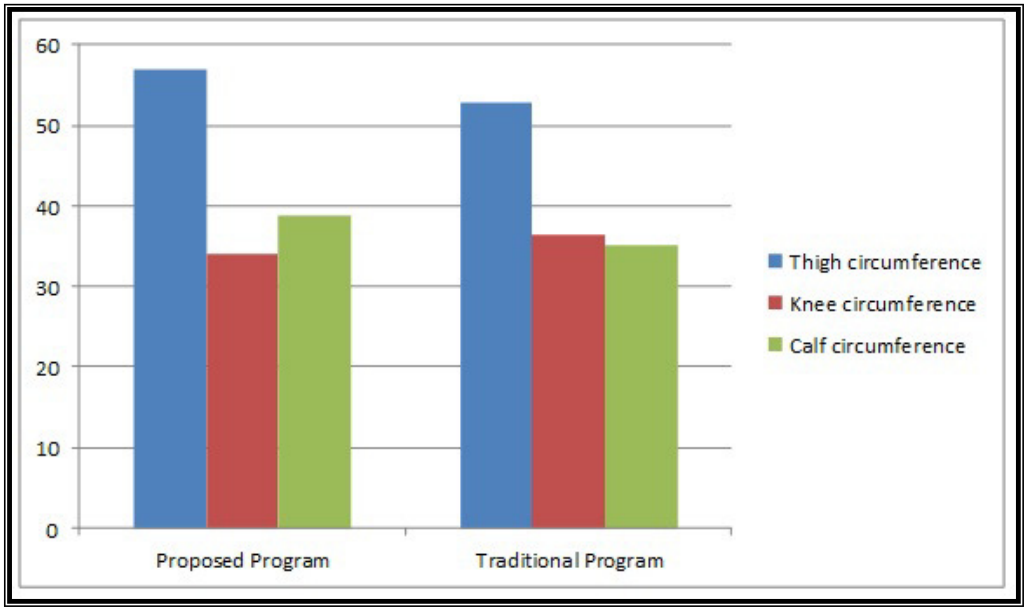

Figure (4) Mean difference in post measurements of circumference variables between both programs (N=18)

Table (5): Percentage improvement in circumference variables between pre and post measurements of both programs (N=18)

Variables	Proposed Program			Traditional Program			Improvement Difference %
	Pre	Post	%	Pre	Post	%	
Thigh Circumference	50.17	56.86	13.34	49.09	52.73	7.42	5.92
Knee Circumference	40.10	34.12	14.91	38.90	36.43	6.35	8.56
Calf Circumference	33.54	38.70	15.39	33.11	35.06	5.89	9.50

The table **(5)** shows that there is percentage improvement between pre and post measurements after 12 weeks of proposed rehabilitation program in infected lower limb circumferences (thigh, knee and calf) are **(13.34%**, **14.91%** and **15.39%)** respectively in favor of post measurements. While the percentage improvement between pre and post measurements after 12 weeks of traditional rehabilitation program in circumferences variables (thigh, knee and calf) are **(7.42%**, **6.35%** and **5.89%)** respectively in favor of post measurements. There are improvement differences between both programs in circumferences variables (thigh, knee and calf) are (**5.92%**, **8.56%** and **9.50%**) respectively in favor of proposed rehabilitation program.

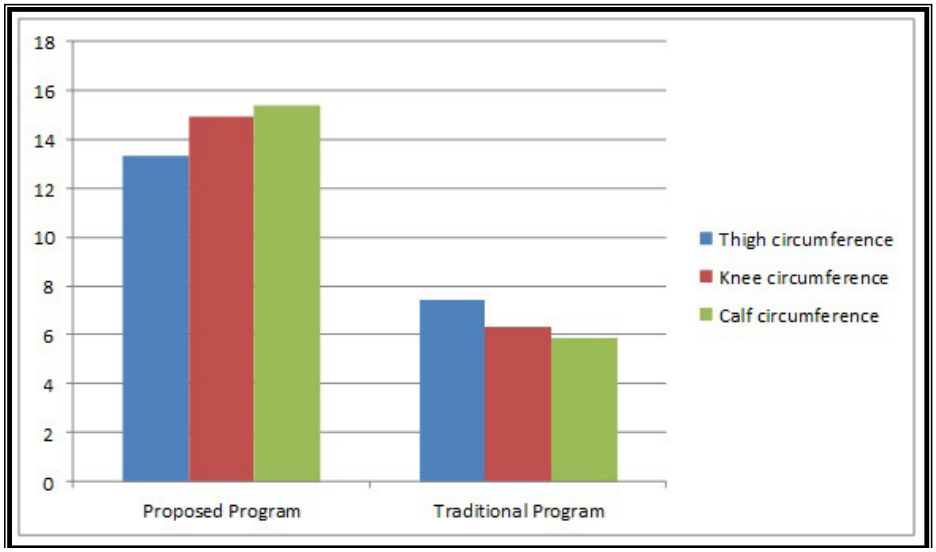

Figure (5) Percentage improvement in circumference variables between both programs (N=18)

Skinfold Thickness:

Table (6): Significant differences in skinfold variables between pre and post measurements of proposed rehabilitation program (N=9)

Variables	Pre		Post		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Skinfold	**22.78**	**3.308**	**17.89**	**2.934**	**-4.890**	**3.3177**	**0.0044**
Calf Skinfold	**17.89**	**2.848**	**12.22**	**2.774**	**-5.670**	**4.2785**	**0.0006**

The table **(6)** shows that there is significant improvement in affected lower limb skinfold thickness after 12 weeks of proposed rehabilitation program. The mean difference between pre and postmeasurements of proposed rehabilitation program in skinfold thickness of thigh **(-4.890)** and calf **(-5.670)** in favor of post measurements. There are statistically significant differences at level **($p \leq 0.05$)** between pre and post measurements in thigh **(0.0044)** and calf **(0.0006)**.

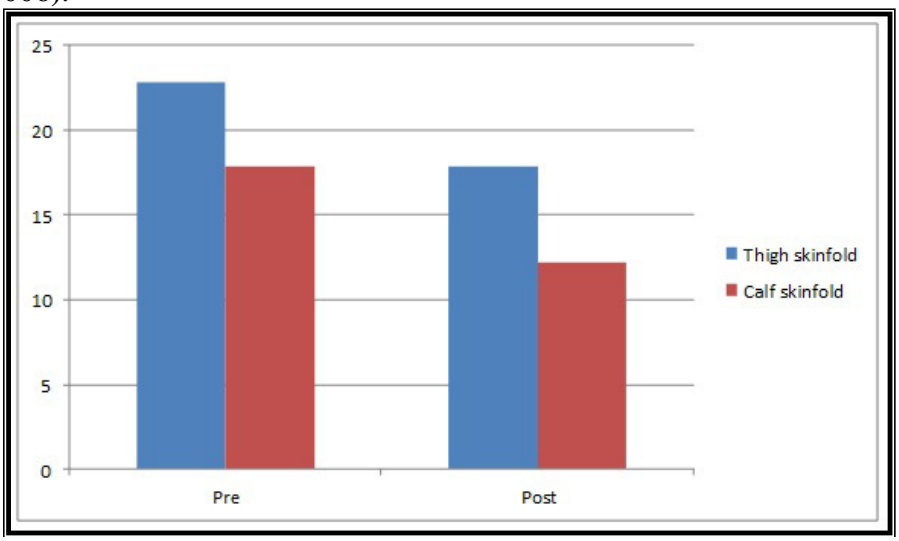

Figure (6)Mean difference in skinfold variables between pre and post measurements of proposed rehabilitation program (N=9)

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Table (7): Significant differences in skinfold variables between pre and post measurements of traditional rehabilitation program (N=9)

Variables	Pre		Post		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Skinfold	**23.00**	**3.873**	**21.11**	**3.689**	**-1.890**	**1.0601**	**0.3049**
Calf Skinfold	**17.56**	**3.358**	**15.44**	**2.920**	**-2.120**	**1.4292**	**0.1722**

The table**(7)** shows that there is less improvement in affected lower limb skinfold thickness after 12 weeks of traditional rehabilitation program. The mean difference between pre and postmeasurements oftraditional rehabilitation program in skinfold thickness of thigh **(-1.890)** and calf **(-2.120)**. While there are no statisticallysignificantdifferencesat level (**p≤0.05**) between pre and postmeasurements of traditional rehabilitation program in both skinfold thickness ofthigh**(0.3049)**and calf**(0.1722)**.

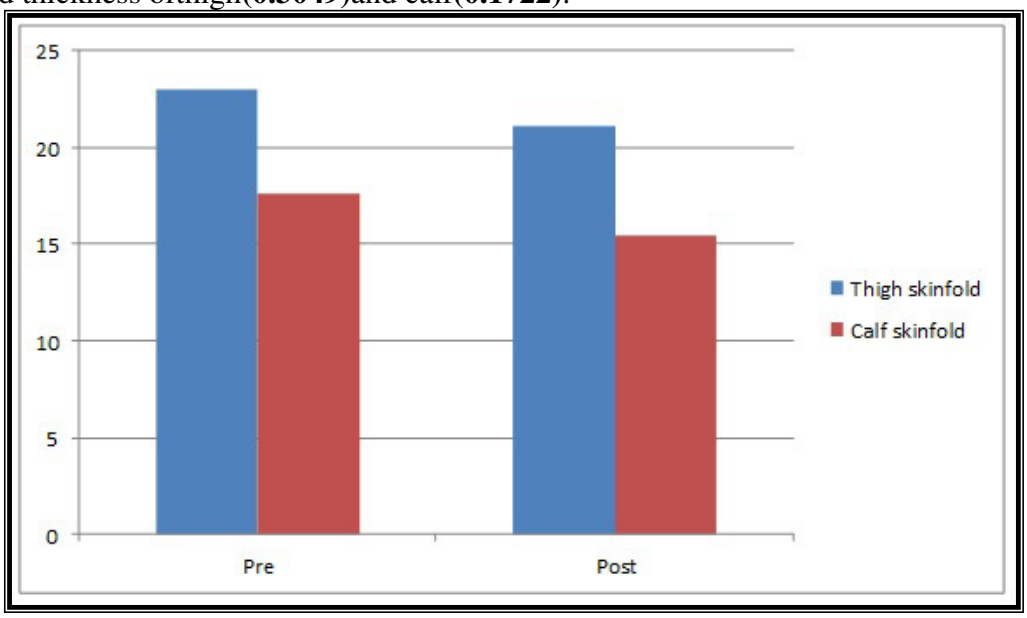

Figure (7)Mean difference in skinfold variables between pre and post measurements of traditional rehabilitation program (N=9)

Table (8): Significant differences in post measurements of skinfold variables between both programs (N=18)

Variables	Proposed Program		Traditional Program		Mean Difference	T.test	P-value
	Mean	S.D	Mean	S.D			
Thigh Skinfold	**17.89**	**2.934**	**21.11**	**3.689**	**-3.220**	**2.0494**	**0.0572**
Calf Skinfold	**12.22**	**2.774**	**15.44**	**2.920**	**-3.220**	**2.3985**	**0.0290**

The table **(8)** shows that there is significant improvement in post measurements between both groups (proposed rehabilitation program and traditional rehabilitation program) in skinfold thickness of affected lower limb. The mean difference in post measurements between both groups in skinfold thickness of thigh **(-3.220)** and calf **(-3.220)** in favor of proposed rehabilitation program. There is statistically significant difference in post measurements at level (**p≤0.05**) between both programs in skinfold of calf (**0.0290**)in favor of proposed rehabilitation program, but there is no statistically significant difference in skinfold of thigh (**0.0572**).

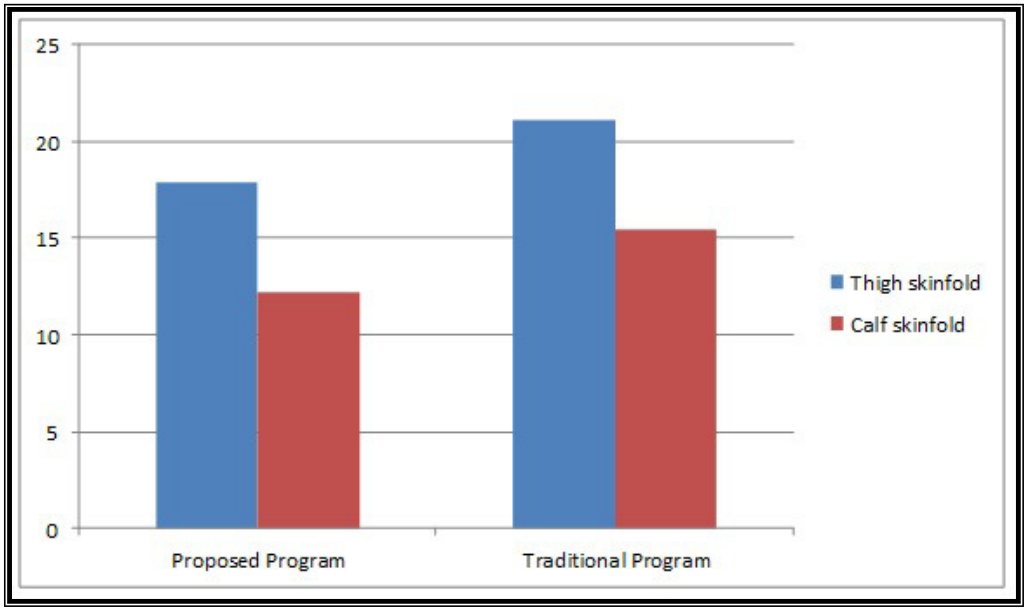

Figure (8) Mean difference in post measurements of skinfold variables between both programs (N=18)

The results of this study showed that the proposed rehabilitation program has significant improvement between pre and post measurements in increase thigh and calf circumferences and decrease knee circumference after knee joint surgery, while there is no significant improvement between pre and post measurements in affected lower limb circumferences after traditional rehabilitation program. However in post measurements the proposed rehabilitation program has positive influence more than traditional rehabilitation program in improve thigh and calf circumferences, but there is no significant difference in knee circumference between both programs. These results are due to the proposed program consisted static and dynamic resistance exercises for strength muscle which increased in muscle fiber diameter (hypertrophy) that leads to increase muscle cross sectional area (CSA), and thus increase thigh and calf circumferences, but decrease knee circumference is related to reduce swelling after rehabilitation. Several researchers have shown that the rehabilitation programs after ACL surgery have positive effects on lower limb circumferences. **(Dragicevic-Cvjetkovic D. et al, 2014)** demonstrated that the positive effects of the rehabilitation protocol results in significant increase of the thigh muscle circumference in favor of the experimental group in 3, 6 and 12 months after ACL reconstruction surgery. **(Ibrahim F., 2013)** demonstrated that the proposed rehabilitation program by using static and dynamic resistance exercises with patients after internal ligaments surgery has led to improve muscles circumference for the infected limb. **(Awadallah A., 2012)** exhibited that the 12 weeks rehabilitation exercises after ACL tear has positive improvement in injured limb muscles circumference, and played important role for return to normal knee functions. **(Bastian J. et al, 2014)** found that improvement in some circumferences of leg muscles for study group which received Power Plate training after 6 and 12 weeks after ACL surgery compared with control group suffered atrophy and loss of strength which used conventional physiotherapy. **(Tuğcu İ. et al, 2013)** resulted that the Gulhane ACL rehabilitation protocol following ACL reconstruction surgery has significant increase in the thigh circle for 13 weeks postoperative in the operated legs. **(Mohammed M., 2013)** showed that the balance and strength exercises

for rehabilitation after arthroscopic ACLR led to improve functional stability through increase the calf and thigh circumferences. **(Gualano B. et al, 2010)** reported that the patients underwent 12 week's resistance training program have positive changes in quality of life and increased muscle cross sectional area, compared with other studies that used conventional training protocols did not report such extensive improvements. **(Van W. et al, 2010)** emphasized that the resistance exercise led to increase in muscle mass due to hypertrophy in muscle fibers, whereas endurance exercise is associated with increased mass/strength (hypertrophy) and fatigue resistance which are important to develop the sportive performance and to understand physiological limitations in rehabilitation and sports medicine fields. **(Arangio G. et al, 1997)** concluded that the exercises rehabilitation after ACL reconstruction have effect in improve the thigh circumference underestimates atrophy. **(Kılınç B. et al, 2015)** mentioned that despite improvement in thigh circumference after ACL surgery rehabilitation, but it is still possible to encounter thigh atrophy even 28 months after ACL surgery under rehabilitation when compared with intact knee and the thigh circumference vary according to the thigh muscle group and knee flexors play an important role in thigh atrophy when determining an appropriate rehabilitation program after ACL surgery. **(Naseer J.,2013)** indicated that increase in thigh muscles circumferences and calf circumference of infected limb have started during second rehabilitation phase postoperative knee when compared with intact limb. **(Awdat M., 2012)** pointed out that the rehabilitation program using strength exercises after ACL rupture led to increase muscles circumferences and reduce knee joint swelling which represented in reduce knee circumference when compared with the intact knee joint. **(Myer G. et al, 2008)** mentioned that the swelling have been related with knee circumference as this factor can be utilized to determine improvement in exercise loading stresses that placed on the knee joint. **(Jakobsen T. et al, 2010)** monitored the changes in knee circumference during rehabilitation after knee surgery, and found that a greater changes in decrease of knee circumference resulting from reduced swelling. **(Tagesson S., 2008)** interpreted that the results of increase knee joint circumference in the early period after injury or surgery due to the swelling in the knee joint, but regular stages of rehabilitation led to reduce swelling gradually, thus decrease knee circumference. It can be explained that the positive effects of proposed rehabilitation program in increase thigh and calf circumferences due to static and dynamic resistance exercises which led to increased muscle cross sectional area in thigh and calf, but the decrease knee circumference related by reduce swelling in the affected knee joint after 12 weeks of regular rehabilitation after ACL surgery.

Skinfold Thickness:

The results showed that the proposed rehabilitation program has significant improvement between pre and post measurements in decrease skinfold thickness of thigh and calf after rehabilitation knee joint surgery, while there is no significant improvement between pre and post measurements in skinfold thickness of thigh and calf after traditional rehabilitation program knee joint surgery. Whereas in post measurements the proposed rehabilitation program has good validity score more than traditional rehabilitation program in decrease calf skinfold thickness, but there is no significant difference in thigh skinfold thickness between both rehabilitation programs. This difference between results could be demonstrated that the proposed rehabilitation program consisted of advanced exercises by using different resistances gradually, which led to improve muscle strength and reduce fat in infected lower limb. Many studies have shown the impacts of rehabilitation and training

processes on skinfold thickness of exercised limbs. **(Medeiros F. et al, 2015)** demonstrated the importance of investigation in skinfold thickness associated with rehabilitation of some knee functions which may help physiotherapists to better understand the effectiveness of adipose tissue and to design more rational strategies whether for rehabilitation or sports purposes. **(Lopresti C. et al, 1988)** accentuated that skinfold thicknesses were increased in operative leg due to deposition of fat which covered the muscle atrophy following repair of ACL. **(Bouchard C., & Katzmarzyk P., 2000)** confirmed that the resistance training increased muscle hypertrophy compresses the extracellular space, this would result in decrease subcutaneous assessed by skinfold in the exercised limb. **(Hassanein M., 1992)** indicated that decrease in skinfold thickness of thigh and calf due to the rehabilitation program after ACL surgery included exercises focused on improving infected limb muscles, thus it led to increase muscle strength and decrease skinfold thickness. **(Rodgers M. et al, 1991)** showed a consistent decrease in thigh skinfold thickness after using the progressive intensity training protocol included of 36 sessions (3 sessions weekly for 12 weeks). **(Al-Anani N., 2005)** reported that the rehabilitation program to improve the knee functions in women with musculoskeletal rheumatology has positive effect on decrease thigh and calf skinfold thickness after 12 sessions for one month. **(Artero E. et al, 2011)** found that there were improve in muscle mass and decrease body fat through some measurements such as body mass index and set of skinfold thickness (biceps, triceps, subscapular, suprailiac, abdominal, thigh, calf) after 8-week program of WBV combination with resistance training exercises on knee extensors muscular performance. **(AvilaI J. et al, 2013)** observed that a significant reduction in fat body mass, fat percentage and skinfold after 13 weeks of exercise training on the body composition. **(Seo M. et al, 2015)** concluded that there were significant decreases in body weight, percent body fat, and fat tissue after 8 weeks training program which included different intensity in running, stair climbing, sit-ups and push-ups during each training session separately. **(Kostrzewa-Nowak D. et al, 2015)** analyzed skinfold thicknesses in order to discover the impact of 12 weeks fitness training program, were observed a significant decrease in weight, body mass index, free fat mass, total body water, percentage of fat and crus skinfold thickness. It can be demonstrated that the proposed rehabilitation program by using different resistance exercises has led to increase muscle hypertrophy and decrease body fat, which would result in decrease skinfold thickness of exercised limb after 12 weeks following ACL surgery. Based on the mentioned above showed that the anthropometric measurements play role important in investigate the effects of rehabilitation or training processes. After comparative between both rehabilitation programs in anthropometric measurements, the hypothesis has been partly achieved in thigh and calf circumferences and calf skinfold thickness in favor of proposed rehabilitation program after knee joint surgery of athletes.

Conclusions:

The proposed rehabilitation program had a highly effectiveness more than traditional rehabilitation program in improve thigh and calf circumferences, calf skinfold thickness, but there is no significant difference in knee circumference and thigh skinfold thickness between both rehabilitation programs.

Recommendations:

Apply the proposed rehabilitation program on athletes after ACL surgery, who returned to their sports activities after rehabilitation, but they unable to participate in competitions as same their functions and skills levels preinjury. The design of rehabilitation

exercises after knee joint surgery should be based on scientific and clinical research and focus on specific drills and exercises designed to return the injured athletes to the desired functional goals. Focus on adding some prevention exercises to rehabilitation program with theory lessons about ACL injury risk factors and prevention to avoid injury recurrence and to safe return to sports participation. Increase sample of the study to provide a higher representation of the characteristics of the society for results to be credible. Conduct comparative study between males and females athletes after ACL reconstruction.Develop the proposed rehabilitation program by addition of some therapeutic modalities (e.g., CPM., faradic simulation, ultrasound, etc.).

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Short Communication
Autonomic Changes During "Om" Meditation

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Abstract

The autonomic and respiratory variables were studied in seven experienced mediators (with experience ranging from 5 to 20 years). Each subject was studied in two types of sessions - meditation (with a period of mental chanting of "OM") and control (with a period of non-targetted thinking). The meditators showed a statistically significant reduction in heart rate during meditation compared to the control period (paired "t" test). During both types of sessions there was a comparable increase in the cutaneous peripheral vascular resistance. Keeping in mind similar resulta of other authors, this was interpreted as a sign of increased mental alertness, even while being physiologically relaxed (as shown by the reduced heart rate).

Key words: Oxygen Consumption; Metabolism; Yoga; Meditation

Introduction

Mentally chanting "OM" was shown to increase the efficiency with which sensory information was processed in subjects with more than 10 years of meditation experience, whereas mentally chanting "one" had the opposite effect (1). These changes occurred mainly at the mesencephalic or diencephalic level. Another study of 7 proficient subjects (3 of whom had 20 years experience of meditation), revealed that mental chanting of "OM" activated higher neural centres, i.e. the association cortices (2). Mental chanting of "OM" leads to a single thought state, and a subjective feeling of deep relaxation. Hence the present study was carried out to find out whether "OM" meditation would also cause changes in the autonomic and metabolic functions of the seven experienced meditators whose neural responses to the meditation were described above (2).

METHOD

Subjects

The study was carried out on 7 normal, healthy male volunteers in the age range of 29 to 55 years (mean + SD, 42.3 + 9.8 years). They were all committed meditators with experience ranging between 5 and 20 years. The details of the study were explained to the subjects and their signed informed consent was taken in accord with the ethical guidelines of the Indian Council of Medical Research, New Delhi.

Designofthestudy

Each session was of 32 min duration, of which 20 min were spent in meditation, preceded and followed by two 6 min periods of sitting relaxed, with eyes closed. Subjects were also studied in control sessions which were of the same duration as the meditation sessions, and similar in

design except that the 20 min period was spent sitting relaxed with eyes closed, and non-targetted thinking (instead of meditation). Meditation involved mental chanting of "OM", while sitting comfortably, with eyes closed. Both types of sessions were repeated on three separate days.

Parametersstudied

Recordings of autonomic and respiratory variables were made on a 10 channel polygraph (Model 10, Polyrite, Recorders and Medicare systems, Chandigarh, India). EKG was recorded using the standard limb lead I configuration. Heart rate was obtained by counting the number of QRS complexes per 40-sec intervals continuously. Epochs of 40 sec were chosen to be able to correlate this data with that of subjects practicing other meditations (3). This has been described in the discussion. Palmar skin resistance (SR) was recorded using 2 silver chloride disc electrodes filled with electrode jelly (CSR Technocarta, Hyderabad, India), placed 4 cm apart on the palmar surface of the right hand. SR values were sampled continuously at 20-sec intervals. Skin blood flow was recorded using a photo-electric plethysmograph placed over the left thumb nail. The amplitude of six plethysmogram waveforms were calculated in each minute. Two nasal thermistors placed one at each nostril were used to record respiration. The number of breath cycles in each minute was calculated to give the respiratory rate. Oxygen consumption was recorded using the closed circuit Benedict-Roth apparatus. In this method, the subject breathed into an oxygen tank wearing a close fitting mask, and with a nose clip. The exhaled carbon dioxide does not enter the tank, as it is absorbed by soda lime. The difference between the initial and final volumes of oxygen in the tank is the amount of oxygen consumed by the subject in a given period of breathing (i.e. 5 min). The recording laboratory had a temperature of 25 ± 10C, with relative humidity about 70 percent. The values were corrected for standard temperature and pressure. The OC recordings were made before and after meditation, but not during meditation. Polygraphic recordings were made before, during, and after meditation. Values of the 5 variables mentioned above were averaged for each of the 3 periods of a session viz. before, during and after meditation (or the control procedure). Statistical analysis of these averaged values was done to reveal significant differences between (a) before versus during meditation (or control) and (b) during meditation versus during control periods, using the paired "t" test.

Table 1

Autonomic and respiratory variables recorded in 7 meditators. Values are group mean ± S.D.

Variables Studied	Meditation Session		Control Session	
	Pre	During	Pre	During
Heart rate	47.00	46.90**	47.20	47.60
(Beats per 40 sec)	± 5.00	± 4.30	± 4.90	± 4.80
Respiratory rate	10.80	10.40	10.50	11.10
(Breaths per min)	±3.60	± 3.30	± 3.40	± 3.20
Skin resistance	412.90	446.60	307.40	335.70
(Kilo ohms)	± 129.90	± 107.10	± 123.40	113.80
Finger plethysmogram	1.00	0.70*	1.10	0.70#
Amplitude (mm)	± 0.20	± 0.20	0.20	± 0.20

** $p < 0.001$ during meditation versus during control (paired 't' test)
# $p < 0.05$ before versus during period (paired 't' test)

Results

All seven meditators showed a small but statistically significant reduction in heart rate during meditation compared to the control period ($P<0.001$, paired "t" test, Table 1). There was a significant and comparable decrease in finger plethysmogram amplitude, during the meditation and control periods compared to the preceding periods ($P<0.05$, paired "t" test, in both cases). There was also a non-significant trend of reduction in the oxygen consumption following meditation ($P>0.05$, paired "t" test). The group average values ± SD for all 5 variables are as shown in Table 1.

Discussion

The present study revealed a significant decrease in heart rate during mental chanting of "OM", which is suggestive of psychophysiological relaxation. The non- significant trend of reduction in oxygen consumption also has a similar interpretation. This change is similar to that caused by TM (4), though of smaller magnitude.

However, it is important to note that the actual pre-meditation (or control) values of oxygen consumption of the (senior) meditators of the present study were noticeably higher than those of other meditators (4), and of the general population. Since it is usually thought that yoga practitioners have lower oxygen consumption values than those who do not practise yoga, these results are difficult to explain. There is a report (5) in the literature which demonstrated an increase in the basal metabolic rate (BMR) with six weeks experience in yoga, compared to the period before learning yoga. The BMR decreased, but did not return to the initial value after continuing yoga practice for six weeks. In contrast to the present study, the subjects were not practisingmeditation, but were practising specific postures (yogasanas) and breath regulation (pranayama). Hence no direct correlation can be made between the two studies, and further assessments are necessary to come to a definite conclusion.

The significant decrease in finger plethysmogram amplitude (i.e. increased peripheral vascular resistance) which occurred during both meditation and control periods is a sign of increased sympathetic tone and hence is also not expected during meditation (4)

While attempting to explain these seemingly contradictory results, it is to be noted that the same individual may simultaneously show changes in two variables indicating opposite states of arousal, e.g. a decrease in heart rate along with reduced skin resistance. While explaining similar contradictory changes in AnandaMarga meditators (6), the authors described the reduced skin resistance as an attempt to prevent intrusion of sleep during the session. Since reduced skin blood flow is known to occur when the subject is alert, as while solving arithmetic problems mentally (7), the present study might indicate that chanting "OM" mentally causes increased alertness (reduced finger plethysmogram amplitude), even though the subject was more relaxed (reduced heart rate).

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Comparative Study on Mental Toughness among Female Volleyball Players and Female Basketball Players

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Abstract:

The main objective of the study was to compare mental toughness among female volleyball players & female basketball players. The study was conducted on 50 players in which 25 volleyball & 25 basketball selected as a sample. The age of the sample ranged from 18-25 years and all the samples were selected from random basis. To assess the mental toughness of selected female players, mental toughness inventory developed by Sandeep Tiwari was used. This test is highly reliable & valid to assess mental toughness of selected female players. The't' test was used to find out significant among volleyball players & basketball players. Results found that female basketball players have better mental toughness as compared to female volleyball players.

Key Words: Mental Toughness, Female Volleyball Players and Basketball Players etc.

Introduction:

Mental toughness is the limit with respect to a person to bargain viably with stressors, weights and difficulties and perform to the best of their capacities regardless of the conditions in which they get themselves". The 4Cs of mental sturdiness:

•Control •Commitment •Challenge •Confidence

Mental toughness is the capacity to focus on the procedure of a specific brandishing discipline and not let the weight of the match circumstance or the feeling of event to show signs of improvement of the players. Hostility among human is an old as mankind. Hostility is characterized as the ponder to hurt someone else. This incorporates physical, mental as social damage is the essential concentrate then again very extreme conduct inside the standards of the amusements isn't animosity.

The present world is advanced to the point that each part of life is ruled by science and innovation sports aren't a special case to it. Innovation has perpetually changed our reality, and in the process fundamentally expanded the significance of measuring and controlling execution pertinent to mental and physiological factors. Game science has a huge part in recognizing, observing, and creating youthful gifted competitors. For best practices and achievement, mentors need to comprehend the intricate procedures in creating athletic mastery. Among others, efficient preparing and all around arranged projects might be critical in youth advancement programs. Specialists additionally showed that anthropometric, physiological, and ability credits could be utilized to foresee expected aptitudes and skill in sports. Furthermore, expectation could be supplemented with constant estimation of physical, intellectual, and perceptual abilities, intrapersonal and relational attributes, and enthusiastic security.

Mental strength is a measure of individual flexibility and certainty that may foresee achievement in game, training and the working environment. As an expansive idea, it rose with regards to sports preparing, with regards to an arrangement of properties that enable a man to improve as a competitor and ready to adapt troublesome preparing and troublesome focused circumstances and develop without losing certainty. In late decades, the term has been regularly utilized by mentors; wear clinicians, sports pundits, and business pioneers.

There are a few factors in the matter of why an uplifting mindset or mental sturdiness is a gigantic advocate to progress. A first class competitor must have the capacity to deal with weight, have self-conviction and stay away from any way of life diversions. They should have that inclination to win and realize that they have every one of the abilities to do anything they want. This current separate's the great competitors from the first class competitors (Jones et al, 2002).

"Mental strength" is as often as possible utilized informally to allude to any arrangement of constructive characteristics that causes a man to adapt to troublesome circumstances. Mentors and game observers openly utilize the term mental durability to portray the mental condition of competitors who drive forward through troublesome game conditions to succeed. In help of this, various examinations have connected mental sturdiness to wearing achievement or accomplishment. In any case, it is regularly basically connected as a default clarification for any triumph, which is very hazardous as an attribution.

Methodology:

From 50 Players in which 25 female volleyball & 25 female Basketball Players selected as a sample. The age of the sample ranged from 18-25 years and all the samples were selected from random basis. To assess the mental toughness of selected players, mental toughness inventory developed by Sandeep Tiwari was used. The scoring was done according to the rule led down the authors. This test is highly reliable & valid for measuring mental toughness of selected samples. The ‘t’ test was used to find out significant difference among female volleyball & basketball players

Results & Discussion:

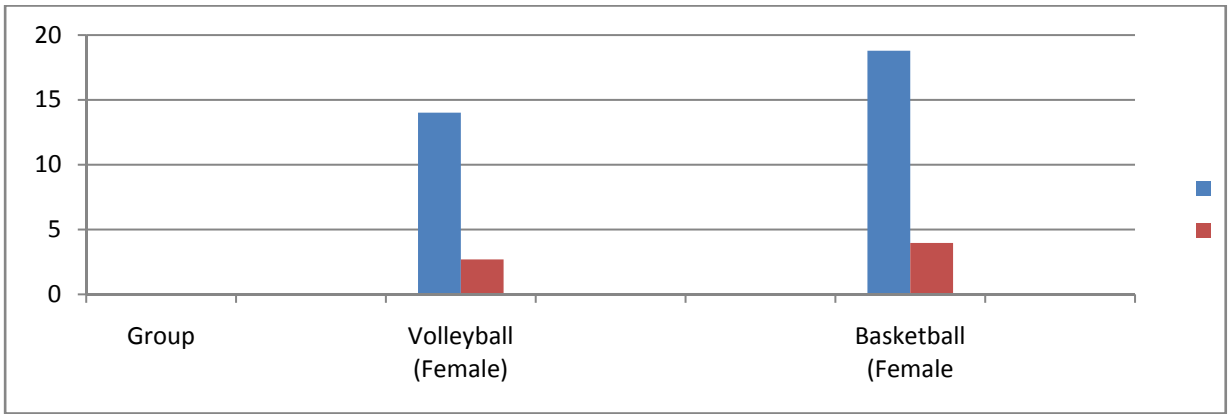
Mean, standard deviation &‘t’ test were computed to compare volleyball & basketball player’s scores and data pertaining to this have been presented in table given below:

TABLE NO. 1
COMPARISON BETWEEN FEMALE VOLLEYBALL AND FEMALE BASKETBALL PLAYERS ON MENTAL TOUGHNESS

Group	N	Mean	SD	MD	‘t’ Value
Volleyball (Female)	25	14.01	2.69	4.78	2.94*
Basketball (Female)	25	18.79	3.96		

***Significant at 0.05**

Fig No.1



From table no.1 result found that female basketball players have better mental toughness (M=18.79, SD=3.96) as compared to female volleyball players (M=14.01, SD=2.69). The't' value is 2.94 i.e. significant difference at 0.05 level.

Conclusion:

It is concluded that female basketball players have better mental toughness as compared to female volleyball players.

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Modern Yoga Versus Traditional Yoga

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Yoga:

Yoga one of the six classic systems of Hindu philosophy, distinguished from the others by the marvels of bodily control and the magical powers described to its advanced devotees. Yoga affirms the doctrine that through the practice of certain disciplines one may achieve liberation from the limitations of flesh, the delusions of sense and the pitfalls of thought and thus attain union with the object of knowledge. Such union, according to the doctrine, is the only true way of knowing. For most Yogi (those who practice Yoga), the object of knowledge is the universal spirit Brahma. A minority of Yogi seek perfect self-knowledge instead of knowledge of God. In any case, it is knowledge and not as is commonly supposed, feats of asceticism, clairvoyance, or the working of miracles, that is the ideal goal of all Yoga practices. Indeed, Yoga doctrine does not approve of painful asceticism; it insists that physical and mental training is not to be used for display but only as a means to spiritual ends.

The typical public perception of Yoga has shifted significantly in recent years. This article addresses the nature of those shifts, comparing traditional Yoga of the ancient sages to the modern revisions. The article also includes quotes from nine different teachers whose names are well known.

Traditional View of Yoga and postures (asanas)

Traditional view:

To the ancients, Yoga is a complete system, of which the postures are a small, though quite useful part. The word "Yoga" referred to the whole, not merely one part, which is the postures, or Asanas. The entire purpose of Yoga is spiritual in nature, according to the ancient sages.

Modern View of Yoga and postures (asanas)

Modern view:

In modern times, the relative position of the postures has been elevated, so as to lead people to believe that the word "Yoga" refers to physical postures or Asanas, and that the goal of these is physical fitness. The whole and the part have been reversed, terribly misleading and confusing people about the true nature of authentic Yoga

Yoga "On" and "Off" the Mat:

Within the past few decades there has been a new invention, that of the yoga "mat", which is made of some sort of synthetic rubber or plastic material. This has lead to the idea that "yoga" is practiced "on" such a mat. Since the mat is designed to be used for physical postures or asanas, its invention has even further led to the distortion of yoga. Along with the invention of yoga "on the mat", there has been a subsequent invention of yoga "off the mat" to describe the "other" form of yoga. Google presently reveals 1,220,000 results for a search of "yoga off the mat". While it is good that people are doing other such practices, the mere fact that "yoga off the mat" has come into vogue implies that the default position of real yoga is "on" some synthetic "mat". This is just one more example of setting aside the ancient tradition of authentic yoga for the sake of promoting the modern distorted yoga through all of the yoga business channels.

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The goal of Yoga is Yoga:

The goal or destination of Yoga is Yoga itself, union itself, of the little self and the True Self, a process of awakening to the pre existing union that is called Yoga. While it is not the intent of this article to give a final or conclusive definition of the term Yoga--which can be described in different ways--it has to do with the realization through direct experience of the pre-existing union between Atman and Brahman, Jivatman and Paramatman, and Shiva and Shakti, or the realization of Purusha standing alone as separate from Prakriti. The mere fact that one might do a few stretches with the physical body does not in itself mean that one is headed towards that high union referred to as Yoga.

Two perceptions of Yoga:

Perception has recently shifted:

The typical perception of Yoga has shifted a great deal in the past century, particularly the past couple decades. Most of this is due to changes made in the West, particularly in the United States, though it is not solely an American phenomenon. (Similar shifts have happened with Tantra as well.)

Gist of the two perspectives:

The gist of the shift can be summarized in two perspectives, one of which is modern and false, and the other of which is ancient and true.

False: Yoga is a physical system with a spiritual component.

True: Yoga is a spiritual system with a physical component.

The false view spreads:

Unfortunately, the view that Yoga is a physical exercise program is the dominant viewpoint. The false view then spreads through many institutions, classes, teachers, books, magazines, and millions of students of modern Yoga, who have little or no knowledge or interest in the spiritual goals of ancient, authentic, traditional Yoga and Yoga Meditation.

Swami Rama writes about the situation of traditional Yoga and modern Yoga in his text, Path of Fire and Light:

"The majority of people view Yoga as a system of physical culture. Very few understand that Yoga science is complete in it, and deals systematically with body, breath, mind, and spirit.

"When one understands that a human being is not only a physical being, but a breathing being and a thinking being too, then his research does not limit itself to the body and breath only.

"For him, gaining control over the mind and its modifications, and the feelings and emotions, become **more important than practicing a few postures or breathing exercises**. Meditation and contemplation alone can help the aspirant in understanding, controlling, and directing the mind."

In the opening paragraph of Lectures on Yoga, Swami Rama explains:

The word Yoga is much used and much misunderstood these days, for our present age is one of faddism, and Yoga has often been reduced to the status of a fad. Many false and incomplete teachings have been propagated in its name, it has been subject to commercial exploitation, and one small aspect of Yoga is often taken to be all of Yoga. For instance, many people in the West think it is a physical and beauty cult, while others think it is a religion. All of this has obscured the real meaning of Yoga.

In the second volume of Path of Fire and Light, Swami Rama goes even further, where he flatly declares:

"The word 'Yoga' has been vulgarized and does not mean anything now."

Conclusion:

By keeping above paragraphs in mind it is concluded that yoga is the only way by which the soul of humans can be joined or connected with the supreme soul by which one can get a satisfaction so that one can enjoy the life to its fullest.

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Role of Information Technology in Physical Education and Sport

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Abstract:

The emergence and use of technology in this century is a significant development affecting the teaching and learning of physical education and sport. Education is faced with a new dimension dominated by e-learning. For Physical educators, this trend is also reflected by the necessity to improve their teaching and methodology. The modern alternative is the use of technology meant to increase accessibility to information and teaching process effectiveness. This paper highlights the use of modern technology in physical education and sports. The use of technology for teaching and learning has be summarized, in the following aspects: the needs for technology, computer-motion analysis, internet, video analysis/conferencing, chatting and challenges. It is concluded that technology use enormously improve teaching and learning of physical education and sport.

Keywords: Physical Education (P.E.), Teaching and learning.

Introduction

The rapid development of technology over the past two decades has provided many new and creative ways for educators to present instructional materials effectively. Until recently, those advancements have focused on desktop technology, which limited their use in physical education

The National Association for Sport and Physical Education (NASPE) believes that technology can be an effective tool for supplementing instruction when used appropriately. Therefore, the primary purpose of this document, developed by a task force of NASPE's Physical Education Steering Committee, is to provide guidelines for using technology to help students achieve the Standards for Physical Education. Teachers now face a generation of students who have never known life without a computer, video game console, cellular phone or Internet access; and that is changing the scope of education dramatically. Technology tools can provide objective data on activity levels and creative methods for individuals to engage in physical activity. Studies have indicated that active gaming can promote higher levels of energy expenditure compared to seated video games, as well as increasing heart rate and oxygen consumption. National School Health Policies and Programs Study indicated that 42% of physical education teachers receive staff-development training on using physical activity monitoring devices; 37% on using technology overall.

Also, between 17% and 49% of the teachers studied received additional training for administering fitness tests, assessing student performance, and developing portfolios and individual physical activity plans: areas in which technology can supplement instruction and help in managing data. Those statistics in addition to the recent release of updated National Educational Technology Standards for Teachers underscore the importance of developing guidelines for proper technology use in physical education.

Technology such as projection systems, smart boards and wireless transmission (Wi-Fi and Bluetooth) allow for the display and transfer of information far beyond the traditional chalkboard. Teachers can enhance physical education instruction by using those tools,

provided that set-up and/or implementation don't reduce student activity time.

Planning and preparing effectively in advance of lesson presentation is necessary to ensure that these valuable tools become an integrated part of the lesson with minimal transition time and manage Physical educators must consider which types of physical activity monitoring devices are suitable for students' developmental levels. Using technology to monitor children's heart rate and comparing the data to adult ratios, for example, or having children use pieces of equipment designed for adults can provide invalid information. Teachers should use these tools to enhance instruction only if the data provided are accurate for the grade level to which they are to Using technology for technology's sake might not provide relevant instruction experiences for students, since technology is not the curriculum but rather a tool or device to supply When implementing technology, teachers must continue to adhere to the best practice of maximizing participation and success.

All students, not only a few should benefit from technology. If not enough heart rate monitors, pedometers, exergames and/or computers are available for all students to use them simultaneously, teachers should implement station or circuit formats. Instruct Desktop programs such as Microsoft Excel, and Web and CD-ROM software can allow for the collection of data using hand-held computers, with the ability to transfer results to desktop systems quickly. Those technologies can help physical educators determine assessment performance quickly and easily through calculation formulas, and allows them to create and customize individualized fitness plans, as well as offering many other uses.

Motion-analysis software and digital video make student performance evaluation easier, thereby enhancing teacher, peer and individual assessment.

Many pieces of technology, such as heart rate monitors, pedometers and active games, have the ability to track performance, allowing students to document and monitor their progress. However, physical educators must consider the reliability and validity of such devices when selecting the technologies to use. Students also should be well-versed in using the devices, to prevent an increase in management time and a reduction in student activity levels.

Implementing technology appropriately into physical education can enhance teaching and learning and contribute to providing a quality physical education program. Technology can aid in content presentation and can help students becoming physically educated individuals who have the knowledge, skills and confidence to enjoy a lifetime of physical activity

Practical use of technology in the teaching and learning of physical education opines that the use of technology in the learning process of physical education may not be a goal of its own but it is a tool with which to reach objectives. The following are the uses of technology in learning physical education.

Use of Computer

Computer is an electronic devise that has the capacity to store, retrieve and process both qualitative and Quantitative information fast and accurately. Computers-we used to produce documents, lesson plans, to convert scores management. It also involves video units PC heart rate monitor, remedy heart rate monitor and educational software. Computer also aid learning experiences when they are used for motion analysis. This involves using computer to examine the way learner moves and then determine ways in which this movement can be improved in a practical physical education class. This devise stresses how human motor abilities can be perfected and controlled. For example if you ask a softball pitcher how he/she

throws a fastball, they may not be able to tell you. Motion analysis visually shows the rudiments and sequence of actions involved in arm, leg movements to enhance performance of skills. Video tape images are also transferred into computers. Special application software analyzes the images. It measures the exact angle at which the player s holding his or her arms and legs. The speed and efficiency of each movement is measured. When using images, the teachers, advantage consist in his possibility of making corrections as soon as pupils exercise is completed, which him to quickly progress and improves his learning. Other computer software such as the programmes Professional Evolution Soccer (PES) is used to play games. Learners play, identify appreciate the skills, rules and evaluate officiating of the game.

Use of Internet

Internet is a global system of interconnected computer networks that promotes free flow of information by pocket switching using the standardized internet protocol suit. It is a network that consist of millions of private and public academic business and government network of local global scope that are linked by copper wires, fiber-optic cables and wireless connections technologies. The internet provides various information resources and services which can be used by physical educators for teaching and learning. They include electronic mail, online chat, electronic transactions, and bulletin board, file transfer and file sharing, online newspapers, arid journals, online gaming and inter linked hyper text documents and other resources of the worldwide web. Physical education teachers share experiences with other professionals via the internet which are integrated into teaching lessons. Students explore new knowledge as they surf the web for assignments, chat with fellow students and play games online. The internet can be used to maximize the effectiveness their learning process of physical education. Students have the possibility to email their questions or comments concerning their questions concerning issues in health and audition fitness, physical education programmes, courses to their physical education teachers and academic staff. Internet is used access a machining list of professionals in the same area of study. A user sends an email message to like mailing list which is broadcast to other users for accessing current information. Examples are the sports philosophy and Questia lists.

Chat through the Internet

Interactive chat improves communication with experts and colleagues and community members. Chat allows fellow physical educators to simultaneously communicate publicly on your website, internet, extranet. Team members, class and course mates from different locations can easily conduct on line meetings. Colleagues gather together to intimate groups and discuss issues related to physical educations. They could gather in large online events to interact with expert's celebrities, instructors, coaches and teachers can assess chat groups on particular academic issues in physical education and sports.

Video Conferencing

It allows two or more people at different locations to see and hear each other at the sometime. The communication technology offers new possibilities for sport colleges, libraries including formal instruction to share strategies for coaching sport skills. A very attractive multimedia tool determining students' enthusiastic participation in physical education lessons is represented by the audio aids.

Direct or indirect aids such as drums, piano respectively. Radio cassette recorder equipped with CD/DVD can be used to reline the movement pace and get students familiarized, with some sonorous competitive conditions.

The digital camera use in the instructive educative process allows a quick verification

of students' placement and posture, being at the same time a very good mean to stress body segment positions when performing sonic motor elements. These are the potentials used to enhance teaching and learning of physical education.

Challenges of technology using Physical Education

Although technology has attractive potentials for improving teaching of physical education, it also has challenges especially in developing nations of the world. Physical educations are not technology compliant. The reports indicate that many do not still appreciate the use of technology in teaching and learning and complaint. Nowadays, it is uncommon to see physical education computers in classroom and on sport playground. These could be either ignorance of technology use or affordability of technology devices.

Similarly most educational institution in Nigeria is not providing enough funds for equipping schools with technology devices. Technology devices are becoming more and more mobile and affordable and this could eventually turn into a reality making the study of human movement in physical education a reality. Other challenges include the availability of regular power supply, staff training and development on technology softwares; assessing softwares and packages for teachers. Other challenges include crashing of computers corruption of files.

Conclusion

Physical education essentially requires the performing physical activity. This is associated with the development of motor skill. Physical education within the school system requires time, facility space and interactive lesson plans. Technology provides access to information, compresses information, motivate learners, and connect learners to teachers and teacher to the colleagues. There are nowadays many available technological innovations that could be inserted into the physical education lesson. The visual physical education lesson is essentially based on the connected learning environment which uses technology that are networked in structure. Physical education should avail themselves of these technology opportunities to make their lesson more real and dynamic.

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Social Development during Adolescence

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Introduction:

In order to construct a house we need a proper foundation and basement. Similarly, to construct physical education and sports, we need biological foundation, psychological foundation and sociological foundation. Biologically all animals including man are living entities. Their innate structure grows and develops as they interact with the environment. From the viewpoint of biologist, the highest aim of life is "movement". Movement means activities. Life is full of "activities", the activities cease, life ceases. In other words, as long as the organism continues to move, so long, it remains alive.

Psychologically, it considers that human organism is more than a mere complex structure of bones and flesh, because it thinks feels and acts. Sociologically, human beings possess unique characteristics which separate them from other animal . Their behavior is social. Society is as essential as food to them. They believe in the maintenance of social relationship and try to adjust with others. But this does not mean that the child is born with social behavior and social qualities. Sociology is concerned with a study of people, of groups of persons, and of human activities in terms of the groups and in situations in society. It is concerned with the origin of society. Man cannot live as man without society. 'Man becomes man only among men'. Man is biologically and psychologically equipped to live in groups, in society. Society is more than our environment. It is within us as well as around us.

The study of sociology shows that the human being becomes a different type of individual from his or her original nature when acquiring characteristics of human nature. The traits and characteristics that result in antisocial conduct and cause fear, hate, and worry in the world are acquired characteristics. People are not born as anti-social beings. They are not born with traits that lead to power seeking, aggrandizement, and intolerance. These traits are acquired through environment. Through a better understanding of human nature and through a meaningful educational experience, it is possible to build a better social order for all humankind. Physical educators should understand these things so that they can utilize their work in the development of a better social order.

SOCIAL DEVELOPMENT:- Social development is the process by which a person acquires the necessary knowledge, skills and disposition that makes him an acceptable member of his own group. According to Garrett:-"Socialization or social development is the process whereby the biological individual is converted into a human person."

SOCIAL DEVELOPMENT DURING ADOLESCENCE:- The word adolescence comes from the Latin verb 'adolescere' which means ' to grow'. So the essence of word adolescence is growth and it is in this sense that adolescence represents a period of intensive growth and change in nearly all aspects of child's physical, mental, social, and emotional life. It is very crucial period of one's life. The growth achieved, the experiences grained, responsibilities felt and the relationships developed at this stage destine the complete future of an individual.

Technically speaking, a child is described as an adolescent when he achieves puberty that is when he has become sexually mature to the point, where he is able to reproduce his kind. He ceases to be an adolescent when he has acquired maturity to play the

role of an adult in his society or culture. Maturity, as the term used here, does not mean mere physical maturity, it is also implies mental, emotional and social maturity.

Adolescence is a period of intense emotions. Emotional behavior dominates the social characteristics and qualities of adolescents. An adolescent is highly sensitive, idealist and social reformer by nature. He feels strongly for the weak and sufferers. He is always ready to do some sort of social and community service. From time to time he exhibits his desire for bringing reforms in the social set –up and is highly critical of social evils and injustice.

There area of specific interests and social contacts gets widened during adolescence. Besides individual characteristics the culture, Socio-economic status of the family, sex education – all effect their social interest and contacts. We find too much diversity in the adolescents regarding their interests and sociability. While some are highly extravert and sociable the others like to remain aloof and shirk from social contacts and participations.

Social awareness, increasing social relationships and intimate friendships. During this age the individual is provided with wide area of interests and opportunities for making social adjustment and learning so many social qualities. During this age an individual prepares himself to plays a role of adult in his social life. Up to the end of this stage, the social behavior of the child becomes almost matured.

SOCIAL MATURTY:-

1. A socially mature individual likes to mix up with people. He is capable of making and keeping friends.
2. He is not self –centered. He is always ready to sacrifices his interests for the greater cause of groups, society and nation. While demanding and asserting for his rights, he always cares for the social obligations.
3. He possesses the ability for sharing and shouldering the social responsibilities. He is prepared to play the role of a leader or of a staunch follower as the situation demands for him.
4. He is able to make proper decision and take suitable action at the time of any social crisis, problem or situation in which his help is needed.
5. The area of his social interests and participation is very wide. He possesses refined tastes and adequate social etiquettes.
6. His social behavior conforms to the norms, mores, social codes and ethics. He never engages himself in any sort of activities or behavior is antisocial and looked down up on by the society.
7. He possesses a greater degree of adaptability and adjustability. He can make himself adjusted easily to the varying needs of the society and social circumstances.

FACTORS AFFECTING SOCIAL DEVELOPMENT:-

The factors which influence the social development of an adolescent are as under.

A. PERSONAL FACTOR

1. Bodily structure and health:- Development of social behavior is influenced by the physique and health which one possesses. A healthy child with a normal physique develops self-confidence and a sense of self respect. He has the strength and ability to make himself adjusted in the challenging social situations.

2. Intelligence:- Intelligence is defined as the ability to make and take the right decision at a right time and the ability to adapt or adjust to new situations. The more intelligent a person is the more adjustable and social he will prove.

3. **Emotional development:-** Emotional development of the child bears a positive correlation with the social development. Emotional adjustability and maturity is one of the very important elements of social maturity. The people who can express their emotions in a proper degree at a proper time are found to possess a healthy social personality.

B. ENVIRONMENTAL FACTOR:-

1. Family atmosphere:-Family is named as the most important primary agency for socialization of the child. The home atmosphere and the family relationships exercise much influence up on the social development of the child. The child learns the first lesson of social qualities from his parents. The family which provides healthy social atmosphere and where basic needs of children are satisfied produces socially balanced personalities whereas in the homes when the family relationships are under strain and the elders possess negative characteristics, the child is not brought up properly and consequently the socially undesirable and negative behavior is produced among children. Therefore it is essential to seek the active cooperation of parents in providing suitable atmosphere at home for the proper social development of children.
2. The school and its atmosphere:-social development in children is greatly influenced by the social environment and functioning of the school. The school having a healthy social and democratic atmosphere inculcates so many social virtues among the students while a poor and un healthy atmosphere of the school and the negative social behavioural characteristics of the teachers and school mates cast a bad influence up on the social behavior of the child. Therefore the teachers as well as the authorities should try to their level best to make the school environment as healthy as possible for the proper social development of the children.
3. Peer-group relationship and gang influence: - The play mates, or class mates also influence the social development of the child. He picks up the habits and social qualities of his companions. A good company helps him to learn good qualities while a bad company provides all opportunities to spoil him and turn him into anti-social personalities.
4. Community and Neighbourhood:- As the child grows older he comes in contact with the social circles of his neighbourhood and the community to which he belongs. Every community and the society are characterized by its unique cultural patter, social modes, traditions and social characteristics. The child as a member of the community and the society picks up these things which goes on shaping his social behavior and influence his social development.
5. Religious institutions and clubs:- The social agencies like temple, church ,social clubs etc, also influence the social development of the child. These places serve as a meeting ground for the members of the society and help in developing social contacts and relationships. The social behavior of an individual is greatly influenced by the traditions, values and social characteristics maintained by these institutions.
6. Information and Entertainment agencies:- Agencies like News-papers, Magazines, Radio ,Cinema etc also exercise their influence upon the social development of children. The mass entertainment agencies like radio, cinema television etc, play a vital role in the moulding and shaping the behavior of the members of the society.

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Relationship of Selected Motor Fitness and Anthropomeric Parameters with Long Jump Performance among Indian National Level Jumpers

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Abstract

The purpose of the study was to know the relationship of selected motor abilities and Anthropometric parameters of National level long jumpers performance. Twenty two male long jumpers were taken as subjects for the present study. Speed test (30mts), jumping ability tests(3Hop standing from both legs),strength test (Standing Broad jump) and Anthropometric procedures were administered to collect the data. Trials were conducted to assess the Long jump performance.

The results indicate that there is lower relationship of 30mts fly (0.214) with performance. The **r** value of standing broad jump (0.384) is having significant with competition performance at 0.05 level.

Strength parameter has shown significant correlation with performance.

3 Hop standing with Right leg (0.316) &Left leg (0.618) and 5Hop Right leg (0.851) Left leg 0.809) Is highly significant with Long jump performance.

Introduction

The long jump was one of the events of the pentathlon of the original Olympics in Ancient Greece. The long jump has been part of modern Olympic competition since the inception of the Games in 1896.

There are four main components of the long jump: the approach run, the last two strides, takeoff and action in the air, and landing. Speed in the run-up, or approach and a high leap off the board are the fundamentals of success. Because speed is such an important factor of the approach, it is not surprising that many long jumpers also compete successfully in sprints. A classic example of this long jump / sprint doubling is performances by Carl Lewis.

The long jump is a track and field event in which athletes combine speed, strength, and agility in an attempt to leap as far from the take-off point as possible.

Pearson (1963) stated that in long jumping the athlete should be capable of varying type of moments to the limit of the joints. In a "Hitch Kick: movement a full range of movement is necessary to affect maximum contrary turning on the upper part of the body. Short hamstring muscles may cause the jumper to drop his leg down earlier than required for a good landing.

According to **Bosen** (1972)a successful long jumpers requires speed to cover the sufficient distance with controlled speed.

Bosen (1972) reported that this event requires a run up of sufficient length to develop maximum controllable speed combined with effective sprinting at the take off.

Wilt Fred (1972) stated that approach speed in the long jumping is important but he is also stated that the 100M sprint time is not comparable with the result of long jumping because the long jumper speed requirement is decisive at a distance between 40M to 5oM,

Further he noted that the higher speed of approach run which jumper can maintain at the takeoff without great loss in the momentum, the better will be the resultant conversion of the approach speed at the take off.

According to **Baursfield and Schroter (1979**) the performance in all jump events in track and field is based on explosive strength which is known as jumping strength for the jumpers and is related to reactive strength ability

Doherty (1984) is of the belief that the practice organization for long jump should consider at least five factors i.e speed, power, skill, tendon and tissue toughness and speed endurance.

Victor Lopez (1989) stated that a potential horizontal jumper must possess "speed" and explosive power, which includes elastic components such as "flexibility" and good co-ordination.

Dan Plaff (1996) pointed out that the tests for elastic strength such as timed hopping over the barriers and alternate bounding provide valid prediction.

According to **Bianco (1996)** speed is one of the most important physical qualities required for successful performance in the jumps, especially in the Long jumpers.

METHODOLOGY

Twenty two male long jumpers were taken as subjects for the present study. Out of 22 long jumpers, eleven were National position holders in various National competitions at senior and junior levels and rest had only participated in the various All India competitions. The long jumpers selected for the study were from Northern region.

The following test procedures were used for the assessment of anthropometric and fitness variables in the present study.

Anthropometric Measurements

- **Height(cm)**
- **Weight(kg)**
- **Sitting Height(cm)**

Fitness tests

30 m Run from Standing start (seconds)-Speed

Standing broad jump (meters)	-Explosive strength
3 Hop standing right leg (meters)	-Explosive strength
3 Hop standing left leg (meters)	-Explosive strength
5 Hop standing right leg (meters)	-Explosive strength
5 Hop standing Left leg (meters)	-Explosive strength
Forward Bend and reach (cms)	-Trunk Flexibility

In addition to above mentioned assessments, long jump performance was also recorded.

Mean, SD and correlation of coefficient was calculated to interpret the data.

RESULT AND DISCUSSION

The main objective of the present study was to determine the relationship between selected anthropometrical and fitness variables with long jump competition performance. The mean score, standard deviation and correlation (r) values of selected variables and competitive performance are presented in Table 1 to 7.

Table 1.Mean and SD values of selected variables (n=22)

S.N.	TEST	MEAN	SD
1	30M flying(sec)	3.48	0.26
2	Standing broad jump(mts)	3.18	0.25
3	3 Hop standing right leg(mts)	8.36	1.64
4	3Hop standing left leg(mts)	8.78	0.87
5	5 Hop standing right leg(mts)	14.63	1.28
6	5 Hop standing Left leg(mts)	14.46	1.23
7	Flexibility(cm)	21.25	3.47
8	Ht(cm)	179.9	5.38
9	Body wt(kg)	74.81	8.84
10	Leg length	98.80	5.32
11	Performance	6.866	0.543

The above Table-1 is presenting the Mean and SD values of all selected variables.

Table 2.Relationship between physical characteristics and long jump performance (n=22)

Tests	Correlation(r)
Ht	0.148
Body wt	0.111
Leg length	0.095

Significant at 0.05 level (required value=.360)

The correlation value of height, body weight and leg length presented in Table 2 are 0.148, 0.111 and 0.095 respectively.

The height is dominating factors to achieve higher competitive performance (Sodhi,1981). But the results of the present study indicate that height, weight and leg length has no relationship with long jump performance. According to Ranawat and Kang (2010) jumpers were found tallest among all athlete groups. The height is a dominating factor to achieve higher competition performance in long jump (Sodhi,1981).

Table 3. Relationship between 30m flying with long jump performance (n=22)

Test	Correlation
30M flying	-.2144

Significant at 0.05 level (required value =.360)

From the result presented in the above table 3 it has been found that the correlation value of 0.214 is not significant at 0.05 level. Locatelli (1987) stressed that 30m fast runs are a must for all levels of long jumpers. Speed is the most important physical ability among the other abilities required for jumpers (Schmolinsky,1983).

Table-4. Relationship between standing broad jump with long jump performance (n=22)

Test	Correlation
Standing broad jump	0.384

*Significant at 0, 05 level (required value=.360.)

The correlation values (r) mentioned in the Table-4 for standing broad jump is 0.384 which shows significant relationship with competitive performance.

Table-5. Relationship between explosive strength ability (3hops) with performance in long jump (n=22)

Test	Correlation
3 Hop standing right leg	0.316
3 Hop standing left leg	0.618

Significant at 0, 05 level (required value=.360.)

The correlation values presented in table 5 show that there is a significant relationship between 3 hop standing left leg and competition performance with a value of 0.618 and a non-significant relationship of 3 Hop standing right leg with competition performance (0.316). The reason behind left leg hop showing significant relationship may be that the majority of the subjects were left leg dominating jumpers. The mean value of left leg hop is higher than the right leg hop .Straznski (1987) states that the jumping ability plays a major role for performance, a faster, effective take –off action.

Table 6. Relationship between explosive strength (5 hop) ability with performance in long jump (n=22)

Test	Correlation
5 Hop standing right leg	0.85132
5 Hop standing Left leg	0.80968

Significant at 0.05 level (required value=.360.)

The correlation values (r) 0.85132 and 0.80968 mentioned in Table **6** show that 5 Hop standing right leg and 5 Hop standing Left leg is significantly correlated with performance at 0.05 level. Larkins (1990) stated that hopping drills that emphasize horizontal projection, rather than vertical projection are related to long jump performance.

The reason may be that hop jumps measure the explosiveness of the legs muscles in horizontal direction which is considered to be a dominating factor in long jump and pole vault.

Table 7. Relationship between flexibility ability with long jump Performance (n=22)

Test	Correlation
Flexibility	-0.377

Significant at 0, 05 level (required value=.360.)

The r values of 0.377 presented in table 7 shows that there is a statistically significant relationship between long jump performance and flexibility in National level jumpers.

The result of trunk flexibility test indicating significant relationship with long jump performance confirms the view of Payne H. (1981) that flexibility is one of the other motor ability for improving range of moment of joints. Thus improving running or jumping performance in long jump.

Conclusions

The following conclusions are warranted from the results of this study:

Old trainees having lower height (1.70-1.75) has shown maximum jumping performance (7.77mts).while new trainees having maximum height (1.88-1.89) has lower jumping performance. So these results had shown no co-relation between jumping performance In relation to height, leg length.

The variation may be due to having small sample size.

1. There is significant relationship between speed and jumping performance.
2. There is significant relationship between standing Broad Jump and Long jump performance.
3. 3 standing hops on left leg shows higher and significant relationship with long jump performance in comparison to right leg hops.
4. 5 Hop jumps performance is significantly correlated to the long jumpers' performance.

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Use of Computer Technology in Sports

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Abstract

Computers are becoming increasingly common in sports applications particularly since the development of the low-cost microcomputer. They have numerous roles to play but can be identified as a major mechanism for easing the burden associated with data gathering and information processing. This information in turn can be used for developing a greater knowledge and understanding of sport. After tracing a brief history of the computer in sport, this paper considers specific areas of application covering sports research, competitive sport, sport and recreation management, education in sport, and the sport and leisure industry. In each of these areas examples are used to illustrate the variety of applications in which the computer has been used successfully and the benefits which have resulted from its use.Today, very few jobs do not use a computer. While sports are mainly a physically demanding profession, they too use computers each and every day. The devices are used in a variety of ways to help push sporting organizations towards their goal of success.

The history of sports in India dates back to the Vedic era. Physical culture in ancient India was fed by powerful religious rites. There were some well-defined values like the *mantra* in the *Atharva-Veda*, saying," Duty is in my right hand and the fruits of victory in my left". In terms of an ideal, these words hold the same sentiments as the traditional Olympic oath: ".....For the Honour of my Country and the Glory of Sport."

A deeper insight into the advances made in Europe, America, China and Japan and Russia, we find that there have been lot of new dimensions are being added towards overall development of sport and a sportsperson as well. This includes management, training, nutrition, training, gear and equipments, and at advanced level physiological testing, biomechanical analysis, performance analysis and a whole range of technologies that can be strapped on, attached to, or integrated into the athlete or their equipment.

One of the advantages of scientific development was that of computer technology. Today computers have revolutionized our lives. Computer aided technologies have for outperformed our traditional capacities. This is also true in the field of sports. Probable use of computer aided technologies will provide answers to the questions like what do we lack? Where do we fail? Why do fail to achieve these international standards. What has been the key to super human performances of the sportsmen from all over the world and that too in a consistent manner?

Today, very few jobs do not use a computer in some form or fashion. While sports are mainly a physically demanding profession, they too use computers each and every day. The devices are used in a variety of ways to help push sporting organizations towards their goal of success.

Storing and Analysing Video

Video preparation is a major component of professional sports. Many athletes review game tape to study someone's performance at critical parts of a competition. A boxer can review his next opponent's fights to learn weaknesses to exploit, or a football coach can review game tape to see how to improve his offense's passing attack. Computers also allow sports professionals to store a large amount of video footage in one place. Rather than having multiple discs or cassettes of film, the same information can be stored on a single jump drive

or laptop. Easier access to these videos is another benefit of using computers in sports.

Statistical Data Storage

Statistics are an important part of sports. Fans, sports agents, coaches, and players all want to know exactly how well they performed at any given moment. Keeping track of that data is another way that computers can be used in sports. For example, a team manager can create a spreadsheet database that holds all the current stats for his team throughout the season. At the end of the year that information can be used to decide which players the team will keep during contract negotiations and who has become expendable. Sports media outlets can also use computer applications in the same manner when developing in-depth stories about the performance of specific players and teams.

Equipment Development

Safety is an important aspect in professional sports today. News stories are often released about the study of concussions on football and hockey athletes. To help minimize those injuries equipment developers have used computers to develop safer equipment. For example, helmet company Riddell designed a new football helmet for the National Football League during the 2010 season after a number of players were injured by concussions. They used a variety of technological programs to design a helmet that would be able to absorb the constant impact and limit damage to the head and neck area. The same type of research is being done for such sports as hockey and auto racing to better improve the safety of the athletes.

Sports Media

Sports media outlets use computers everyday in their jobs. Writers use computers to complete research on their stories, while video editors use various applications to create vignettes and film pieces about their subjects. Larger sports media outlets such as ESPN have used computer technology to create applications such as their "ESPN Axis" field view. This program rotates the field of view at any moment to give a different visual perception of the action at the time. Computers play a major part in how well media outlets cover their respective sports.

Negative Impacts of Computers

Today our lives are completely influenced with technological advances. We just cannot imagine living without our cell phones, laptops, domestic appliances etc. These appliances and dependence on technologies have made our lives easy! The question is it really so? There are certain inherent questions that are being raised today? Even in sports the super human feats achieved by athletes in various fields are quite astonishing. The question is weather are we loosing the true spirit of sports. Olympics were primarily based on human abilities and celebrating the peak of these abilities. Today it is more of technology rather than an athlete.

Sophisticated technologies have a rather regressive effect. Some technological developments decrease costs, in most cases new computerised equipment increases the cost and inevitably reduces access to it.

It creates a gap between those who have access and those who do not. Thus the levels of training, preparedness, etc do not match in real time conditions. Those who do not have this technology are placed at a significant disadvantage in their development. This is reflected in huge gaps between the winners and losers.

Computers are becoming more and more influential in training and development of athletes the more essential they become. This can significantly reduce the development of a

sport at all levels. In countries where funding for a particular sport is relatively lower, those athletes will be further disadvantaged, potentially restricting the expansion and even restricting further the number of countries able to compete in a sport. This, in turn, has an indirect impact on participation at grass roots levels, as the inspiration to young, aspiring athletes in those nations diminishes.

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Role and Impact of Stress in Athletics

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Introduction

Actors, athletes and students all have something in common. They all perform their tasks with varying stress levels. What is this stress that we all talk about? Stress can be defined as a physical, mental or emotional demand, which tends to disturb the homeostasis of the body. Used rather loosely, the term may relate to any kind of pressure, be it due to one's job, schoolwork, marriage, illness or death of a loved one. The common denominator in all of these is change. Loss of familiarity breeds this anxiety with any change being viewed as a "threat".

PHYSIOLOGY OF STRESS:-

Stress is an integral part of our lives. "It is a natural by product of all our activities" . Life is a dynamic process and thus forever changing and stressful. Our body responds to acute stress by liberation of chemicals. This is known as the fight-or-flight response of the body, which is mediated by adrenaline and other stress hormones, and is comprised of such physiologic changes as increased heart rate and blood pressure, faster breathing, muscle tension, dilated pupils, dry mouth and increased blood sugar. In other words, stress is the state of increased arousal necessary for an organism to defend itself at a time of danger. Alterations of hormones in the body include not only adrenaline, but also substances like testosterone and human growth hormone. Up to a certain point stress is beneficial. We perform with greater energy and increased awareness with the influx of excitatory hormones that release immediate energy .

STRESSOVERLOAD

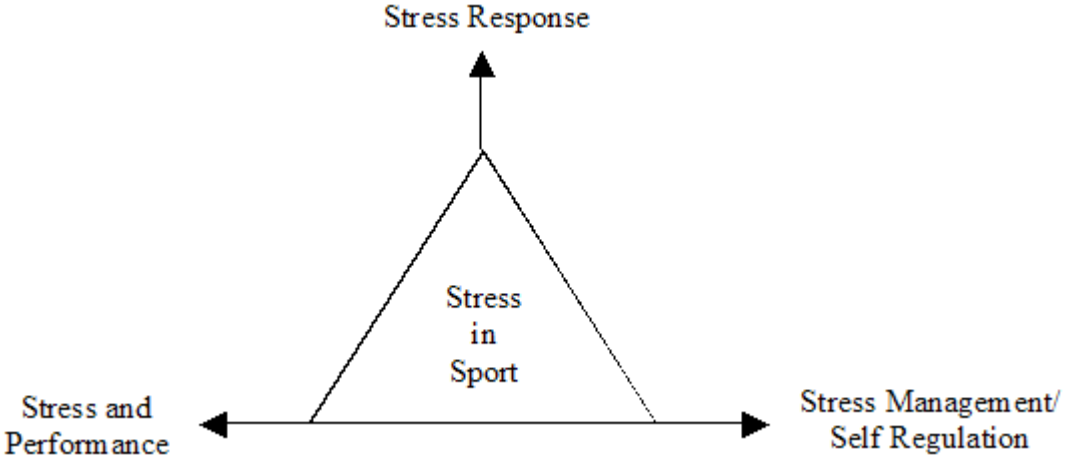
As we all probably know, there is only so much tension one can take. Whether it is constant episodes or chronic stress, either can transform what was beneficial stress into "distress". The stress hormones which are protective initially and liberated for self-preservation may cause damage due to overproduction. This has an effect on the entire metabolism, including the rate at which our cells grow and are repaired as well as the production of the cells in the immune system .

The brain of course is a crucial target and neurons exposed to elevated glucocorticoids for long periods of time are known to be adversely affected. Tests have shown that brain cells in rats may shrivel and the dendrite branches, which are used to communicate with other neurons, wither away. In particular, the hippocampus, which is implicated in memory and mood, may be damaged by stress and the adrenal steroids.

Advances in medical technology like magnetic resonance imaging (MRI) enable us to develop clear images of specific parts of the brain, which in return allow us to see where exactly stress is affecting the brain. The hippocampus – which has glucocorticoid receptors, is actually noted to be twelve percent smaller in volume in people with stress disorders. Yet, is stress-linked brain damage permanent? Short-term stress damage appears to be reversible (as per rat experiments) though chronic stress may lead to neuronal loss.

Martens, Vealey, and Burton (1990) stated, “Stress has been defined as stimulus, intervening and response to variables by different researchers. As a stimulus variable stress is a precipitator; as an intervening variable, a mediator; and as a response variable, a behavior.” There are many factors which can cause stress for an athlete. There are two ways these are

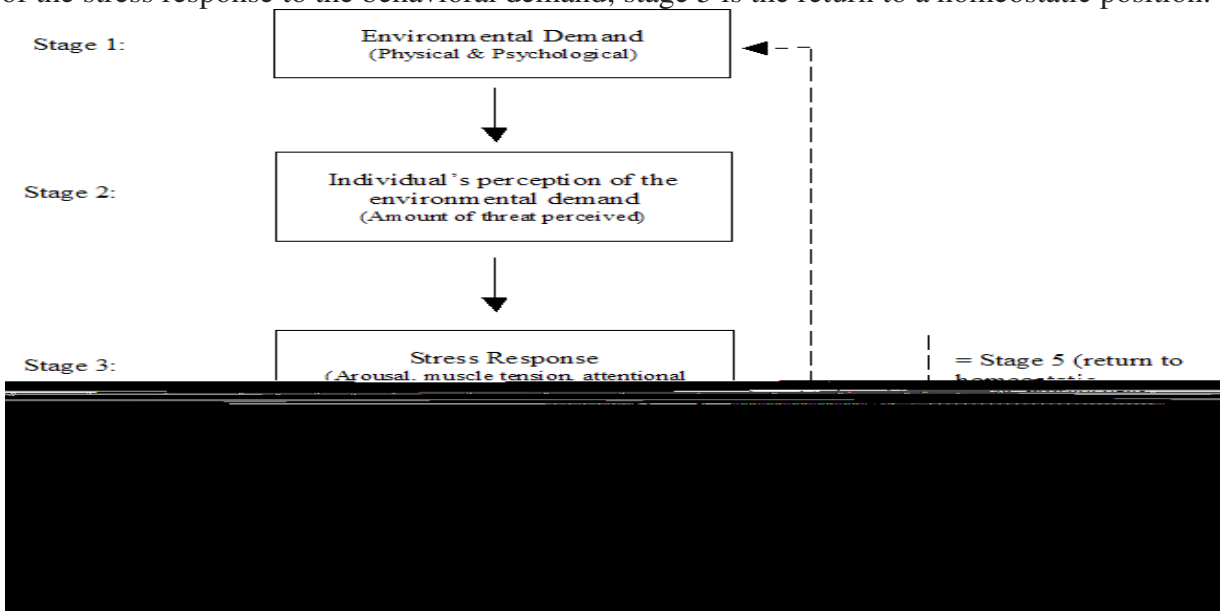
demonstrated, the stress model and the stress response process. See the diagrams below.



Stress Model, Graham-Jones & Hardy (1990)

The stress model demonstrates what factors affect stress in sport. Stress can affect performance, the way an athlete responds to the stress can affect it, and the management of the stress can negatively or positively affect the athlete's stress level.

The stress response process (shown below) consists of five stages. Stage 1 is the environmental demand; stage 2 is the athlete's perception of the environmental demand; stage 3 is the stress response to the environmental demand; stage 4 is the behavioral consequences of the stress response to the behavioral demand; stage 5 is the return to a homeostatic position.



Stress Response Process, Reilly & Williams, 2003

Stress is a factor of life that affects everyone, but athletes tend to suffer from it more than non-athletes, due to the amount they are required to balance, between schoolwork, practices and games, as well as family pressures and everyday life.

Stress Disorders

The study of stress in sport lies within the realm of sport psychology. There are many disorders which are related to stress. Typically an athlete is diagnosed with general stress

disorder, but there are more specific stress disorders as well. These disorders include, but are not limited to, obsessive-compulsive disorder (OCD), depression, and post-traumatic stress disorder (PTSD). Stress can be manifested in people with OCD because the person will become so obsessed with their traditions, whether it is the number of times they must turn a light off, or clean their hands, if the person does not do it the correct number they will because stressed and will consume their thoughts until they go and correct it.

Depression can cause a person to become stress, and stress can cause depression because a person will become preoccupied with what is stressing them out, and will begin to focus only on that and soon not find pleasure in their normal everyday activities which will end up like a snowball effect and continue to get worse, unless they get help. Post-traumatic stress disorder is not usually a disorder that affects athletes but sometimes it may, especially after a traumatic car accident, or serious injury. PTSD is a very serious condition that can lead to further problems such as suicide. This is a condition not to be taken lightly and if the athlete is showing any signs of PTSD, they should be referred to a counselling center in order to get proper treatment. There are many different stress disorders, many which need specialized treatment. At any time an athletic trainer feels like the athlete's stress level is becoming too high and unmanageable then the athlete needs to set up with a counselling center so they can get proper help, and tools to help lower their stress level.

Signs and Symptoms

There are many signs and symptoms of stress, and everyone is different, so one sign or symptom described by one athlete may not be what another athlete experiences. Ray and Weise-Bjornstal (1999) described seven categories in which an athlete may experience stress. These categories are: affective, behavioural, biological/physiological, cognitive, imaginal, interpersonal, and sensory (Ray and Weise-Bjornstal, 260). Each category has its own signs and symptoms. Affective signs and symptoms include: anxiety, anger, guilt, depression, shame and feeling sorry for oneself. Behavioural signs and symptoms include: sleeping disturbances, restlessness, aggressive behaviour, alcohol or drug abuse, sulking, crying, poor performance, absenteeism, and clenched fists. Biological or physiological signs and symptoms include muscle tension, increased heart rate, indigestion, stomach spasms, pain and headaches.

Cognitive signs and symptoms are frustration, worries, distortion, exaggeration, unrealistic performance expectations, self-defecting statements and self handicapping. The imaginal signs and symptoms include images of failure, images of re-injury, flashbacks of being injured, images of helplessness, and images of embarrassment. The interpersonal signs and symptoms include withdrawal, manipulation and argumentation. The last category, sensory, includes tension, nausea, cold sweat, clammy hands, pain and butterflies in the stomach (Ray and Weise-Bjornstal, 260). There are many signs and symptoms of stress, which are not all experienced by each person, and each person can experience a variety of signs and symptoms.

Healthy Response

There are many ways an athlete can respond to stress. Many times athletes do not handle stress properly, nor do they know how to, so they must seek outside help in order to deal with it. Healthy ways for athletes to deal with stress are to engage in pleasurable activities, take care of their body, maintain a positive perspective, laugh, practice relaxation techniques, talk to others, and get help from a professional. Many athletes do not know how to handle their stress and usually need help when it comes to dealing with the stress. Due to this

fact many times the athletic trainer or coach is the first person the athlete turns to when they are stressed out. The coach and athletic trainer both need to know the available resources and know the proper steps to go to in order to get the athlete the proper help they need.

Related Health Problems

There are many health problems related to high levels of stress. These include, but are not limited to, irritable bowel syndrome, diabetes, skin disorders, such as hives, ulcers, respiratory conditions, and sexual dysfunction. These conditions do not occur over night and tend to occur over an extended amount of time. Once an athlete develops one of these other conditions the athletic trainer and health care providers need to sit down with the athlete and try to figure out the cause of the condition. They need to keep in mind that stress could be the underlying cause and suggest ways for the athlete to help deal with their stress. The athlete may need to also adjust their eating habits as well as make other lifestyle changes to help manage their stress and health problems.

Coping Mechanisms of Both Stress and Anxiety

There are a variety of coping mechanisms available for athletes who may be suffering from stress or anxiety. Each athlete needs to figure out which one works best for them, and that may take them a while as they need to try out each mechanism for a while to see if it works for them. There are many methods available including "hypnosis, progressive relaxation, visualization, biofeedback, autogenic training, mediation, negative thought stoppage, and confidence enhancement" (Hann, 2000). Reilly and Williams (2003) stated seven different demand categories in which an athlete may need to alter in order to lower their levels of stress and anxiety, these categories include: "physical demands, psychological demands, environmental demands, expectations and pressure, relationship issues, life direction concerns and uncategorized stress sources." In each category Reilly and Williams listed a variety of coping mechanisms the athlete can use to help limit stress and anxiety in that category. For physical demands they suggest, "rational thinking, pre-competition mental preparation, changing to healthy acting attitudes and behaviour, and training hard and smart." For psychological demands they suggested using "pre-competition mental preparation, management, positive focus and orientation, and training hard and smart."

Environmental demands did not have many coping mechanisms them but Reilly and Williams suggests "time management and prioritization, as well as isolation from the stressor and deflection." Ways for the athletes to deal with the stress from high expectations and pressure to perform at their highest standard include "positive focus and orientation, training hard and smart, rational thinking, positive self talk, social support, pre-contemplation mental preparation and anxiety management." The athlete has many relationships with other people which can add to their stress level, to combat these the athlete should try "positive focus and orientation, social support, striving for a positive working relationship, isolation and deflection, as well as rational thinking and positive self-talk." Life direction concerns affect everyone, not just athletes. Ways to help deal with life direction concerns include "time management and prioritization, rational thinking and positive self-talk."

Uncategorized stress sources can be dealt with through "reactive behaviours, social support, isolation and deflection" (Reilly and Williams, 2003). Above are a variety of techniques an athlete can use to help lower their stress and anxiety levels for a variety of stressors. Graham-Jones and Hardy suggest "self-regulation training which helps copes with stress and enhancing the likelihood of peak performance" (1990). Graham-Jones and Hardy also suggest using "goal setting, imagery, and attention control," (1990), in order to properly

manage stress and anxiety disorders. There are a variety of methods available for athletes to use in order to help reduce their stress and anxiety. Many times it is a case of trial and error in order for the athlete to find what works best for him or her.

How Stress Athletes

There are many factors which can cause an athlete to experience stress or anxiety. The factors which can increase stress and anxiety are: physical demands, psychological demands, environmental demands, expectations and pressure to perform to a high standard, significant other stressors, relationship issues and life direction concerns (Reilly and Williams, 2003). There are four proposed main reasons for competitive stress response before competition which include:

1. "Assumption that the athlete's mental set prior to competitive can affect subsequent performance.
2. Assumption that the athlete has some control over his or her mental preparation during the pre-contemplation period.
3. At a practical level, this period is much more accessible to researchers than the period of competition itself.
4. If pre-competition anxiety is a negative source of performance variance than the clinician can assist in developing an appropriate pre-competition state." (Graham-Jones and Hardy, 1990).

Research has shown that "intercollegiate athletes experience greater psychopathology. Examples include: more problems with alcohol, and are at a greater risk for eating disorders symptomatology" (Storch, et al, 2006). Storch, et al, (2006) also found that "female athletes reported higher levels of depressive symptoms, social anxiety, and non-support than male athletes and male/female non-athletes." These factors all tie into the athlete and their performance, which can lead to the performance issues discussed below.

Performance Issues

Athletes who suffer from stress and anxiety and do not learn to control their symptoms will soon have issues that will cross over into their performance. Hann (2000) found "sports psychologist have long believed that high levels of anxiety during competition are harmful, worsening performance and even leading to dropout." Dropout is a bad result for athletes to have due to poorly managed stress and anxiety, but Hann also found "another widely accepted assumption is that all positive emotions facilitate sport performance" (2000), which has actually been proven to not be true. Performance is especially affected when an athlete has suffered an injury and is stress and anxious about their return to their sport. Mann, et al found "the psychological issues related to injury most frequently discussed with patient-athletes were fears about re-injury, fears about surgery, unwillingness to be patient with recovery and rehabilitation, avoidance of rehabilitation or sports-related activities and concerns that the consequences of the injury will disappoint others" (2007).

Storch, et al, (2006) found a "particularly problematic issue is that athletes greatly underutilize school counselling and mental health services." Many athletes report a "need for counselling regarding time management, stress, burnout, and fear of failure, anxiety, depression and performance related issues" (Storch, et al, 2006). There are many ways that stress and anxiety negatively affects sports performance, which the athlete needs to consider in order getting help.

Results if Poorly Managed

There are a few results that athletic trainers never want to have happen to their athletes if they are overstressed or anxious which includes overload, burnout, dropout, and maladaptive fatigue syndrome. Hackfort and Spielberger (1989) found that burnout results from "high or conflicting demands, that results in overload, low social support, low autonomy, low rewards, low demands which leads to boredom." Overload and burnout are common among athletes especially at the higher levels of sports, such as collegiate athletes. "Elite athletes have dropped out of sports at the peak of their careers maintaining that they are 'burned out' and that participation has become too aversive for them to continue" (Hackfort and Spielberger, 1989).

Maladaptive fatigue syndrome occurs when the athlete does not get help to control their stress or anxiety and the symptoms do not go away and the athlete constantly suffers from the symptoms. Hann (2000) defined the "emotions of adaptive and maladaptive fatigue syndrome to include: anger, hostility, anxiety, confusion, depression, sadness, lack of vigour and apathy." Once an athlete begins showing signs of maladaptive fatigue syndrome the athlete needs to seriously consider quitting their sport and getting professional help. Some athletes with maladaptive fatigue syndrome need to be admitted to a psychotherapy facility in order to receive the best treatment.

Burnout, overload, dropout and maladaptive fatigue syndrome are conditions that an athletic trainer does not want their athletes to experience. The athletic trainer should supply resources for the athlete before their condition gets to this level, even if it is to just send them to the counselling centre on campus.

Summary and Conclusions

Stress and anxiety affect everyone daily, but research has found that many athletes struggle with these conditions more than the rest of the population. "Despite the well-documented benefits from exercise and sports participation on mental health, some athletes will at times experience psychological, emotional, and behavioural problems" (Mann, et al, 2007). "Many factors which can influence the performer's psychological state and so alter it from the optimum required for their performance" (Graham-Jones and Hardy, 1990). Many athletes struggle to handle the stress and anxiety that comes along with a full class load, the demands of their sport, as well as the pressures of their family and friends. Athletic trainers need to be sure they help their athletes utilize the counselling centre, and other techniques to help limit their stress and anxiety.

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Samashti Yoga: A New Approach to Enhance Universal Brotherhood

P. V. Shirpurkar: Sadhak and Yoga Teacher

Abstract:

This study aims to discuss a new approach called 'Samashti Yoga' to enhance brotherhood with compassionate communication between people. Based on the concept of Vyashti and Samashti, using Yoga therapy,universal brotherhood could be encouraged for harmony and peace in the society. Samashti is collective efforts and Vyashti is individual efforts. If Yoga techniques are practiced collectively in Samashti, desired goal of brotherhood could be achieved. 'Samshti Yoga' philosophy is based on visions from Ashtang Yoga from Patanjali's Yoga Sutras. Yoga techniques are aligned with spiritual principles.

Study design involved two groups; control group and intervention group. Qualitative analysis of five variants; physical fitness, mental wellbeing, forgiveness, inter-personal communication and love and peace is carried out. Yoga techniques were practiced collectively in batches in intervention group whereas, individual Yoga practices are carried out in control group participants. In 'Samashti Yoga' approach, initially, theoretical knowledge of Yoga was imparted. Practical approach using a five-step model was then practiced. Observations were interpreted through deep understanding. Finding of this study indicates that 'Samashti Yoga' approach improvesphysical and mental fitness and develops qualities like love, compassion and communication which further enhances brotherhood.'Samashti Yoga' has proved to be a unifying factor of humankind. Thus, in current era Samashti sadhana or efforts should be put for betterment of the society as we owe a deep debt to society.'Samashti Yoga' would help dissolve the barriers between us and complement universal brotherhood.

Key words: Yoga, Brotherhood, Samashti, Patanjali, Meditation

Introduction:

Yoga is a science, philosophy and technique in the form of mental and physical discipline. Vedas and textual references reveal the mystery of Yoga. 'Yoga' originates from the Sanskrit word 'Yuj' mean to join or come together or unite. Yoga is a union of body and mind. It helps to make life a beautiful experience by maintaining harmony and creating universal brotherhood by following principles of Achar, Vichar, Ahar and Vihar. Yoga deals with Prana, which is a life force and it pervades in every living thing. Different branches of Yoga are KarmaYoga, RajYoga, DhyanaYoga, BhaktiYoga, DyanaYoga, HathaYoga. Yoga is a way of life, an integrated system of educating body, mind and spirit. It deals with universal truths. It is a science of healthy and better living.

Modernization and urbanization takes us away from nature and people. Yoga can be practiced to avoid, prevent and restrict the problems, disorders and diseases. Simple techniques like proper breathing, relaxation, stretching body parts result in cure of common ailments. It also helps to manage the stress resulting in better performance. Yoga improves concentration, helps complete integration of self, control of thoughts and allows living a full healthy life. Thus, Yoga has therapeutic values and therefore can be applied as Yoga Therapy. Yoga Therapy consists mainly Asanas, Pranayama and Meditation.Yoga is a way of life, an

integrated system of educating body, mind and spirit resulting in universal brotherhood. Yoga techniques also bring the mind to a state of calmness and balance.

Brotherhood is the association of people linked by common interest with unconditional love and affection. It is a feeling of friendship, support and understanding between people, regardless of nationality, religion, creed and ethnicity. The concept of universal brotherhood is manifestation of love and affection beyond the terms like male or female. When we put collective efforts love, affection and faith grows stronger.

Swami Vivekanand, who was a 'Yogi', in his speech at Chicago conference, addressed the audience as "My brother and sisters". This was entirely a new idea of enhancing universal brotherhood. He emphasized that Yoga can lead to peace and harmony in the universe.In the recent years many Yogis and Sadhakas used the concept of Yoga to create brotherhood. Principles of Yoga talk about interpersonal relationships leading to brotherhood. This concept is used by our Honorable Prime Minister, Shri. Narendra Modi ji, by declaring 21st June as 'Yoga Day' all over the world.

The purpose of this study is to findthe differentiation between collective Yoga practices and individual Yoga practices to evaluate overall well-being of participants.

As a Sadhak and Yoga teacher, during the practice of Yoga therapy a new approach 'Samashti Yoga' is designed to improve the qualities of brotherhood like love and affection, forgiveness, communication. Universe is Samashti and an individual is Vyashti. Samashti is sum total of Vyashti. Samashti refers to the oneness and solidarity of whole universe. Collective power of society could be experienced and perennial problems could be solved with the efforts of Samashti. When individuals relate to the society in an intensive way, Vyashti unites to become Samashti and universal brotherhood would be enriched with peace and harmony.

To assess the benefits of this approach, control and intervention study was designed. Convenient sampling method was used. Pilot tests were conducted to assess life style, attitude, physical and mental health. This helped in selecting participants for the study. Further, a control group of 40 participants were given individual attention and Yoga practices. And an intervention group of 75 participants in five batches were given Yoga practices collectively. The entire research study was carried out over a period of time and at different places.

Samashti Yoga – a new approach:

Samashti Yoga philosophy is based on Ashtang Yoga which includes Yam, Niyam, Asana, Pranayam, Pratyahar, Dharna, Dhyan and Samadhi. Samashti Yoga is a profound and comprehensive technique of realization of our responsibilities towards society. Awareness of our emotions as well as others could be attained. In this approach emphasis is given on the 'Bahya Yoga' (Yam, Niyam, Asana, Pranayama, Pratyahar) with the help of theoretical and practical knowledge. Theoretical knowledge includes information about selective Yoga Sutras, life style changes.

Getting Started:

Samashti Yoga technique is initiated with sattvic diet, cleansing, mindfulness and prayers.

1. **Diet:** It is said, 'as you eat, so you become'. Diet must be balanced, controlled, nutritive, usually Satvik. More use of fruits, vegetables, salads, nut, proportionate amount of carbohydrates, fats, vitamins and minerals should be included in diet. So, that sufficient

calories are provided to restore energy. Food items should be selected to form 80% alkaline ash and 20% acidic ash.

2. **Cleansing:** It is necessary to remove impurities from body before practicing Yoga. Yoga could be practiced preferably in the morning in comfortable dress with relaxed mood.
3. **Mindfulness:** Mindfulness is to be fully present in the moment and not to be overwhelmed with surrounding. It helps to concentrate, create awareness, enhance attention span. This innate quality could be cultivated with simple techniques.
4. **Prayer:** Universal prayers could be chanted together. This helps in coordination, feeling of oneness and to create sound energy.

Five-step model:

Practical approach of Samashti Yoga isa five-step model which includes Conditioning, Stretches, Asanas, Pranayama and Meditation.

1. **Conditioning** – This is the first step where Mantras are chanted in standing or sitting position with closed eyes. This helps to calm down and to focus on learning. Sound energy created during mantra chanting helps to create positive vibrations. Chanting is followed by alignment of the body with mind. Breathing should be naturally balanced in simple posture. Acceptance will increase if body and mind are in coordination.
2. **Stretches** – Before starting Yoga, body may be little stiff. Stretching exercises of hands, neck, shoulder, legs and waist are practiced making the joints flexible, loosen the muscles, increases blood flow and tune up the body. Stretching is done with gentle poses and slow movements.
3. **Asanas** – Patanjali Yoga Sutra defines Asana as a 'steady, comfortable posture'. There are two types of poses; meditative pose and traditional pose. Asanas in different positions like standing, sitting, lying on abdomen, lying on back and twisting are practiced. Tadasana, Konasana, Utkatasana, Trokonasana, Parvatasana, Ushtrasana, Bhujangasana, Naukasana, Supta-Vakrasana, Yashtikasana, Pavan-muktasana, Setu-bandhanasana, Chakrasana and their variations are some of the common Asanas which help in physical and mental health.
4. **Pranayama** – Pranayama is control of internal energy using rhythmic breathing. Traditional Pranayama like Surya-bhedi, Chandra-bhedi, Nadi-shodhan, Ujjai, Shitali, Shitkari etc. are practiced. Knowledge of other Pranayama techniques like Kapalbhati and Anulom- Vilom is essential.
5. **Mediatation**–Meditation is a dynamic state of mind. It amplifies mental power and induces calmness. Basic knowledge of meditation is imparted. Prekshadhyan and Transcendental Meditation are practiced. During meditation, techniques to control and redirect our thoughts to encourage a feeling of love and peace are sought.

During the practice of Samashti Yoga, participants had joyful and blissful experiences. Profound and stable transformation in attitude, feelings and relationships took place eventually. Depending on individual's level of involvement, these transformations could be immediate or take a longer time. In intervention group, sharing and discussion of these experiences have a greater impact on their qualities of brotherhood.

Theoretical and practical approach of 'Samashti Yoga' is practiced with control and intervention groups. Analysis of five variants, those are physical fitness, mental wellbeing, forgiveness, inter-personal communication and love and peace is carried out at certain interval. Qualitative analysis is interpretative as responses were implicit and could be understood through deep understanding.

Observation and Discussion:

1. The progress of physical fitness and mental wellbeing was observed to be similar in both the groups.
2. Improvement in inter-personal communication, love and peace and forgiveness was observed more in intervention group. It was almost negligible in control group.
3. Out of these three (Inter-personal communication, love and peace and forgiveness), maximum improvement was seen in inter-personal communication followed by love and peace.
4. Minimum improvement in the extent of forgiveness was seen. Several factors like age, gender, environment, socio-economic status, family culture attribute to this observation.

The finding of this study indicates that 'Samashti Yoga' approach leads to the path of universal brotherhood through improvement in Inter-personal communication, love and peace and forgiveness.

General Benefits of 'Samashti Yoga':

Benefits of Yogic techniques for physical and mental fitness are well-known and universally established. Other than these, Samashti Yoga technique contributes following benefits with respect to brotherhood.

- Cultivate empathy and compassion between people
- Encourage heartfelt connection with ourselves and others.
- Transforming our emotional pattern into conscious responses
- Shifting paradigm from power of politics to power of spirituality
- Transparency and accountability
- Tool to resolve conflict situations
- Taking decisions with our core values

Conclusion:

This study contributes an approach of 'Samashti Yoga' for universal brotherhood. 'Samashti Yoga' could be used as a tool to bring awareness of universal brotherhood. Subtle individual energy could be transformed into universal energy. In this, traditional teachings are integrated with modern perspectives. It supports balance of body and mind. Sattvic diet, cleansing, mindfulness and prayers will initiate the process of 'Samashti Yoga' technique which is followed by Conditioning, Stretches, Asanas, Pranayama, Meditation. The results provide evidence of increase in physical fitness, mental wellbeing, inter-personal communication and love and peace. The findings also suggest further research to be carried out to enhance forgiveness.

It is evident from the results that, while practicing this technique individual ego is dissolved, a sense of connectivity is developed and spirit of oneness is created. This helps us to be courageous and fight for good. Participants witness an inspiring and life-changing experience. Cumulative effect of Samashti Yoga is transformative and highly beneficial for universal peace and harmony.

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Assessment of Aggression Behavior between Bowlers and Batsman in Cricket a Comparative Study

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Abstract

The main purpose and objective of the present study is to compare the aggressive behavior between fast bowlers and batsman in cricket. A total of 44 state level male subjects age ranged between 18 -25 years were selected for this study from Cricket Coaching Centre, (Karnataka) approved by BCCI. All the subjects, after having been informed about the objective and protocol of the study. They were further divided into two groups of 22 each (N1=22; fast bowlers and N2 =22; batsman). Aggression has been assessed using Dr. G.C. Pati in Hindi version Aggression Questionnaire. For the data aggression behavior the t- test was employed to find out the significant differences between male fast bowlers and batsman. The results revealed significant differences between fast bowlers and Batsman on the psychological variables Aggression behavior.

Keywords: bowlers, batsman, aggressive behavior, comparative study

Introduction

Cricket is a gentlemen game. Whenever a tournament starts, the cricket enthusiasts forget their daily work and are glued to the television set. These days Aggressive behavior has become a topic of vital importance and a major concern in most societies. The whole world seems to be under the strain of aggressive acts of various forms. Violence is disturbingly common in most parts of the world and it is undoubtedly creating chaos and disturbing the world peace and harmony.

The term aggression is used in several ways. We speak of "good" aggression and "bad" aggression. Aggression or aggressive behavior is a term that is used extensively in sports. "Aggressive behavior is an unprovoked hostility" Psychologists define aggression as "any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment. Behavior of any kind that is carried out the intention of harming another person is a called as aggression. Aggression is a desirable behavior in sports & games for maximum performance. Player have to be aggression due to the nature of the games. Frustration is the cause of aggression. The amount of aggression is usually determined by the level of the frustration produced by the particular situation. The level situation will be affect by drive strength, degree of interference, the number of thwarted response sequence.

Method and Procedure

Selection of subjects

To achieve the objective of the study, a total of 44 state level male subjects age ranged between 18 -25 years were selected for this study from Cricket Coaching Centre, Jind (Haryana) approved by BCCI. They were further divided into two groups of 22 each (N1=22; fast bowlers and N2 =22; batsman). To compare the aggression level between fast bowlers and batsman, the date were collecting by using by Dr. G.C. Pati. Aggression questionnaire

Statistical Procedure

Independent t-test was employed to compare between male fast bowler and Batsman. The level of significance was set at 0.05 levels. The statistical analysis was conducted by using SPSS 16 software.

Table 1: Mean, Standard Deviation, Standard Error of the Mean, t- value and p- value of Bowler and Batsman

Variables	Mean		SD		SEM		t-	P Value
Aggression	Bowler	Batsman	Bowler	Batsman	Bowler	Batsman	3.933	00
	26.64	22.27	2.592	37.53	0553	0.8		

***Significant at 0.05 level,**

The comparison of mean scores of both the groups has been presented graphically in figure

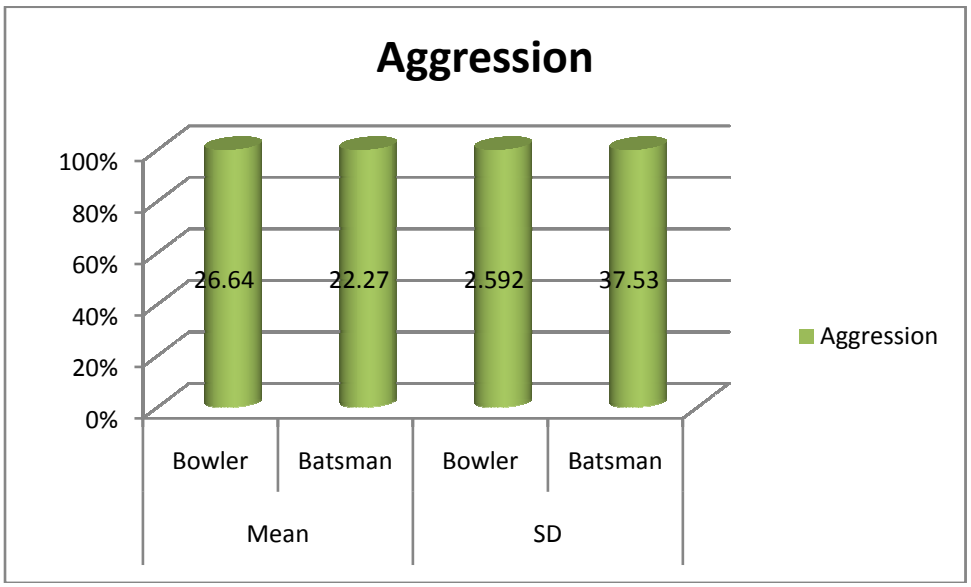

Table no.1 shows the mean and SD value of Fast Bowlers on the variable of Aggression as 26.64 and 2.59 respectively. However, Batsman had mean and SD values as 22.77 and 3.75 respectively. The 't' - value 3.973 as shown in the table above was found statistically significant (P>.05).

Conclusion

Based on the finding and with in the limitation of the present study, following conclusions were drawn:- significant different found between fast bowler and batsmen on the variables of aggression behavior.

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Scope of Sports Managment in India

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Abstract

Sports industry is so vast than one could imagine, with a plethora of opportunities. The Industry is interdisciplinary and can be divided into many segments like Sports Media, Sports Medicine, Sports Team Administration and Sports Management. In this paper, we go in detail about sports management as a career. Sports Management includes Management and Finance, Organizing leagues etc. as team manager. Sports management is a lucrative career option for sports lovers, especially for those who have an administrative bent of mind and good managerial skills. Sport management involves combination of skills related to planning, organizing, directing, controlling, budgeting, leading, and evaluating a sports event or activity. Sports management basically involves managing a sporting institution or team. This career in sports helps to plan, supervise and organize all sorts of sporting activities on domestic and international levels. Sport managers are employed in a variety of organizational settings like college sports department, professional sports team, amateur sports, sport marketing and management firms, sport communications and news media firms, corporate sponsorship and advertising firms, sporting goods companies, arenas, stadium, sports federation.

Introduction

In India, sports' marketing is relatively new and is yet to be recognized as an economic sector. This is because there has been very little comprehensive study done on the industry's size and the potential opportunities that are available. The sports sector includes various disciplines such as sports tourism, sports law, sports finance, facilities and event management, sports medicine and sponsorships. According to a study done by KPMG, it is seen that the global sports industry contributes about 1 to 5 percent of a country's GDP. The establishment of a sports industry in India can reap rich dividends in different segments. Employment and the massive market opportunities which will open up within this industry will be enormous in the years to come.

Exports – A Momentous Growth

India's share of the global sports goods export market is expected to grow manifold, with the country establishing the credibility of its goods in the international market. Indian sporting goods are well known around the world and have made a mark in the global sports goods market. The industry exports nearly 60 per cent of its total output to sports-loving people the world over.

- The sports goods market in India was valued at US$ 2 billion in 2012-13. The market is growing as 35-40 per cent a year and is expected to reach US$ 3.6 billion by 2015. The growth is expected on account of increasing awareness about health and fitness in the country.
- India exported sports goods worth around US$ 256 million in 2013-14 as compared to US$ 214.95 million in 2012-13 and registering a growth of about 19 per cent.
- The major items to be exported during 2013-14 includes inflatable balls, cricket bats general exercise equipments, sports nets and protective equipment for cricket.

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The most interesting factor is that the land of Sports Engineering, United Kingdom is the major importer of Indian sports goods. It shows India's ability to grow as a sporting super power.

The game is changing

Sport is regarded as one of the largest industries globally in terms of employment and revenue. The Business of Sports is a multi-billion dollar global industry propelled by enormous consumer demand. The sports business means many different things to different people. This is a truly global industry, and sports stir up deep passion within spectators and players alike in countries around the world.

But in past, it was just a loss-making affair in India. Now, sport is going to be the next big industry in India. In developed countries, sports contribute around 2 to 4 percentage of total employment. It includes a variety of career profiles such as athletes, coaches, trainers, event managers, public relation officers, Coordinator of sport organizations, Marketing Consultant, Program and Facility Manager, Professional Sport Promoter, Sport equipment and product sales, Sport Event Planner and Manager and Sport Sponsorship Specialist.

Career in Sports Management

You can start your career by joining sports management companies there by taking experience in that field. Fields include: *Sponsorship Event Management, Sales & Marketing, Ticketing and Logistics*

Conclusion

All in all, the sports industry in India has tremendous business potential, especially in the fields of marketing, management/sponsorship, exporting of goods or apparel, and sports medicine and tourism. Therefore, the time is ripe to facilitate investment mobility so that corporate houses that are already engaging in sports can upgrade to for-profit sporting ventures, while business houses that are not involved in sports so far may consider this sector as an ideal avenue for CSR activities. It's time to find out whether the sports industry can in fact be the next big thing for India's economy. The sectors of sports tourism and sports medicine also have massive business potential in India. Sports in India have a tremendous potential for expansion in the existing huge market. With a high growth economy and an ever-growing middle class with disposable income and leisure time

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Sports Marketing: Indian Scenario

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Abstract

Sport like cricket is a religion in India and others like tennis, football and hockey are also fast catching up. The Indian Marketing Scenario (IMS) is one of the biggest consumer markets which is precisely the reason why Indian market-place they need to hire Indian representative who are much more aware of the Indian economic, political, legal and social realities. The two major reasons for these changes in the IMS are changes in globalization and technology. Essential skills required for a Sports Marketing Director are the skills of organizational, written/oral communication, computer, creative thinking, resistance to stress, and highly motivated leadership. This paper also discusses about some of the specific duties of sports marketing executives working in any of the above areas such as negotiating, preparing contracts for athletes, planning and coordinating sports events, etc. There are multiple opportunities in terms of sponsorship sales, sponsorship activation, ticketing, corporate hospitality, ceremonies, athlete management, advertising and communications, and new media.

Introduction

Sports marketing are no longer the private playground of breweries, cigarette makers and sporting goods companies. Marketers understand the popularity of sports and have made them a centerpiece of marketing campaigns for decades. As the size and popularity of national sports has grown, the field of sports marketing has grown with it. Using sports to sell products presents many opportunities that bring both risk and reward. A successful sports marketing campaign can linger in the minds of consumers for years, while an ineffective one can be a significant waste of money. All marketing efforts must be guided by a comprehensive marketing plan if they hope to succeed.

Sports Goods Industry in India

The sports goods industry in India is nearly a century old and has flourished due to the skills of its workforce. Being labour-intensive in nature, the industry provides employment to more than 500,000 people. The nucleus of this industry in India is in and around the states of Punjab and Uttar Pradesh. Jalandhar in the state of Punjab and Meerut in the state of Uttar Pradesh account for nearly 75 per cent of total production Together, the two towns house more than 3,000 manufacturing units and 130 exporters. The Indian sports goods industry also has a presence in the cities of Mumbai, Kolkata and Chennai, albeit at a lower scale.

What is sports marketing?

Sport marketing is marketing using sports as a medium. It involves not only on the promotion of sports teams and events but also the promotion of other products and services through sports events and sports teams. The goal for a sports marketer is to understand the needs of the client and formulate strategies to promote sports or non-sports themes through sports. These strategies incorporate the traditional four 'P''s of marketing – ***Product, Price, Place and Promotion***.

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What does a sports marketer do?

For a sports marketer, one will be expected to handle a plethora of responsibilities, depending on the role given to him or her, which could be of the following mentioned below.

Licensing and merchandising sports properties.
Sponsorship servicing
Player appearance at public events
Fan club management
Organize leagues and competitions.
Look out for advertisement opportunities.
Broadcasters and media
Suppliers and Retailers
Sports governing bodies and associations

Conclusion

Sports are prime opportunities for real-time marketing because they are essentially a string of unpredictable events happening at a moment's notice."Go where the fans are: find them on social media and leverage their content to personalize the experience and create a sense of community. Create momentum: create hash tags or contests that motivate fans to create relevant content, get engaged, and pull more fans into the mix. Set specific goals: social media marketing will only be effective if you set specific goals. Find your focus - are you generating awareness or engaging fans? Build a real-time plan: Invest in the right analysis and visualization tools so that you can take advantage of real-time events.

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The Influence of level of Sports Competition on Anxiety Behavior between National and State Level Women Players

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Abstract:

The purpose of the study was to find out pre-competition anxiety between national and state level women athletes. Due to the fact that during competition athletes' mental state greatly affects their stamina explosion, which finally influence the result of final competition. Anxiety in sports is considered as an important issue for many athletes. It refers to a sort of nervous and fear emotion formed by frustration of self-esteem and self- confidence, or increasing of the sense of failure and guilty, which is resulted by the threat from being unable to achieve goals or to overcome obstacles at the right time. For the purpose of the study the subjects were selected randomly from 63rd State Athletic Championships of West Bengal to measure the pre-competition anxiety by a questionnaire Sport Competition Anxiety Test (SCAT) developed by Rainer Marten. 25 national level and 25 state level women athletes selected randomly from the said Athletic Championships. To find out pre-competition anxiety between national level and state level women athletes't' test was applied. The result showed that there was significant difference on pre-competition anxiety between national level and state level women athletes. The national level women athletes had less pre-competition anxiety than the state level women athletes.

Key words: The Influence of level of sports Competition anxiety, National & State level women players

Introduction

Sports is littered with broken dreams of those whose performance collapsed when they are most needed to be in control of themselves and focus on the task at hand. It is not uncommon to see athletes "freeze" in big games or moments or commit unexplainable error in the course of their performance. When athletes do not perform well in relation to their abilities, nervousness in anticipation of the sporting challenges could be the root cause of anxiety. Track and field competition has always been regarded as "mother of sports", for it is the foundation for the other sporting events (John and Paul, 1993). What's more, sprint is a fundamental event in track and field sports, with very significant meaning and role to the training of other sporting events (Mangan, 2009). Anxiety refers to a sort of nervous and fear emotion formed by frustration of self-esteem and self- confidence, or increasing of the sense of failure and guilty, which is resulted by the threat from being unable to achieve goals or to overcome obstacles (Akbar et al., 2011). Anxiety can have a devastating effect on the performance of an athlete. No matter how much talent or skill one may have, he will never perform at his or her best if he or she lives in fear before every event. The problem of pre-

competitive anxiety is one of the most pressing problems in modern sports psychology. It has been recognized for many years that psychological factors, in particular anxiety, play an important role in competition and in competitive sports, every athlete experience fear before, during and after events (Lizuka, 2005). Anxiety could make even the world most successful athlete feel nervous. According to Moran (2004), factors such as fear of failure and lack of confidence induce feeling of anxiety in athletes. Anxiety is like worry; it is an unpleasant emotion that most athletes feel at sometimes when they are faced with challenges. Researcher took up this study to compare the Pre Competitive anxiety between the Players who represent the West Bengal in national level track and field competition, and the Players who represent their respective District in state level but could not qualify for the National Championship. The purpose of the study was to compare the differences on pre-competition Anxiety between women National and State level Athletes.**"**A Comparative Study of Sports Competition Anxiety. Between Male and Female Cricket. Players of Gujarat"He also found significant result. Using the right techniques such as visualization, goal setting, cognitive restructuring, developing self confidence and focusing on what you can control rather than what you control cannot will help athletes free from pre-competitive anxiety. For the Coaching and teaching should provide more and more competition within the frame work of practice and training inculcate anxiety and stress free behavior.

Methodology

For the purpose of the study 25 female national level athletes, who participated at national level Athletes competition as a representative of West Bengal and 25 female state level athletes, who participated in state level Athletic competition as a representative of their districts but could not qualify for the National level Championship were selected randomly from 63rd West Bengal state Athletic Championships.

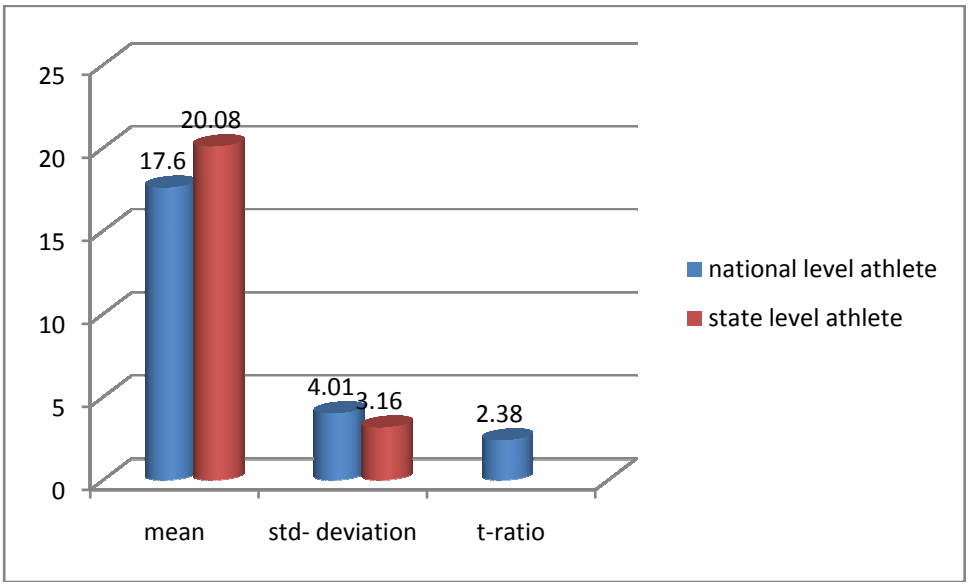
The age of the subjects ware ranged between 14 to 24 years. To compare the pre competition anxiety between the National and the state level players the data were collected by using Sport Competition Anxiety Test (SCAT) questionnaire, developed by Rainer Marten. Students „t□ test at 0.05 level of significance was applied to calculate the significance of difference between national and State level Women Athletes.

Table-1

Significance of Differences of Mean, Standard deviation and „t□ test on pre-competition Anxiety between women national and state level Athletes

groups	mean	std- deviation	t-ratio
national level athlete	17.6	4.01	2.38
state level athlete	20.08	3.16	

Table-1 shows that the mean and standard deviation and „t□ test of Women national level and state level Athlete on pre-competition Anxiety. Mean and standard deviation of national level Track and Field event player has been found 17.6±4.01 and 20.08±3.16, the mean and standard deviation of state level Track and Field event player. The „t□ value of pre -competition Anxiety is 2.38* this is significant.



Graphical representation of Mean & SD on Pre-Competition Anxiety between women national & State Level Athletes. The above table reveals that significant mean difference was found between women national and State level Athletes in relation to pre-competition anxiety as against the Calculated value of t= 2.38 is greater than the tabulated t05(48)= 2.00

Discussion of finding

Anxiety plays a paramount role in sports. It is the challenge in sports participation which produces anxiety. How an athlete handles the anxiety determines how successful he would be. Anxiety may be a positive motivating force or it may interfere with successful performance in sports events. The degree of anxiety also varies with a number of different conditions. Anxiety is likely to be greater in higher competitive sports than in relatively non competitive sports, because in the competitive sports, participants are expected to win a great demands are made up on them to succeed. It is revealed from the above findings that the Women state level athletes possessed more pre-competition Anxiety than the Women national level athletes. This study highlighted the anxiety levels by utilized both psychological and physiological measures of anxiety as the competition approached among women national and state level athletes. The mean for pre-competition Anxiety scores shown higher in state level athletes compared to national level athletes but in case of SD national level women athletes shows higher result.

A comparison of national and state athletes revealed several significant differences. National track and field event athletes reported higher self-confidence intensity, win orientation, and ethnic identification scores compared to state track and field athletes. The previous literature showing increased self-confidence levels associated with higher ethnic identity among African Americans (Martinez & Dukes, 1997) may also partially explain the higher win orientation scores among this population**.** Competitive anxiety is one of the factors to decrease athletes performance (Esfahani & Soflu., 2010). Feelings of tension, thinking of upcoming events in their mind, nervousness, and worry and involved in physiological changes such as increased in heart rate response are common response for the athletes prior to the competition (Hackfort & Spielberger, 1989). Some athletes also involved with the feelings of fear, unhappiness, guilt, discouragement, and focus distraction (Cerin, 2003; Kais & Raudsepp, 2005). The national level players are more experienced and have adjustable ability

with the environment and situation before competition. They are able to control their emotion and anxiety. Their nutritional status, blended demand with training for skill development in their training schedule and previous record in competition increase their confident level before competition. These have been reflected in the result for significant differences.

Conclusion

Women state level athletes are much more prone to pre-competitive anxiety due to fear of failure, thinking too much on what people may say about the performance, and lack of confidence, skill level, experience and general level of arousal in daily activities Women national level athletes are subjected to less pre-competitive anxiety due to more experience and adjustable ability with the environment and situation before competition, control their emotion and anxiety, their training schedule and previous record in competition and practice.

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