



BHARATHIAR NATIONAL JOURNAL OF
PHYSICAL EDUCATION AND EXERCISE SCIENCES
BNJPEES

DOUBLE – BLIND REFERRED JOURNAL



From the Editors' Desk

Whilst we are striving hard to manage the new normal post Covid pandemic, there is a great realisation on health fitness and wellness. The department of Physical Education, Bharathiar university with societal responsibility publishes this 12th volume of 'The Bharathiar National Journal of Physical Education and Sports Sciences'. In spite of the pandemic break the editorial team had put in tremendous efforts to bring out this volume of research works and articles.

The Bharathiar National Journal of Physical Education and Exercise Science (BNJPEES) is an open access quarterly journal, double blind refereed journal with ISSN – 0976-3678 which publishes original articles, commentary, editorials, review articles and case reports covering recent innovative high quality researches on sports published by the Department of Physical Education, Bharathiar University Coimbatore since June 2010. The purpose of this journal is to enrich the field of physical education and sport with literary base dynamic latest research and articles. The field of sport and physical education with its dynamic nature needs a literary back up to keep the masses informed of the latest changes that are happening across this field. Since the Sports Climate is experiencing a wide range of change and is very much essential that we stretch ourselves to meet the key challenges on sports and games. Since the inception of the new editorial team from 2019, the journal has been upgraded online to increase the vicinity across the globe and provide a wider citation opportunity scaling up research heights. The journal has been indexed with google scholar, world cat, core and road.

We appreciate the research scholars for stepping forward to get their works published in our university journal. Volume 12 has brought out 40 articles in total out of the 73 articles submitted. After thorough plagiarism check using Ithenticate and Turnitin, the articles are subjected to a double blind referee system for review. Based on the reviewers report the articles are accepted. Being a quarterly journal in this volume we have four issues of 10 articles each. We are also working hard towards quality control of the articles in par with the international standards.

From the editorial desk we submit to you that BNJPEES, with immense pleasure is working for the development of research in the field of Physical education and sports sciences which is the need of the hour. We encourage the authors to submit evidence based realtime research results which would benefit the society.



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Publisher's Desk

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Effect of Interval Training on Selected Performance Related Physical Fitness Variable Among Athletes

T. Kaliraj¹

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Abstract

The purpose of the study was to find out the impact of interval training on selected performance related fitness variable among athletes. A total of thirty athletes players from tenkasi district schools were selected randomly as subjects. The age of the students ranged from 14 to 16 years. The selected subjects were divided into two groups namely interval training group and control group, Group A underwent interval training for eight weeks of two days per weeks. Group B acted as control group, who were not engaged in any special activities other than their daily routine. The Selected performance related fitness variable namely speed and power were measured by 50 yards dash and vertical jump test. The data were collected from each subject before and after the training period and statistically analyzed by dependent 't' test which is used to find out the significant improvement on selected criterion variables and Analysis of Covariance (ANCOVA) was used to find out the significant difference between the experimental and control groups on each variables separately, All the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses. It was found that there was a significant improvement in interval training group on selected performance related physical fitness variable among athlete's players. It was found that there was a significant difference between the interval training and control groups on selected performance related physical fitness variable.

Keywords: Interval, Speed, power and athletes players.

Introduction

A variety of training regimens are commonly used to improve power and work output of the athlete. Whether in sprinting, jumping, or throwing, the ability of the athlete to accelerate one's own body, an opponent, or an implement is crucial to sport performance. Interval training is a type of training that involves a series of low- to high-intensity workouts interspersed with rest or relief periods. The high-intensity periods are typically at or close to anaerobic exercise, while the recovery periods involve activity of lower intensity.

Methodology

Subjects and Variables

A total of thirty athletes players from Tenkasi district schools were selected randomly as subjects. The age of the students ranged from 14 to 16 years. The selected subjects were divided into two groups namely interval training group and

control group, Group A underwent interval training for eight weeks of two days per weeks. Group B acted as control group, who were not engaged in any special activities other than their daily routine.

The Selected as criterion variable namely speed and power were measured by 50 yards dash and vertical jump test.

Training Programme

The training program was scheduled for one session a day each session lasted between forty five minutes to one hour approximately. Training programme was administered to the athletes players for eight weeks with two training units per week. The interval training exercises are kettle bell swings, squat with overhead press, burpees, bent over row, jump rope, push ups, high jumps, mountain climbers high to low plank and lateral burpees.

Statistical Technique

The data were collected from each subject before and after the training period and statistically analyzed by dependent 't' test which is used to find out the significant improvement on selected criterion variables and Analysis of Covariance (ANCOVA) was used to find out the significant difference between the experimental and control groups on each variables separately. All the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

ANALYSIS OF THE DATA

The analysis of dependent 't' test on the data obtained for speed and power of the pre-test and post-test means of interval training and control groups have been analysed and presented in table I.

The Table-I show that the pre-test mean value of performance related physical fitness variable namely speed and power in interval training group and control group are 7.55 & 7.621 and 42.93 & 41.8 respectively and the post test means are 7.45 & 7.622 and 49.13 & 41.6 respectively. The obtained dependent t-ratio values between the pre and post test means of speed and Power in interval training group are 7.26 and 8.19.

The obtained dependent t-ratio values between the pre and post test means of speed and

Power in control group are 0.07 and 0.31 respectively. The table value required for significant difference with df 14 at 0.05 level is 2.145. Since, the obtained 't' ratio value of experimental group is greater than the table value, it is understood that interval training group had significantly improved the speed and Power. However, the control group has not improved significantly because the obtained 't' value is less than the table value, as they were not subjected to any specific training. The analysis of covariance on speed and Power of interval training and control groups have been analysed and presented in Table II.

The table II shows that the adjusted post test means of speed and agility of interval training and control groups are 7.48 & 7.58 and 48.64 & 42.09 respectively. The obtained 'F' ratio value of speed and agility are 35.35 and 25.08 which are higher than the table value of 4.21 with df 1 and 27 required for significance at 0.05 level. Since the value of F- ratio is higher than the table value, it indicates that there is significant difference among the adjusted post test means of interval training and control groups on selected performance related physical fitness variable namely speed and power. The results of the study showed that there was a significance difference between the adjusted post test mean of interval training group and control group on speed and power among athletes players. The pre, post and adjusted post test mean value on Speed and power are graphically presented in figure- I & II.

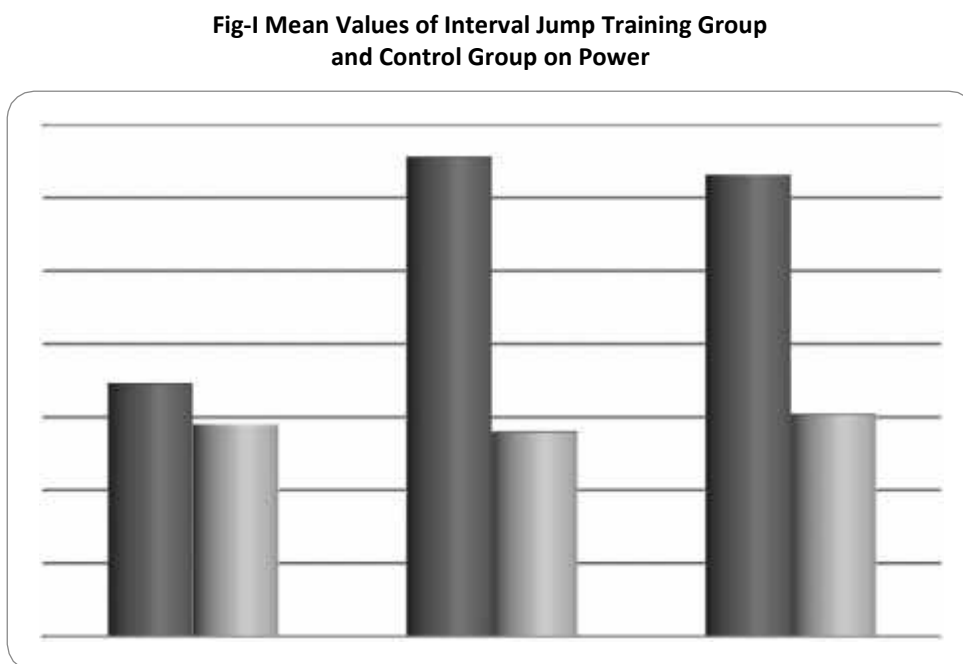
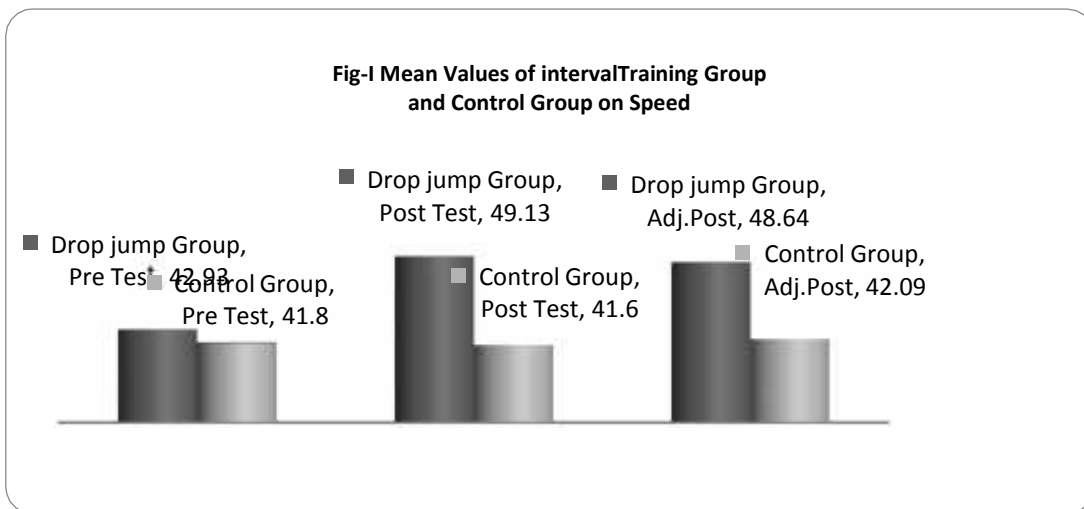
Table –I: The Summary of Mean and Dependent 'T' Test for the Pre and Post Tests on Speed and Power of Interval Training and Control Groups

S. N	Variable	Test	Interval Training group	Control group
1.	Speed	Pre test mean	7.55	7.621
		Post test mean	7.45	7.622
		't' test	7.26*	0.07
2	Power	Pre test mean	42.93	41.8
		Post test mean	49.13	41.6
		't' test	8.19*	0.31

* Significant at 0.05 level. (The table value required for .05 level of significance with df 14 is 2.145).

S.No	Variable	Adjusted post test mean		Source	SS	df	MS	F
		DJT	CON					
1.	Speed	7.48	7.58	SSB	0.08	1	0.08	35.35*
				SSW	0.06	27	0.0022	
2.	Power	48.64	42.09	SSB	319.85	1	319.85	49.34*
				SSW	175.04	27	6.48	

**Significant at .05 level of confidence (The table values required for significance at .05 level of confidence with df 1 and 27 is 4.21)*



DISCUSSION

A wide variety of training studies shows that interval can improve performance in vertical jumping, long jumping, sprinting and sprint cycling. It also appears that a relatively small amount of interval training is required to improve performance in these tasks. Just one or two types of interval exercise completed 1-3 times a week for 6-12 weeks can significantly improve motor performance (Blackey & Southard, 1987; Gehri et al., 1998; Matavulj et al., 2001). In addition, several studies on interval training have demonstrated that a significant increase in vertical jump height of 10% was accompanied with similar increase in sport-specific jumping, (Bobbert, 1990; Little, Wilson & Ostrowski, 1996) sprinting (Chimera et al., 2004; Kotzamanidis, 2006 and distance running performance. Also consistent with previous studies Abass (2009) found that intervals exercises (BWT) with depth jumping and rebound jumping characteristics are best used in developing muscle strength of the lower extremities.

CONCLUSION

There was a significant improvement on speed and power due to the effects of the interval training among athletes players. There was a significance difference between interval training group and control group on speed and power among athletes player.

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Effects of Hatha Yoga Training on Selected Psycho Physiological aspects of College Women

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Abstract

Nowadays women's having lots of problems from environments, working place, college, public places, and home also. They are easily getting tension it causes stress and also obesity. I want to find out the solution of obesity and stress for women. The purpose of the study was to find out the effects of hatha yoga training on selected psycho physiological aspects of college women. To achieve the purpose of the study was selected psychological variables of stress and physiological variables of body composition for college women. Twenty (N=20) Bharathiar University Women students was joined in this study. Subject's age ranged in 21 to 25 years. The hatha yoga training would be given following pranayama, meditation, suryanamaskar and asanas was given. The training program was agenda between 6.00am to 8.00am in morning, weekly 5 days from Monday to Friday. the analysis of pre-test and post-test 't' value was statistically significant from the eight weeks of the Hatha yoga training. It was significant changes of the mean value of Body Mass Index (0.59), Body Fat Percentage (0.70), Lean Body Mass (0.72) and Stress (0.69). I would be concluded through the Hatha Yoga training was help to significant changes for the Body Mass Index, Body Fat, Fat Mass, Lean Body Mass and Stress.

Keywords: Hatha yoga, Psycho physiological, women, Stress and Body composition.

Introduction

Yoga is a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. Living with freedom in all walks of life, health and harmony shall be the main objectives of yoga practice. "Yoga", also refers to an inner science comprising of a variety of methods through which human being can realize this union and achieve mastery over their destiny. Yoga, being widely considered as an 'immortal cultural outcome' of Indus Saraswati Valley civilization. Now in the contemporary times, everybody has conviction about yoga practices towards the preservation, maintenance and promotion of health. For many, the practice of yoga is restricted to Hatha yoga and asanas (postures). However, among the yoga sutras, just three sutras are dedicated to asanas. Fundamentally, Hatha yoga is a preparatory process so that the body can sustain higher levels of energy. The process begins with the body, then the breath, the mind and the inner self.

Yoga is also commonly understood as a therapy or exercise system for health and fitness. While physical and mental health are natural consequences of yoga, the goal of yoga is more far-reaching. "Yoga" is about harmonizing oneself with the universe. It is the technology of aligning individual geometry with the cosmic, to achieve the highest level of perception and harmony. Yogic practices for health and wellness: the widely practiced yoga sadhanas (practices) are: Yama, Niyama, Asana, Pranayama, Pratyama, Dharana, Dhyana (meditation), Samadhi/ Samyama, Bandhas& Mudras, Shat – Karmas, Yuktaahara, Yukta Karma, Matrajapa, etc. Yama's are restraints and Niyama's are observances. These are considered to be pre-requisites for the Yoga Sadhanas (Practices). Asanas, capable of bringing about stability of body and mind 'Kuryat - tad – asanam – sthairyam', consists in adopting various body (pscho-physical) patterns, giving ability to maintain a body position (a stable awareness of one's structural existence) for a considerable length and period of time as well.

Criterion Measurement

aspects of yoga. The students were given theory

S.NO.	VARIABLES	TEST ITEMS	UNITS OF MEASURES
Physiological			
1	Body composition	Skin fold caliper	In mille meter
Psychological			
2	Stress	Perceive stress scale	In Points

OBJECTIVES

1. To assess the effects of Hatha yoga on Body composition of college women students.
2. To assess the effects of Hatha yoga on stress of college women students.

HYPOTHESIS

In order to carry out the investigation, the following hypotheses were formulated:

1. Hatha yoga practice would have significant impact in the Body Composition changes among the women participants, from the baseline to post treatment of four weeks, among the women participants.
2. Perceived stress may have significant changes among the women participants from the baseline to post treatment of four weeks Hatha Yoga practice.

SAMPLE

The sample comprised 20 women students from Bharathiar University, Coimbatore. The age group of 20 purposively selected participants was 21 to 25 years. Only those students were considered who had no previous training or practice in Hatha yoga but had some experience of physical exercises.

METHODOLOGY

One group pre-test and Post-test field experimental design was selected for the present study. The design involved three operational stages. The first stage involved pre-testing of subjects about their body composition and stress. The second stage involved exposure of subjects to Hatha yoga training programme. The investigator took the help of specialized yoga instructor for administering the hatha yoga classes for 1 month for one hour in the morning. The participants were exposed to the theoretical as well as practical

classes on the importance of yogic exercises, astanga yoga, Asanas, Pranayamas, natural diet, concentration and meditation followed by practical sessions on pranayama and one asana. The components of pranayama and asanas involved training on, kapalbhati pranayama as relaxation technique. It was thought that, a regular practice of the Pranayama and asanas would bring total relaxation to the body which is essential for the development of better body composition and stress of women students. The third stage included post-testing of same group using the same tool after a hatha yoga training programme.

RESULTS

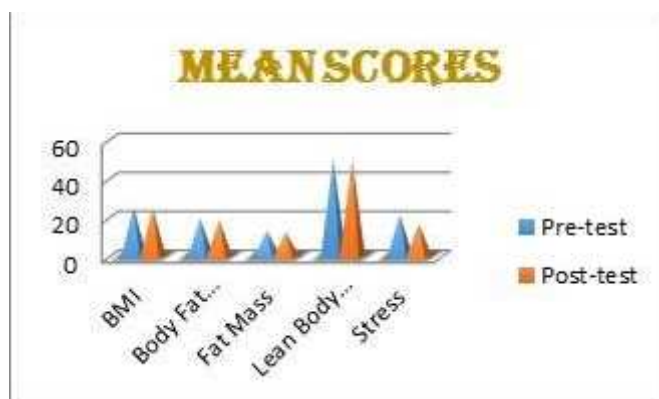
Analyses were conducted for all participants who completed the study. Hatha yoga related data were expressed as mean, standard deviations and standard error between the mean and mean deviation as appropriate. The tabulation value shows the mean Losses/Gains between Pre and Post-test value on selected physiological and psychological variables of college women students.

Table:1 Significance of difference between mean of pre-test and post-test scores for BMI, Body fat, Fat mass, Lean body mass and stress variables of women students

Table reveals that there was significant difference in the pre-test and post-test scores of Body mass Index, Fat Mass, Lean Body Mass, Body Fat and Stress variables of women students as the calculated value of "t"(10.31), (10.34),(6.79),(6.84),(3.20), is higher than its tabulated value. Hence, it may be inferred on the basis of result that hatha yoga practice for one month may help the students to develop better positive attitude about their physical and physiological and psychological improvement. Hence, a hypothesis 1 of the study i.e. "The Hatha yoga will significantly improve Body Mass Index,

Fat Mass, Body Fat, Lean Body Mass and Stress variables of the women college students” was accepted.

Fig:1 depicts the mean score of BMI, Body Fat, Fat Mass, Lean Body Mass and Stress variables pre-test and Posttest of the Hatha yoga Intervention Programme



Conclusions

Results observed that there was a positive effect of Hatha yoga practices in improving the physiological and psychological variables of body composition such as body mass index, body fat percentage, fat mass and lean body mass, clearly confirm the effect of hatha yoga practices, on body composition lead to conclude that varied poses includes in suryanamaskar would have the significant source. The results of present study give an insight to policy makers, house wife's and women students to include yoga as a subject in schools to develop human resources to the fullest extent. The study has certain limitations such as it would be better to take a large sample to replicate the study to obtain more fruitful results and some other physical variables may be included in the study to get the therapeutic effect of the hatha yoga. Further when the result, on stress, the observed result analyses was favored to the effect of Hatha Yoga. Thus, the obtained result makes the researcher to conclude that the complementary effect of pranayama may have the significant changes in Stress of students

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None of the authors have any conflicts of interest to declare.

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Effect of Yogic Practices on Selected Physiological and Psychological Variables among Middle Age Male

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Abstract

The purpose of the present study was to find out the effect of yogic practices on selected physiological and psychological variables among middle age men. The study was conducted on 40 middle age men in totally two groups, namely, control & experimental group. Experimental group consisted of 20 middle age male people. They underwent 12 weeks practice in Pavanamuktasana series, Asana, Pranayama, Meditation and Relaxation whereas the control group did not undergo any type of training. Physiological and psychological variables were measured before and after the experimentation using the standardized tests and standard/modified questionnaires. Analysis of Covariance (ANCOVA) analyzed the data and it was concluded that the Pavanamuktasana series, Asana, Pranayama, Meditation and Relaxation had significant of ($P < 0.05$) effect on physiological and psychological variables among geriatric people.

Keywords: Middle age male people, Pavanamuktasana series, Asana, pranayama, meditation and relaxation, physiological and psychological variables.

Introduction

Health is the level of functional or metabolic efficiency of a living organism. In humans, it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. This definition has been subject to controversy, in particular as lacking operational value and because of the problem created by use of the word "complete" Other definitions have been proposed, among which a recent definition that correlates health and personal satisfaction. Classification systems such as the WHO Family of International Classifications, including the International Classification of Functioning, Disability and Health (ICF) and the International Classification of Diseases (ICD), are commonly used to define and measure the components of health. Swami Vivekananda in his immortal speech said Indian philosophy will be accepted around the world by one and all Krishnacharya and Swami Sivananda Saraswati

have proved swami Vivekananda words true by spreading yoga to all nations of the world. In Present day yoga is respected around the world and accepted as a life style practice. Researcher's a carried art it the Past have proved beyond doubt that yoga has improved not only the physical body but also the mind. The subtle anatomy of the humans is divided into five energetic sheaths known as 'pancha kosha'.

Pancha, meaning five and kosha, meaning layer or sheath. This ideology describes the human being "as multi-dimensional, with the source or foundation in a spiritual dimension." The so-called 'spiritual dimension' is pure consciousness which is hidden by the other four koshas, the outermost layer being the most dense, physical body. Each kosha can be thought of as energy vibrating at a different frequency. The physical body therefore vibrates at the slowest rate and the 'inner light of consciousness' or 'atman' vibrates at fastest rate or frequency. Although all five layers interpenetrate one another.

Yoga is the science of right living and, as such, is intended to be incorporated in daily life. It

works on all aspects of the person: the physical vital, mental, emotional, psychic and spiritual. The word yoga means 'unity' or 'oneness' and is derived from the Sanskrit work yuj, which means 'to join'.

This unity or joining is described in spiritual terms as the union of the individual consciousness with the universal consciousness. On a more practical level, yoga is a means of balancing and harmonizing the body, mind and emotions. Pranayama is an excellent means of dealing with tensions. By exercising and strengthening the lungs, rebalancing the autonomic nervous system, and strengthening the entire nervous system, it diminishes the possibility of a future asthma attack. Essentially pranayama is designed to allow us to master the body's energy systems. The practices lead to increased self-confidence and mastery of mind. Through greater control of prana, we gain greater control over ourselves. Kriya means action. Shat kriya consists of six groups of purification practices. These process intent to purify the body from its impurities and the three dhosas or humors in the body (i.e. –phlegm, wind and bile), and balance them to help the free flow of prana.

Review of Related Literature

Maxwell et al, 2017 Results of meta-analyses showed that simple biofeedback, relaxation-assisted biofeedback, progressive muscle relaxation, and stress management training did not show statistically significant reductions in elevated BP. Analysis of trials of the Transcendental Meditation program showed clinically and statistically significant changes in BP (-5.0/-2.8 mm Hg). Other published research on the Transcendental Meditation program suggest complementary effects on other CVD risk factors, disease markers, and clinical events for reducing psychosocial stress, smoking, alcohol abuse, myocardial ischemia, carotid atherosclerosis, and mortality rates. Thus, there is sufficient evidence that, among stress reduction programs, the Transcendental Meditation program is effective and warrants recommendation to patients with elevated blood pressure in preventing or treating hypertension and CVD.

Methodology

The purpose of the study was to find out the effect of yogic practices on selected physiological and psychological variables among middle age men people. For the purpose of this study, forty middle age male people were chosen on random basis from Chennai only. Their age group ranges from 35 to 45. The subjects were divided into two group of forty. The experimental group would undergo yogic practices and the second group consider as control group not attend any practices, and the pre test and post tests would be conducted before and after the training. Training would be given for 12 weeks. It would be found out finally the effect of yogic practices on selected physiological and psychological variables among middle age male people in scientific method. The collected data were statistically analyzed by using analysis of covariance (ANCOVA)

Training Schedule

Experimental Group: Yogic practices Training Programme

1. Pavanamuktasana series
2. Suryanamaskar (Bihar School of Yoga) - 12 counts

Asana Breathing

- | | | | |
|-----|----------------------|---|---------|
| 1. | Pranamasana | - | Normal |
| 2. | Hasta Uttanasana | - | Inhale |
| 3. | Padahasthasana | - | Exhale |
| 4. | Ashwa Sanchalanasana | - | Inhale |
| 5. | Parvatasana | - | Exhale |
| 6. | Ashtanga Namaskara | - | Holding |
| 7. | Bhujangasana | - | Inhale |
| 8. | Parvatasana | - | Exhale |
| 9. | Ashwa Sanchalanasana | - | Inhale |
| 10. | Padahasthasana | - | Exhale |
| 11. | Hasta Uttanasana | - | Inhale |
| 12. | Pranamasana | - | Normal |

Yogasanas

1. Padmasana, Vajrasana, Paschimottanasana
2. Tadasana, Trikonasana, Padahasthasana, Ardha Chakrasana
3. Salabhasana, Bhujangasana, Dhanurasana
4. Viparitarani, Sarvangasana, Halasana, Uttanapadasana
5. Savasana (Relaxation)

Pranayama

1. Anulom, Vilom
2. Nadi Shodhana
3. Sitali

- 4. Sitkari
- 5. Bhastrika

Meditation Relaxation

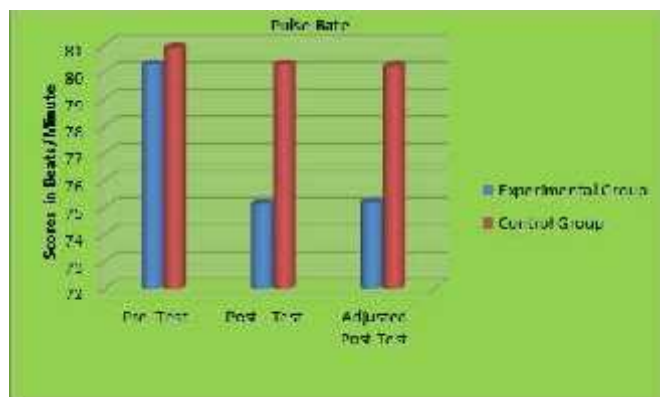
Group II: Control Group (No Training).

Results and Discussions

The statistical analysis comparing initial and final means of pulse rate due to yogic practices among middle age male people is presented in Table I.

Test	Experimental group	Control group	Source of Variance	Sum of square	Df	Mean Squares	Obtained F
Pre-test mean	80.25	80.85	Between	3.60	1	3.60	0.69
			Within	198.30	38	5.22	
Post-test mean	75.10	80.25	Between	265.23	1	265.23	50.51*
			Within	199.55	38	5.25	
Adjusted mean	75.16	80.19	Between	249.22	1	249.22	47.89*
			Within	192.55	37	5.20	

The obtained adjusted mean values were presented through bar diagram in figure 1.



Discussions on the Findings of Physiological Variables

Taking into consideration of the pre-test means and post-test means adjusted post-test means were determined and analysis of covariance was done and the obtained F value 47.89 was greater than the required value of 3.22 and hence it was accepted that the yogic

practices significantly improved (decreased) the resting pulse rate of the geriatric peoples.

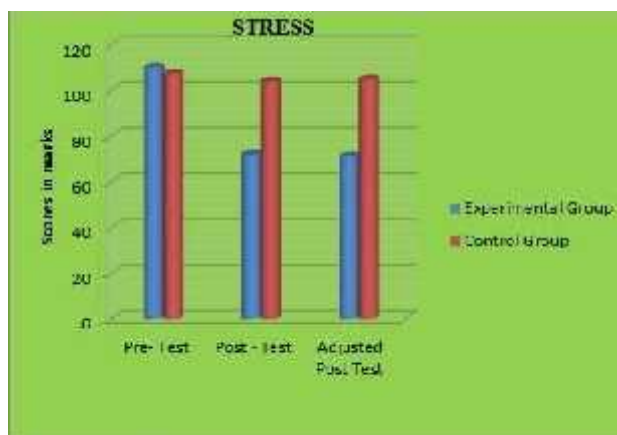
The statistical analysis comparing initial and final means of stress due to yogic practices among middle age male people is presented in Table II.

Table II: Computation of Mean and Analysis of Covariance of Stress of Experimental and Control Group (Scores in marks)

Discussions on the Findings of Psychological Variables

Taking into consideration of the pre-test means and post-test means adjusted post-test means were determined and analysis of covariance was done and the obtained F value 87.61 was greater than the required value of 3.22 and hence it was accepted that the yogic practices significantly improved (decreased) the stress of the middle age male peoples

The obtained adjusted mean values were presented through bar diagram in figure 2.



Test	Experimental Group	Control Group	Source of Variance	Sum of Square	Df	Mean Squares	Obtained F
Pre-Test Mean	109.90	107.10	Between	78.40	1	78.40	0.57
			Within	5211.60	38	137.15	
Post-Test Mean	71.90	103.85	Between	10208.03	1	10208.03	61.90*
			Within	6266.35	38	164.90	
Adjusted Mean	71.12	104.63	Between	11056.22	1	11056.22	87.61*
			Within	4669.18	37	126.19	

*significant. Table value for df 1 and 38 was 3.21
Table value for df 1 and 37 was 3.22.

Conclusions

The analysis of co-variance of Resting pulse rate and stress indicated that experimental group (yogic practices) and group II (Control group), were significantly improved the Resting pulse rate and stress. It may be due to the effect of Yogic Practices.

The findings of the study showed that the experimental group I (Yogic Practices) had improvement (Decreased) Resting pulse rate and stress more than the experimental group I (Yogic Practices) nearly everything in life requires balance. Yogic Practices on its own is a good step toward a healthy life style. However, as individual, it is important to malaise that we need to work on our body as well as our mind. We can use Yogic Practices not only as part of a program to improve (Decreased) Resting pulse rate and stress, but also as a way to assist in attaining other goals

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Conflict of interest

None of the authors have any conflicts of interest to declare.

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Effect of Strength Training Programme on Physical Fitness Variables of Adolescent Female Kabaddi Players

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Abstract

The purpose of the study was to find out the effect of strength training programme on physical fitness variables of adolescent female kabaddi players. To achieve the purpose of the study 30 subjects were randomly selected from the Govt.Hr.Sec.School, Coimbatore district, Tamilnadu. The selected subjects were divided into two equal groups with 15 subjects in each group. The experimental group-I (N=15) underwent strength training and control group (N=15) did not undergo any practices the data were collected before and after the training period of 8 weeks and the data collected were statistically analyzed with 't' ratio, which was used to find out the significant difference on selected physical fitness variables of arm strength and leg strength. Strength training programme showed significant improvement in arm and leg strength.

Keywords: Strength training, physical fitness variables, Kabaddi players.

Introduction

Training is a program of exercise designed to improve the skill and to increase the energy capacities of an athlete for a particular event (Robert,1966). The training is the process of preparing an individual for any event or an activity. Usually in sports we use the term sport training is not just a term but it is very important subject that affects each and every individual who takes up physical activity for health and fitness or for the competition at different level. Sport training is the physical, intellectual, psychological and moral preparation of a player by means of physical exercises.

The strength training involved in playing kabaddi will strengthen the Arm and Leg as well as the muscles of the thighs and lower legs. Playing kabaddi also tones and strengthens the cardiovascular and respiratory systems. Improved circulation circulates more blood, oxygen and nutrients throughout the body, improving the body's functions and your overall health and well being.

Kabaddi is a sport dominated by strength and power. Players need power in their legs to get kicking in the side and strength in their Arm to waist hold, Ankle hold and Thigh hold. Strengthening

kabaddi-specific muscles ensures that athletes are able to reach their maximum performance potential. Kicking and Hand touch is often thought of as the most important skill in kabaddi. Kabaddi is perhaps the only combative sport in which attack is an individual attempt while defense is a group effort.

Materials and method

For the percent study 30 adolescent female kabaddi players were taken as subject. The subject were selected from Govt.Hr.Sec.School Thondamuthur,Coimbatore ,Tamilnadu. 15 subject were selected as randomly for experimental group. Who volunteered to participate in the training programme and the remaining 15 subject were taken as control group and they did not do any training programme. The selection of variable Arm strength and Leg strength. The training programme should for 8week with one hours in every morning session from 6.00am to 7.00am pre-test and post-test was conducted before and after the end of the eight week for group-I and group-II. The data collected from the experimental group were statistically examined with 't' test and the levels of significance was fixed at 0.05 level of confidence.

Test procedure

The arm strength was measure by modified push ups in numbers and seconds and leg strength was measured by full squad in numbers/seconds

Training procedure

Strength training programme were conducted three days per week form 6.00am to 7.00 am the practice was comprised of (for main series of exercise). For this study the training programme consist of strength. Each series started with on your right side (own body exercise). Then practitioners moved on to a set of standing, sitting and lying select the strength exercise. The training was given for 8 weeks of total duration. The training programme last for 60 minutes for a session in a day. The training started with running 5 minutes, stretching exercise for 10 minutes and followed by strength training exercise for 30 minutes. The rest period in between strength exercise was 2 minutes and it was decreased to 30 seconds gradually with a rest in between set for 30 seconds and increased the repetition gradually for 8 weeks. The period rest in between exercise for 30 seconds and each set rest in between for 1 minutes followed by 10 minutes for relaxation technique and increase the repetitions gradually which was in the training schedule given below. First and second week Arm and Leg strengthening exercise for four exercise the name of Alternate heel touch, Mountain, Bicycles and Bird dog. Third- and fourth-week Arm and Leg strengthening exercise for four exercise Pushups, Rotation, Side plank and Alternative curtsy lunges and squat. Fifth- and sixth-week Arm and Leg strengthening exercise for four exercise Plank, two count jumping jacks, Back ward lunge and Bridge. Seventh- and eight-week Arm and Leg strengthening exercise for four exercise Four count jumping jacks, Mountain climber, Rolling side plank and High knee

Statistical training

The purpose of present study was to find out the effect strength training programme on physical fitness variables of adolescent female kabaddi players. To achieve this, the collected date on the criterion measures namely arm strength and leg strength were treated by paired 't' test. The statistical level of significance is fixed at 0.05

Table I: variable and test items

S.no	Variables	Test
1	Arm strength	Modified Pushups
2	Leg strength	Full Squad

Result

Table II: Significance of mean gains and losses between pre and post test scores on selected variables of strength training group (STG)

S. no	Variable	Pre-test mean	Post-test mean	Mean diff.	Std error DM	't' Ratio
1	Arm strength	23.60	25.33	1.73	0.74	2.32*
2	Leg strength	19.13	20.60	1.46	2.46	3.14*

Significant at 0.05 level

Table II shows the obtained 't' ratios for pre and post –test mean difference in the selected variables of Arm strength (2.32) and leg strength 3.14*. The obtained radio when compared with the table value of 2.14 of degrees of freedom (1.14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the means gain and losses male from pre and post –test were significantly improved in physical fitness variables of Arm strength (1.73, $p < 0.05$) and Leg strength (1.46, $p < 0.05$).

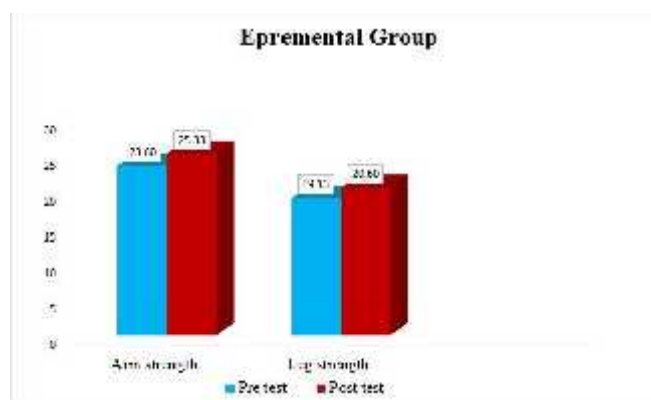


Table III Significance of mean gains and losses between pre and post test scores on selected variables of control group (CG)

S.no	variables	Pre-test mean	Post-test mean	Mean diff.	Std error DM	't' Ratio
1	Arm strength	21.40	22.66	1.26	0.67	1.80
2	Leg strength	18.00	17.40	0.60	0.38	1.54

Table III shows the obtained 't' ratios for pre and post test mean difference in the selected variables of Arm strength (1.80) and Leg strength (1.54). The obtained ratio when compared with the table value 2.14 of degrees of freedom (1.14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre and post were significant improved in physical fitness variables of Arm strength (1.26, $p < 0.05$) and Leg strength (0.60, $p < 0.05$)

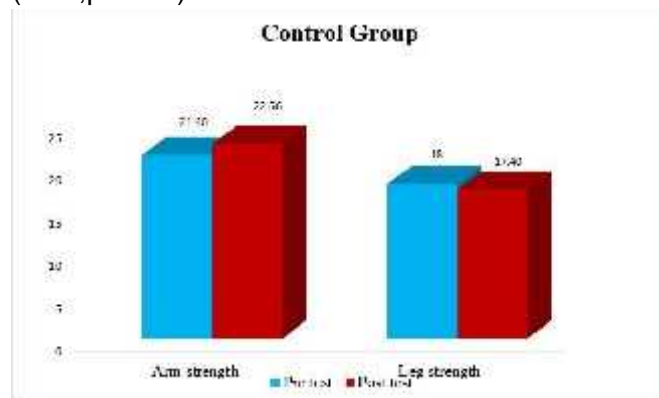


Table III Significance of mean gains and losses between pre and post test scores on selected variables of control group (CG)

S.no	variables	Pre-test mean	Posttest mean	Mean difference	Std error DM	't' Ratio
1	Arm strength	21.40	22.66	1.26	0.67	1.80
2	Leg strength	18.00	17.40	0.60	0.38	1.54

Discussion on finding

Strength training improve arm strength and leg strength of the subjects. It involves coordinated action of synergistic and antagonistic muscles which brings increased steadiness, strength, stamina, flexibility, endurance, Aerobic power and neuro-muscular co-ordination. Strength training

improves overall performance and work capacity of the individual. Strength training (own body exercise) performed with series of poses in sequence with more repetition and sets

the muscles get strength so this leads to increase in strength of the arm and leg once the strength of the muscle in developed it leads to the increased performance of explosive power too.

As far as agility in concern, when the strength training programme performed in the sequential manner with breath concentration the coordination of body and mind in fine –tuned. This lead to the increased change in the strength. So, practicing own body exercise develop to more quickly and faster rhythm develops the lift and hold your entire body's weight constantly and feel energized. Practiced strength training (own body exercise) insist and focuses on your muscle pain. This study proves that there in a improvement in the physical fitness due to the strength training

Conclusions

It was concluded that strength training programme had significantly improved on physical fitness variables like arm strengths and leg strength. This results in joy, peace, enthusiasm as the level of strength training in the body increases over all muscular strength and endurance

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Conflict of interest

None of the authors have any conflicts of interest to declare.

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Effects Of Isolated Hatha Yoga and Physical Exercise on Motor Abilities of School Boys

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Abstract

Background

Effects of isolated Hatha yoga and physical exercise on motor abilities of school boys. Hatha yoga is mechanics of the body creating a certain atmosphere and them using posture to drive your energy in specific directions, physical exercise can also prevent or treat many chronic health conditions and enhance the sports performance school level boys.

Methods

The subjects selected for this study were school boys who were studying in Govt higher secondary schools at Coimbatore district, Tamil Nadu. A total of Sixty (N=60) boys were selected at systematic sample used. The Sixty school boys were divided systematic sample and assigned into four groups of twenty each, and group I-underwent Hatha yoga training group (HYTG), II-underwent physical exercise (PEG), III-underwent combined Hatha yoga training with physical exercise (CHYPEG), IV-underwent control group (CG).

Results and Conclusions

These results suggest that Hatha yoga training group (HYTG), and physical exercise training group (PEG), helped to improve selected Motor abilities of school level boys.

Keywords: Speed, Abdominal Strength and Endurance, Arm explosive power, Leg Strength, Leg explosive power.

Introduction

Yoga's exact origin remains a mystery. There is some evidence to indicate that early forms of Yoga may have existed as far back as 2500-1500 BCE, in the Indus Valley region of India. Sculptures of figures seated in what look like lotus postures have been found from this era, but because the script accompanying the figures is unknown, it is not possible to determine with any certainty if the sculptures are representations of a yoga posture, or simply one way of sitting on the floor. What is clear is that since earliest times there has existed an understanding that human consciousness is vast, can be explored, and from that exploration insights unfold as revealed wisdom about the human condition, the universe, and our place in it. Y In the early centuries of the first millennium BCE, two streams of culture existed in India: Vedic and non- Vedic. Possibly as a result of epidemics spreading from isolated villages to major urban centres, that resulted in widespread death, philosophies began questioning the very meaning

of life and the nature of existence. Around the seventh century BCE the oldest Upanishads were written, and were known as "Vedanta," — the end, or culmination, of the Vedas. Upanishad literally means "to sit down near"; this gives a clue as to how this wisdom was transmitted, from teacher to student in close proximity. The teacher or Guru might practice the technique of reciting information to a student, then reaching over, taking his head and shaking it and asking the student to repeat the exercise to make sure he did not forget (Naomi Clement, 2007).

Hatha yoga

It is hardly necessary to meditate in a remote cave in order to create a lifestyle that supports your practice. The practices of Hatha yoga presented in this manual are meant to be integrative and adaptable to the modern world. Between 1000–1400 CE, in India, the region of Kashmir saw a revolution in Yogic thinking. These yoga

practitioners were, in reality, householders, husbands and wives who embraced the practice of yoga and wove it into the fabric of their lives. The approach was one of non-renunciation, among other practices, and was later called Tantra, which literally means to weave. The Yogis took the more classical understanding of yoga and re-created it, refining it into a meaningful practice for themselves. I "A sharp mind, a soft heart and vibrant body" (John Friend) are among the qualities of a competent yoga teacher. Such qualities are supported and encouraged by: adequate rest; supportive relationships; appropriate diet; and self-practice and study

Physical Fitness

Fitness is defined as the quality or state of being fit. Around 1950, perhaps consistent with the Industrial Revolution and the treatise of World War II, the term "fitness" increased in western vernacular by a factor of ten. Modern definition of fitness describes either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. This has led to an interrelation of human fitness and attractiveness which has mobilized global fitness and fitness equipment industries. Regarding specific function, fitness is attributed to person who possess significant aerobic or anaerobic ability, i.e. strength or endurance. A holistic definition of fitness is described by Greg Glassman in the CrossFit journal as an increased work capacity across broad times and modal domains; mastery of several

attributes of fitness including strength, endurance, power, speed, balance and coordination and being able to improve the amount of work done in a given time with any of these domains.

Methods:

The subjects selected for this study were school boys who were studying in Govt higher secondary schools at kuniyamuthur and madhukarai, Coimbatore district, Tamil Nadu. A total of Sixty (N=60) boys were selected at systematic sample used. The age of the subjects was fixed in the range of 14 to 17. In selection of variables, the present study has been delimited to selected Motor abilities (Speed, Abdominal Strength and Endurance, Arm explosive power, Leg Strength, Leg explosive power). The Sixty school boys were divided systematic sample and assigned into four groups of twenty each, and group I-underwent Hatha yoga training group (HYTG), II-underwent physical exercise (PEG), III-underwent combined Hatha yoga training with physical exercise(CHYPEG), IV-underwent control group(CG). The training programme was confined to 12 weeks. Control Group did not want any specific training. All the three experimental groups were trained for three days per week for a Period of 12 weeks. The initial tests on selected criterion variables were taken and recorded for all the four groups. The 't' ratio was applied.

Results

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	DM	't' Ratio
1.	Speed	7.90	7.65	0.25	0.24	0.05	4.63*
2.	Abdominal Strength and endurance	21.80	26.25	-4.45	0.94	0.21	21.07*
3.	Arm explosive power	4.22	4.53	-0.31	0.09	0.02	14.16*
4.	Leg strength	49.85	53.55	-3.7	0.97	0.21	5.78*
5.	Leg explosive power	1.82	1.98	-0.16	0.21	0.04	3.81*

An examination of table-1 indicates that the obtained 't' ratios are 4.63, 21.07, 14.16, 5.78, and 3.81 for Speed, Abdominal Strength and endurance, Arm explosive power, Leg strength, Leg explosive power respectively. The obtained 't' ratios on the selected variables are found to be greater than the required table value of 2.09 at 0.05 level of significance for 19 degrees of freedom. So, it is found to be significant. The results of this study showed that statistically significant and explained its effects positively

Figure-1

Pre and post test scores on selected variables of hatha yoga training group (HYTG)

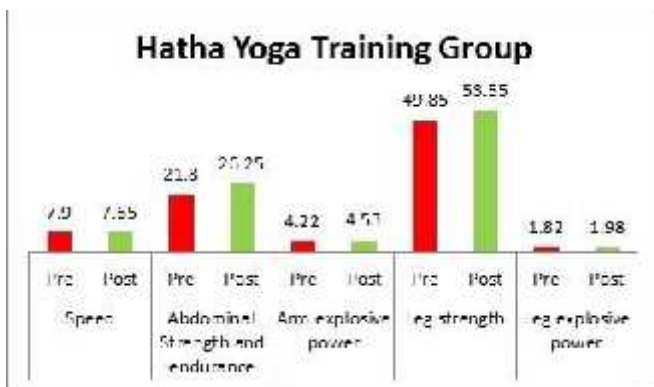


Table-2

Significance of mean Gains & Losses Between Pre and Post Test Scores on Selected Variables of Physical Exercise Group (PEG)

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1.	Speed	7.92	7.47	-0.45	0.23	0.12	6.45*
2.	Abdominal Strength and endurance	20.40	26.10	-5.7	2.29	0.51	11.10*
3.	Arm explosive power	3.99	4.25	-0.26	0.12	0.09	10.67*
4.	Leg strength	51.65	58.30	-6.65	2.24	0.61	11.23*
5.	Leg explosive power	2.08	2.13	0.05	0.03	0.01	7.08*

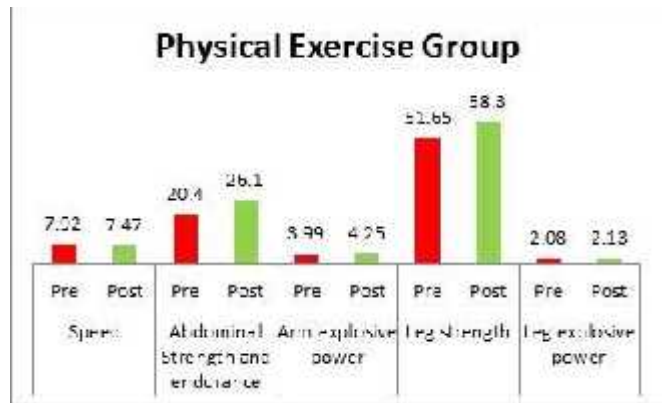
Significant at 0.05 level

An examination of table-4.2 indicates that the obtained 't' ratios are 6.45, 11.10, 10.67, 11.23, and 7.08 for Speed, Abdominal Strength and endurance, Arm explosive power, Leg strength, and Leg explosive power respectively.

Leg explosive power respectively. The obtained 't' ratios on the selected variables are found to be greater than the required table value of 2.09 at 0.05 level of significance for 19 degrees of freedom. So it is found to be significant. The results of this study showed that statistically significant and explained its effects positively

Figure-2

Pre and post test scores on selected variables of physical exercise group (PEG)



An examination of table-3 indicates that the obtained 't' ratios are 1.32, 0.41, 0.29, 0.56 and 1.71 for Speed, Abdominal Strength and endurance, Arm explosive power, Leg strength, Leg explosive power respectively.

The obtained 't' ratios on the selected variables are found to be less than the required table value of 2.09 at 0.05 level of significance for 19 degrees of freedom. So, it is found to be insignificant. The results of this study showed that

statistically insignificant and explained its effects negatively

Table-3

Significance of mean Gains & Losses between Pre and Post test scores on selected variables of Control Group (CG)

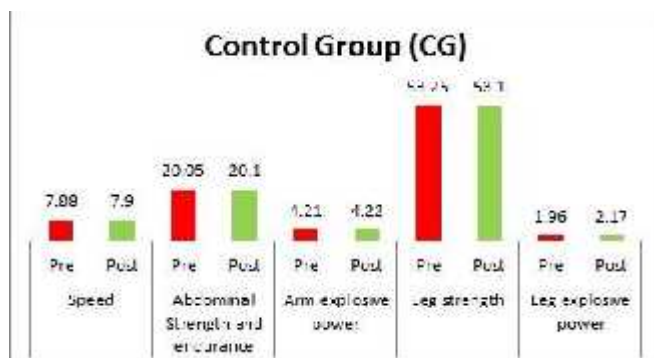
S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1.	Speed	7.88	7.90	-0.02	0.08	0.01	1.32
2.	Abdominal Strength and endurance	20.05	20.10	-0.05	1.14	0.47	0.41
3.	Arm explosive power	4.21	4.22	0.01	0.03	0.01	0.29
4.	Leg strength	53.25	53.10	0.15	1.18	0.26	0.56
5.	Leg explosive power	1.96	2.17	0.21	1.37	0.42	1.71

* Significant at 0.05 level

An examination of table-3 indicates that the obtained 't' ratios are 1.32, 0.41, 0.29, 0.56 and 1.71 for Speed, Abdominal Strength and endurance, Arm explosive power, Leg strength, Leg explosive power respectively. The obtained 't' ratios on the selected variables are found to be less than the required table value of 2.09 at 0.05 level of significance for 19 degrees of freedom. So, it is found to be insignificant. The results of this study showed that statistically insignificant and explained its effects negatively.

Figure-3

Pre and post test scores on selected variables of physical exercise group (PEG)



Conclusion

Based on the findings and within the limitation of the study it is noticed that practise of

Hatha yoga training group (HYTG), and physical exercise training group (PEG), helped to improve selected Motor abilities of school level boys.

It was seen that there is progressive improvement in the selected criterion variables of experimental group of school boys after twelve weeks of training programme. Further practice of drills also helps to improve other fitness factors. It was concluded that individualized effect of Hatha yoga training group (HYTG), and physical exercise training group (PEG) showed a statistically significant positive sign over the course of the treatment period on selected Motor abilities of school level boys. Finally Control group (CG) did not get any improvement of pre to post test

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Effect of Bench Step Exercises on the Selected Physical Fitness Components Among College Girls

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Abstract

The purpose of the study was to find out the effects of bench step training on the selected physical fitness components among college girls. In order to achieve these purpose thirty college students were selected as subjects at random and their age was ranged between 18 to 21. The subjects were divided into two groups such as experiment group and control group. In this study, bench step training was given to experimental group for the period of 6 weeks. The pre-tests were taken from the subjects before administrating the training. The subjects were involved with their respective training for a period of 6 weeks. At the end of the sixth weeks of the training post-tests were taken. The significant differences between the means of experimental group and control group for the pre-test and post-test scores were determined by paired t ratio. The level of significance was fixed at 0.05 level of confidence for the degree of freedom 14. The flexibility and speed were improved due to the influence of bench step training. The above variables were significantly improved by the bench step training than the control group.

Keywords: Bench Step Training, College girls, Physical Fitness.

Introduction

The training process acts a means of improvement of sports performance. In order to ensure fast development in every individual, the physical education teachers, the coaches and the instructors must possess a thorough knowledge of the improvement aspects of sports training. Training demands correct understanding and realisation of the sportsman's strength, capacity and weakness so planned and formulated that the strong points are further encouraged and developed and his weakness are discriminated and eliminated. Bench step training plays a vital role in determining the sports performance. Bench step training must develop the specific physiological capabilities required to perform a given sports skill or activity. The successful coach provides his or her athletes with a group strategy, a psychological environment conducive to a medium level of performance a means of learning skills and a proper course of bench step training. In the stepping up exercise, each subject will be asked to stand near the twenty-two-inch-high bench. On the command "ready start the subject began stepping for a period of three minutes.

The first method of bench step exercises the subject was performed the bench step exercise for three minutes with thirty cadence per minute. By this method the experimental group I could be followed. The second method of bend step exercise the subject was performed the bench step exercise for three minutes with forty cadence per minute. By the methods the experimental group II could be followed.

Methodology

The purpose of the study was to find out the effects of bench step training on the selected physical fitness components among college girls. In order to achieve these purpose thirty college students were selected as subjects at random and their age was ranged between 18 to 21. The subjects were divided into two groups such as experiment group and control group. In this study, bench step training was given to experimental group for the period of 6 weeks. The pre-tests were taken from the subjects before administrating the training. The subjects were involved with their

respective training for a period of 6 weeks. At the end of the sixth weeks of the training post-tests were taken. The significant differences between the means of experimental group and control group for the pre-test and post-test scores were determined by paired t ratio. The level of significance was fixed at 0.05 level of confidence for the degree of freedom 14.

RESULTS

TABLE I

Descriptive analysis of pre and post-test means of experimental and control group on selected variables

S.No	Variables	Pre-Test Mean	Post-Test Mean
1	Flexibility	Exp: 44.07	Exp: 47.80
		Con: 39.47	Con: 39.67
2	Speed	Exp: 8.29	Exp: 8.21
		Con: 8.17	Con: 8.14

TABLE II

Computation of 't' ratio between the pre-test and post Test means of flexibility of experiment Group and control group

S. No	Variables	Mean diff	SD	DM	't' ratio
1	Flexibility	Exp: 3.73	Exp: 1.03	Exp: 0.27	14.00*
		Con: 0.20	Con: 0.41	Con: 0.11	1.87

**Significant at 0.05 level*

An examination of table II indicates that the obtained 't' ratios for flexibility of experimental group was 14.00. The obtained 't' ratio on flexibility were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So, it was found to be significant. The obtained 't' ratios for flexibility of control group was 1.87. The obtained 't' ratio on flexibility were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So, it was found to be not significant. The mean scores of flexibilities of experimental group and control group were shown graphically in figure I.

Figure I

Bar diagram showing the pre mean and post mean of flexibility of experimental group and control group

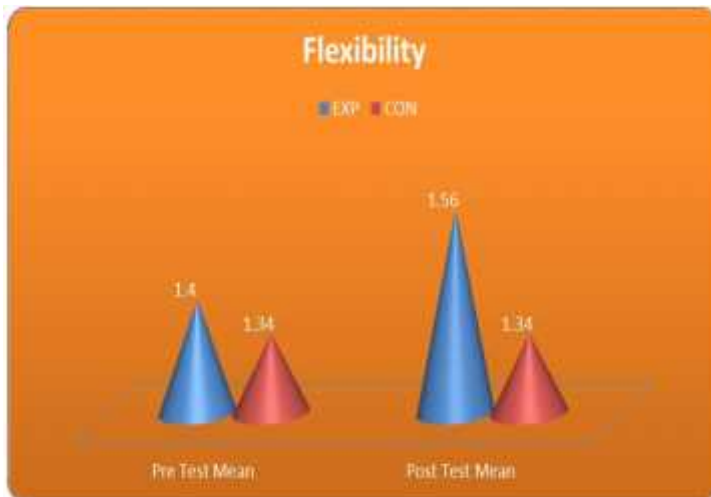


Table III

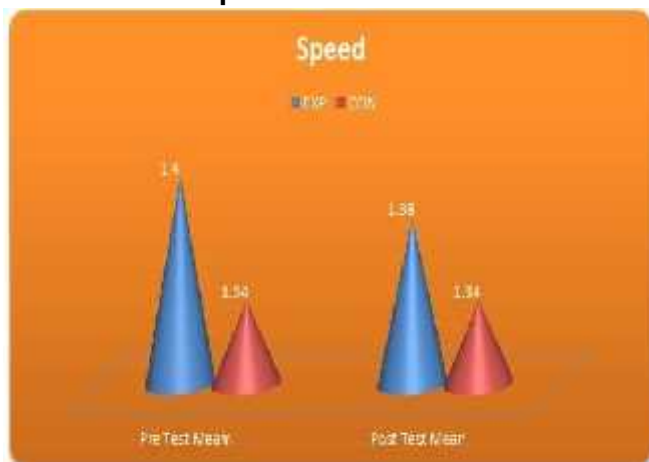
Computation of 't' ratio between the pre-test and post-test means of speed of experiment group and control group

**Significant at 0.05 level*

S. No	Variables	Mean diff	SD	DM	't' ratio
2	Speed	Exp: 0.07	Exp: 0.05	Exp: 0.01	5.21*
		Con: 0.29	Con: 0.10	Con: 0.27	1.07

An examination of table III indicates that the obtained 't' ratios for speed of experimental group was 5.21. The obtained 't' ratio on speed were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So, it was found to be significant. The obtained 't' ratios for speed of control group was 1.07. The obtained 't' ratio on speed were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So, it was found to be not significant. The mean scores of speeds of experimental group and control group were shown graphically in figure II.

FIGURE II
Bar Diagram Showing the Pre-Mean and Post Mean of Speed of Experimental Group and Control Group



Conclusion:

Within the limitation of the present study, the following conclusions were drawn. The flexibility and speed were improved due to the influence of bench step training. The above variables were significantly improved by the bench step training than the control group

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Emotional Intelligence and Stress Tolerance of Diabetic Physical Exercising and Diabetic Non-Physical Exercising Peoples on Critics

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Abstract

This study is an attempt to analyse and interpret diabetic nonphysical exercising and diabetic physical exercising people on psychological aspect of EI from Chidambaram, Cuddalore district, Tamilnadu, India. The problem of this study is a comparison of on EI of diabetic non-physical exercising and diabetic physical exercising peoples. The sample in the present study was limited to 60 diabetic non-physical exercising and 60 diabetic physical exercising people. The result shows that the 'r' value obtained from the variable emotional stability and self-development on the sample of 60 on stress tolerance of diabetic physical exercising group was identified as 0.34 and 0.35 which was significant at 0.01 this shows that here remained a positive relationship between stress tolerance with emotional stability, Stress tolerance with self-development. When emotional stability increases stress tolerance increases, when self-development develops stress tolerance increases. Diabetic non-physical exercising and diabetic physical exercising group significantly differ in their stress tolerance, Comparatively the mean value of 73.81 for diabetic physical exercising people with the mean value of 71.79 for diabetic nonphysical exercising people is less. Hence it is proved that diabetic physical exercising people have more stress tolerance than diabetic nonphysical exercising people. Which indicates that comparatively diabetic physical exercising people can withstand when deprived and tolerate critics of others because diabetic physical exercising people are more stress-tolerant when compared to diabetic nonphysical exercising people. The result of diabetic physical exercising group's 'r' value obtained from the variable EI on the sample of 60 on stress tolerance was identified as 0.25 which was significant at 0.05 this shows that there was a positive relationship between stress tolerance with EI which specifies that when EI increases stress tolerance increases for diabetic physical exercising people vice versa.

Keywords: Emotional intelligence, Stress Tolerance, Diabetic Physical exercising and Diabetic nonphysical Exercising Peoples.

Introduction

Diabetic Mellitus is caused due to endocrine disorder which leads to hyperglycaemia because of insulin deficit, which later leads to accumulation of glucose in the blood. Two major types of diabetics are Type1 and type2 diabetics. Type1 is an autoimmune disease and Type2 is noninsulin depended Mellitus. Indians are prone to develop at the early age of 10 to 15 years, cause for diabetes is due to physical inactiveness, sedentary lifestyle and lack of physical exercise. polyuria, polydipsia, polyphagia, weight loss and asthenia are the indication of diabetics. Psychological association with diabetics' lot of social psychological study has been carried on how to manage with diabetics and how to recover them from diabetics, concept of mental wellbeing is an

integral part of diabetic management. Compare with general population depression is double the time more, patients treated with insulin are less awareness of hypo-glycaemic symptom are at a risk of developing an extreme fear of hypos, chartered by dis proportionate anxiety with avoiding behaviours, following negative effect on the glycaemic control. The capability of individuals to identify his particular emotions and those of others is defined as EI, distinct among diverse moods and tag all properly, custom the emotional information to director intellectual and behaviour manage and to adjust feelings to acclimatize to the surroundings or accomplish individuals goals.1 &2 EI defined the aptitude, capacity or skill or in event of trait EI model, a self-perceived ability to find,

Variables	Diabetic	Number	Mean	Standard Deviation	R-Value	Significant
Self-awareness	Physical Exercisers	60	17.57	0.06	14.08*	0.00
	NonPhysical Exercising	60	17.22	0.17		
Empathy	Physical Exercisers	60	20.11	0.58	52.96*	0.00
	Diabetic	60	19.33	0.17		
Self-motivation	Physical Exercisers	60	24.87	0.19	3.30*	0.02
	nonPhysical Exercisers	60	24.78	0.02		
Emotional stability,	Physical Exercisers	60	16.32	0.01	5.02*	0.00
	NonPhysical Exercisers	60	16.27	0.75		
Managing relationship	Physical Exercisers	60	16.70	0.01	75.45*	0.00
	NonPhysical Exercisers	60	16.41	0.02		
Integrity	Physical Exercisers	60	13.22	0.04	26.57*	0.00
	NonPhysical Exercisers	60	13.18	0.08		
Self-development	Physical Exercisers	60	8.61	0.61	-1.40	0.30
	NonPhysical Exercisers	60	8.62	0.33		
Value orientation	Physical Exercisers	60	7.89	0.10	7.58*	0.00
	NonPhysical Exercisers	60	7.80	0.88		
Commitment	Physical Exercisers	60	8,56	0.01	35.96*	0.00
	NonPhysical Exercisers	60	8.46	0.01		
Altruistic behaviour	Physical Exercisers	60	7.75	0.02	33.75*	0.00
	nonphysical Exercisers	60	7.51	0.04		
EI	Physical Exercisers	60	142.00	0.11	3.80*	0.00
	Nonphysical Exercisers	60	139.42	5.17		

assesses and manage the emotion of one's self or others and of the group. 3Goleman advanced ten

fundamentals of E.I and they are self-awareness, empathy, self-motivation, emotional-stability, maintain -relationship, truthfulness, self-

development, value orientation, commitment, altruistic - behaviour.

Methodology

For this study a normative survive method was used to collect data from diabetic physical

exercising and diabetic nonphysical exercising people from Chidambaram, Cuddalore district, Tamilnadu, India.

This investigate is an attempt to analyse and interpret diabetic physical exercising and diabetic nonphysical exercising people on the psychological aspect of EI. The problem of this study is a comparison of on EI of diabetic physical exercising and diabetic nonphysical exercising peoples. The sample in the present study was limited to 60 nondiabetic and 60 diabetic people.

Anukool (2001). Hyde, Sanjyot Dethé and Upinder Dhar tool is used for measuring EI developed 4. This scale consists of 34 items with each having 5 substitute choices, this scale has 10. The investigator made home and institutional visits and the data were collected. The instruction is given the manual strictly adhered. Before analysing the data, personal information obtained from the subjects for EI was recorded and presented. The collected data were statistically analysed by t-test was used for the comparison of means of the two sets of scores are significant or insignificant. Additionally, correlation was implemented to analyse the relationship between the two variables. There were several indications of relationship. In this study Persons rank order correlation was used. Th correlation between the different variables are found out by the method of product-moment correlation.

RESULT:

Table-I presentation the information and the outcome of Diabetics physical exercising and diabetic nonphysical exercising for various dimensions of EI

(Table-I) shows the various dimensional scores for emotional dimensional intelligence such as self-awareness, empathy, self-motivation, emotional stability, managing relationship, integrity, self-development, value orientation, commitment, and altruistic which collectively accesses the EI. Since the critical value of F is 4.00 for (1 and 118) and the obtained R-ratio value of 14.08, 52.96, 3.30, 5.02, 75.45, 26.57, 7.58, 35.96, 33.75, for self-Awareness, Emotional stability, Managing relationship, integrity, value orientation,

commitment, altruistic is larger than critical value so it is decided that there is a substantial change among the diabetic physical exercising and diabetic nonphysical exercising group in all the dimensions except in the self-development because the obtained value of -1.40 is lesser than the critical value, so there was not at all significant difference found among the diabetic physical exercising and diabetic nonphysical exercising group in the dimension of self-development. And overall, in EI, the obtained r ratio of 3.80 was greater than the critical value so there was a significant difference found between the diabetic physical exercising and diabetic nonphysical exercising group on EI

Table-II Showing the result on the basis of diabetic physical exercising and diabetics nonphysical exercising people for the variable stress tolerance

Stress Tolerance	Diabetics	Mean	S.D	T. Value	LS
	Physical Exercisers	73.81,	0.61	25.86*	
	NonPhysical Exercisers	71.79	0.17		

Diabetic physical exercising and diabetic nonphysical exercising group significantly differ in their stress tolerance, because the t- value of 25.86 is significant in 0. 05level. The mean value of 73.81 for diabetic physical exercising people and the mean value of 71.79 for diabetic nonphysical exercising people was less. This indicates that diabetic physical exercising people have more stress tolerance than diabetic nonphysical exercising people. This also indicates that Comparatively diabetic physical exercising people can withstand when deprived and tolerate critics of others because non diabetic physical exercising people are more stress-tolerant compared to diabetic nonphysical exercising people.

Correlation between various dimensions of EI on stress tolerance of diabetic physical exercising people Correlation under this study was estimated with Pearson’s Product moment method Correlation between various dimensions of EI on stress tolerance of diabetic physical exercising people is shown in table-III

The result of from (table -III) shows that the 'r' value obtained from the variable emotional stability and self-development on the sample of 60 on stress tolerance was identified as 0.34 and 0.35 which was significant at 0.01 this shows that there was a positive relationship between stress tolerance and emotional stability with Stress tolerance and self-development. This show that when emotional stability increases stress tolerance increases, Self-development occurred stress tolerance increases.

The 'r' values of 0.04 self-awareness, 0.56 empathy, 0.10 self-motivation, 0.40 managing relationship, 0.01, integrity, 0.009 value orientation, 0.20 commitment, 0.20 altruism, and 0.007 EI are found to be statistically insignificant so this reveals that above mentioned dimensions do not have any relationship with stress tolerance. in diabetic nonphysical exercising people.

Table-IV Showing the Correlation results of diabetic physical exercising people for various dimensions of EI and Stress tolerance

		Stress Tolerance
1	Self-awareness	0.04
2	Empathy	0.07
3	Self-motivation	0.18
4	Emotional stability	0.10
5	Managing relationship	0.11
6	Integrity	0.07
7	Self-development	0.17
8	value orientation	0.17
9	Commitment	0.05
10	Altruistic behaviour	0.10
11	EI	0.25*

* Correlation Coefficient is significant at 0.05 level

The result of from (table- IV) shows that the 'r' value obtained from the variable EI on the sample of 60 on stress tolerance was identified as 0.25 which was significant at 0.05 this shows that there was a positive relationship between stress tolerance and E.I This show that when EI increases stress tolerance increases for diabetic physical exercising people vice versa

DISCUSSION:

The results of this study showed the score of EI is connected with apparent stress in the

experimented subjects that stated that those folks having higher level of EI had higher level of stress tolerance. 5-6 Findings of current study in line with the findings which confirmed that people who are EI professed had better stress tolerance. 7,8, 9 Ample of studies reported that physical Exercise is the best way to be projected on the EI once equated to gender, over-all mood, over-all health and psychological health. Correspondingly, the subscales of adaptable and using emotion were found expressively dissimilar once associated in physical activity groups studies supported the relationship between the level of EI and. 10 Exercise training generally causes positive psychological and communal adjustments. 11 one more study uncovered the detail that has been associated with avoidance, task-oriented coping, social changes with EI is possible through physical exercise. 12 WHO found more vicarious behaviour in persons through higher physical exercise levels. Though, this research is in line with the results concerning the managing relation. 14 consistent physical activity shown development in psychological wellbeing and self-esteem in diabetic patients. 15 Exercise helps in changing the mood. In line with (NCHPAD). 13 Humans who participate or practice regular physical activity will not be easily depressed. Physical exercise is the determine way to upsurge stress tolerance and assistances to uphold a sense of emotional wellbeing. 7 In line with diabetes daily.com (2007) overall health that is mental, physical and social wellbeing can be developed through physical exercises

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Efficacy of Concurrent Resistance and Endurance Training and Detraining Impact on Cardio Respiratory Endurance of Hockey Players

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Abstract

The purpose of the study was to find out the Efficacy of concurrent resistance and endurance training and detraining impact on cardio respirator endurance of hockey players. To achieve the purpose of this study, 30 men inter-collegiate level hockey players were selected as participants. They were divided into two groups of fifteen participants each. Group-I performed concurrent training; group-II acted as control. The data collected from the two groups prior to and post experimentation were statistically analysed to find out the significant difference if any, by applying the analysis of covariance (ANCOVA). Whenever the obtained 'F' ratio value was found to be significant for adjusted post-test means, the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The data collected from the two groups on post experimentation and detraining (three cessation) were statistically analysed by using two way (2 x 4) factorial ANOVA with last factor repeated measures, if it is significant the simple effect test was used as a follow up test. Finally, Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The result of the study proved that due to efficacy of concurrent resistance and endurance training the VO_2 Max was increased significantly and after the first cessation the increased VO_2 Max was started to decline towards the base line of the Hockey players. The result of the study stated that due to the effect of twelve weeks of concurrent training the cardiorespiratory endurance of the subjects was significantly improved. Hence it was concluded that the improved cardiorespiratory endurance performance of the participants was started to decline after first cessation during detraining period towards the base line.

Keywords: VO_2 Max, Concurrent Training.

Introduction

"Working on strength and endurance at the same time, whether it be in the same session, alternative days, alternative sessions, etc. is called "concurrent training." Countless numbers of recreational workout enthusiasts complete their strength and endurance training workouts during the same training session, or within hours of one another. This sequential exercise regime is referred to as 'concurrent training'. Hickson, *et al.*, (1980) was the first to examine the consequences of combining resistance and endurance training". According to the NSCA, including strength training in an endurance training program can improve the ability of the heart, lungs and circulatory system to perform under conditions of high pressure and force production (NSCA 2000). "Training with weight is becoming an increasingly recognized as the key method of training for games for

development of good physique. It strengthens the muscles and internal organs and promotes the type of health and vigorous that training is ozone of the factors in improving the speed, ability, strength, endurance, flexibility, body components and anthropometric measurement" (James and Karpoulch, 1983). "Endurance training is the act of physical activity to enhance endurance. The term endurance training normally refers to training the aerobic system as divergent to the anaerobic system. The need for endurance in sports is frequently forecasted as the need of cardiovascular and unforced muscular endurance, but the issue of endurance is far more compound (Michael, 2008).

Methodology

The purpose of the study was to find out the Efficacy of concurrent resistance and endurance training and detraining impact on cardio vascular endurance of hockey players. To achieve the purpose of this study, 30 men inter-collegiate level hockey players were selected as participants. They were divided into two groups of fifteen participants each. Group-I performed concurrent training; group-II acted as control. cardio vascular endurance was measured through the Cooper's 12 min run/walk test.

Training Programme

The experimental group performed both the resistance and endurance training programs three sessions per week on alternative days for 12 weeks. The resistance training program was a total body workout consisting of 3 sets of 6-10 repetitions on 8 exercises that trained all the major muscle groups. A percentage of each subject's one-repetition maximum for each exercise was used to determine the intensity of each week. The intensity fixed by the 1RM and started from 55 to 80%, and number of sets and repetitions performed for each exercise changed once in two weeks. The endurance training consists of 20-40 minutes running 2-3 times per week with 55- 80% HRR. The running intensity was determined by a percentage of heart rate reserve (HRR). The duration of each session was increased once in two weeks as training progressed. Every odd numbered week they performed the strength training in the morning session and endurance training in the evening session. Every even numbered week they performed endurance training in the morning session and strength training in the evening session. After the completion of twelve weeks of concurrent resistance and endurance training the subjects of both the experimental and control group were physically detrained for 30 days. During this period the subjects were instructed not to participate in any strenuous physical activity.

Experimental Design and Statistical Procedure

In this study experimental and random group design involving 30 subjects, who were divided at random in to two group of fifteen each. The data collected from the two groups prior to and post experimentation were statistically analysed to find out the significant difference if any, by applying the analysis of covariance (ANCOVA). Whenever the obtained 'F' ratio value was found to be significant for adjusted post-test means, the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. The data collected from the two groups on post experimentation and detraining (three cessation) were statistically analysed by using two way (2 x 4) factorial ANOVA with last factor repeated measures, if it is significant the simple effect test was used as a follow up test. Finally, Scheffe's test was applied as post hoc test to determine the paired mean differences, if any.

Results

The adjusted post-test mean on cardiorespiratory endurance of concurrent training and control groups are 2395.40 and 2079.59 respectively. The obtained 'F' ratio value of 191.83 for adjusted post-test mean on cardiorespiratory endurance of experimental and control groups was greater than the required table value of 4.21 for the degrees of freedom 1 and 27 at 0.05 level of confidence. Hence it was concluded that due to the effect of twelve weeks of concurrent training the cardiorespiratory endurance of the subjects was significantly improved. In order to find out the detraining impact, the data collected from the two groups during post-test and three cessation periods on cardiorespiratory endurance have been analysed by two ways factorial ANOVA (2x4) with repeated measures on last factor and the obtained results are presented in table III.

Table III shows that the obtained 'F' ratio value of groups (A factor) (97.37), and groups and test (B factor) (48.77), interaction of groups, training and test (33.20) are greater than the table value of 4.20 and 2.72 with df 1 and 28 & 3 and 84 respectively required for significance at 0.05 level of confidence on cardiorespiratory endurance.

Findings of the study establish the existences of significant differences in the two-way interaction effect on cardiorespiratory endurance. Since the

interaction effect is significant, the simple effect test has been applied as follow up test and the obtained results are presented in table IV.

Table – I Mean and Standard Deviation on Cardio Respiratory Endurance of Pre, Post Test and Three Cessations of Experimental and Control Groups

Groups		Pre-Test	Post Test	First Cessation	Second Cessation	Third Cessation
Concurrent Training Group	Mean	2008.66	2395.00	2348.66	2240.66	2124.66
	SD	67.38	76.27	58.99	73.43	51.25
Control Group	Mean	2027.33	2080.00	2092.00	2072.33	2060.00
	SD	68.60	39.64	48.28	61.55	77.53

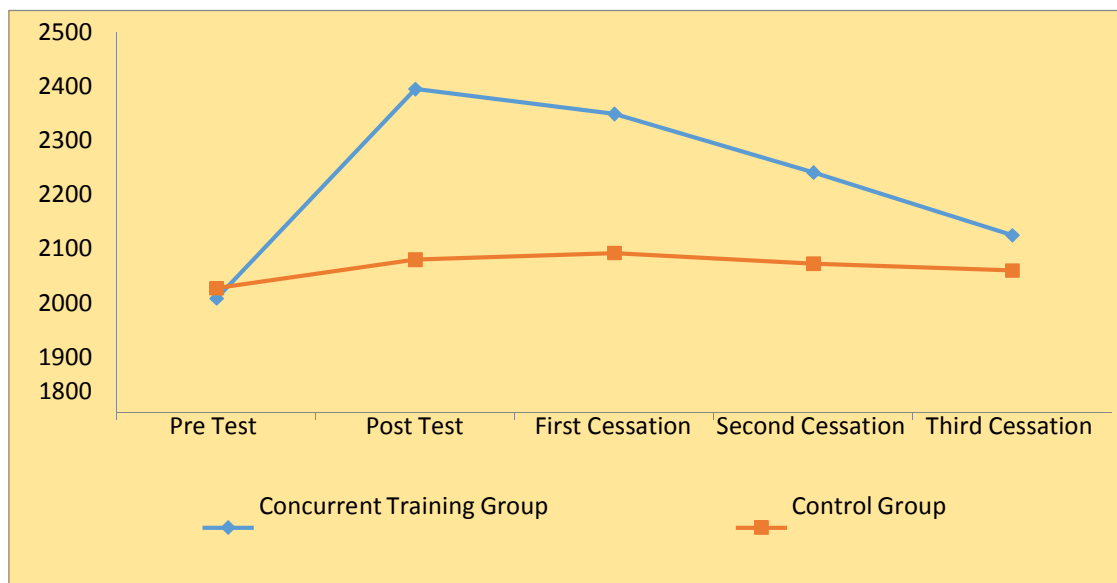


Figure – I Mean Values of Pre, Post Test and Three Cessation of Concurrent Training and Control Groups on Cardio Respiratory Endurance

Table II Analysis of Covariance on Cardio Respiratory Endurance of Concurrent Training and Control Groups

	Concurrent Training Group	Control Group	SOV	Sum Squares	of df	Mean squares	Obtained 'F' ratio
Pre test Mean SD	2008.66	2027.33	B	2613.33	1	2613.33	0.56
	67.38	68.60	W	129466.66	28	4623.81	
Post-test Mean SD	2395.00	2080.00	B	744187.50	1	744187.50	204.42*
	76.27	39.64	W	103450.00	28	3694.64	
Adjusted Post test Mean	2395.40	2079.59	B	733240.83	1	7332450.00	191.83*
			W	103203.43	27	3822.24	

(The required table value for significance at 0.05 level of confidence with degrees of freedom 1 & 28 and 1 & 27 are 4.20 and 4.21 respectively)

*Significant at .05 level of confidence

Table III Two Factor ANOVA on Cardio Cardiorespiratory Endurance of Groups at Four Different Stages of Tests

Source of Variance	Sum of Squares	Df	Mean Squares	Obtained "F" ratio
A factor (Groups)	374000.66	1	374000.66	97.37*
Group Error	107544.16	28	3840.86	
B factor (Tests)	393788.33	3	131262.77	48.77*
AB factor (Interaction) (Groups and Tests)	268114.16	3	89371.38	33.20*
Error	226072.50	84	2691.33	

(Table values required for significance at 0.05 level with df 1 and 28, 3 and 84 are 4.20 and 2.72 respectively.)

Table IV The Simple Effect Scores of Groups (Rows) at Four Different Stages of Tests (Columns) on Cardiorespiratory Endurance

Source of Variance	Sum of Squares	df	Mean Squares	Obtained "F" ratio
Groups at Post test	744187.50	1	744187.50	276.51*
Groups at First Cessation	494083.33	1	494083.33	183.58*
Groups at Second Cessation	212520.83	1	212520.83	78.96*
Groups at Third Cessation	31363.33	1	31363.33	11.65*
Tests and Group I	653781.25	3	217927.08	80.97*
Tests and Group II	8121.25	3	2707.08	1.01
Error	226072.50	84	2691.33	

(Table values required for significance at .05 levels with df 1 and 84, & 3 and 84 are 3.96 and 2.72 respectively.)

TABLE V Scheffe's Test for the Differences among Paired Means of Concurrent Training Group with Different Tests on Cardiorespiratory Endurance

Post test	First cessation	Second cessation	Third cessation	Mean difference	Confidence interval
2395.00	2348.66			46.34	54.11
2395.00		2240.66		154.34*	54.11
2395.00			2124.66	270.34*	54.11
	2348.66	2240.66		108.00*	54.11
	2348.66		2124.66	224.00*	54.11
		2240.66	2124.66	116.00*	54.11

*Significant at .05 level of confidence

Table IV shows that the obtained 'F' ratio values for groups at post-test, first, second, and third cessation are 276.51, 183.58, 78.96 and 11.65 respectively, which are higher than the table value of 3.99 with degrees of freedom 1 and 84 required for significance at 0.05 level of confidence. The result of the study indicates that significant difference exists between the paired means of groups at post-test, first cessation, second cessation, and third cessation on cardiorespiratory endurance. Table IV also shows that 'F' values obtained for tests and group I is 80.97 which is greater than the table value of 2.72 with the degrees of freedom 3 and 84 whereas, for tests and group-II is 1.01 which is lower than the table value of 2.72 with the degrees of freedom 3 and 84 required for significant at 0.05 level of confidence. The result of the study indicates that significant difference exists between various tests of concurrent training group, however no significant difference exists between various tests of control group on cardiorespiratory endurance. Since, the obtained 'F' ratio value in the simple effect is found to be significant, the Scheffe's test is applied as post hoc test to find out the paired mean difference, and it is presented in table V.

Table V shows that the mean differences between post-test and second cessation, post-test and third cessation, first cessation and second cessation, first cessation and third cessation, second cessation and third cessation, of concurrent training group are 154.34, 270.34, 108.00, 224.00 and 116.00 respectively, which are higher than the confidence interval value 54.11 on cardiorespiratory endurance. However, the mean difference between post-test and first cessation value is 46.34 which are lower than the confidence interval value of 54.11 at 0.05 level of confidence. Hence, it was concluded that the improved cardiorespiratory endurance performance of the participants was started to decline after first cessation during detraining period towards the base line.

Discussion on Findings

The result of the study stated that due to the effect of twelve weeks of concurrent training the cardiorespiratory endurance of the subjects was

significantly improved. Hence it was concluded that the improved cardiorespiratory endurance performance of the participants was started to decline after first cessation during detraining period towards the base line. The following studies are supporting the current results. Schroeder, *et al.*, (2019) compared the effects of aerobic, resistance, and a combination of both aerobic and resistance training on CVD risk factors including peripheral and central BP, cardiorespiratory fitness (CRF), muscular strength, body composition, blood glucose and lipids. Combined training provided significant reductions in peripheral (-4 mmHg) and central diastolic BP (-4 mmHg). Kuppan and Muthuraj (2019) examined the effect of resistance, aerobic and concurrent training on cardiorespiratory endurance of untrained college students. The result of the study proved that the effect of resistance, aerobic and concurrent training significantly improved on cardiorespiratory endurance of the untrained college men students compared to control group college men students. Shabani, *et al.*, (2018) conducted the effect of concurrent exercise training on cardiorespiratory capacity and cardio-vascular risk factors among sedentary overweight or obese post-menopausal women. They concluded that Concurrent ER training can be a suitable exercise program for improving plasma lipid profile as well as reducing body composition, high-sensitivity CRP, and increasing VO_{2max} in postmenopausal women.

CONCLUSION

The result of the study stated that due to the effect of twelve weeks of concurrent training the cardiorespiratory endurance of the subjects was significantly improved. Hence it was concluded that the improved cardiorespiratory endurance performance of the participants was started to decline after first cessation during detraining period towards the base line.

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Exploring the Impact of Sky Yoga Exercises and Mudras Practices for Intellectual Impaired Children

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Abstract

Every moment of life offers countless choices. Yoga training is a favorable and best supportive thing to disabilities. The purpose of the study is to find out the impact of SKY Yoga Exercise and Mudras practices on the Fine Motor Skills & Hand-Eye coordination among the Intellectual Impaired Children in Edayar Palayam Govt. School, Coimbatore Dist. Five Intellectual Impaired Male children of age 8-13 years integrated practice of Simplified Kundalini Yoga's Hand & Eye Exercises, Mudras and Pranayama practices for 45 days. The performance of all children shows a significant difference at 0.005 levels in the inserting "Pegs Board" task and "Threading Beads" task. It was concluded that the Fine Motor Skills and Hand-Eye co-ordination significantly improved due to the influence of Simplified Kundalini Yoga practice among the Intellectual Impaired children during Pre and Post Test.

Keywords: Fine Motor Skills, Hand-Eye Coordination, SKY Yoga, Mudras, Pranayama, Intellectual impairment.

1. Introduction

"Consciousness is the radical universal principle".

– Vethathiri Maharishi

In recent years, importance has grown from researchers and schools about how Intellectual Impaired Children benefited from practicing Yoga. Disability can be caused by many factors. Malnutrition and dearth in pregnant mothers can cause deficiency in vital minerals and result will be distortion issues in the unborn child. After birth, developmental delay can also reason deprived development of vital organs in the child, which can in time lead to disability [1].

Intellectual Impaired children consist of those who have: Mental Retardation, which reasons them to grow more slowly than other children [2, 4]. Physical disability, such as a vision problem with numerous impairments. Hand finger dexterity can be mainly disabling as the child studies to relate with the environment through the usage of his or her hands. Attention deficit hyperactivity disorder (ADHD) is a developmental

disorder where there are significant complications with attention, hyperactivity or performing thoughtlessly. It is a compound neuro development syndrome that can disturb the child's achievement at school, as well as their associations [2]. A child with ADHD may have a distress care path of tasks and games. This may basis problems at schools. The signs are sometimes tough to recognize.

Yoga can be gifted to goal detailed disabilities in children with special needs as well as bring back and recovering skills lost by disease in the body. It is one of the simple approaches to increase the Hand-Eye coordination ability among children. Benefits of a yoga practice are increased strength, balanced flexibility, co-ordination, concentration, mental clarity, and memory [7]. It includes body movement with breathing on any different level.

VETHATHRIYAM (Simplified Kundalini Yoga – SKY Yoga):

Vethathiri Maharishi had framed a series of physical exercises when investigating all these exercises, created the finest from them, experienced them for several years with his medical experiences and designed their uses. These exercises are to keep wellness in health and free from illnesses. The aids of SKY yoga are that we're continuously growing under its influence. Whether it's physically, emotionally and spiritually, SKY yoga nudges us out of our well-being zones and gradually develops our inner and outer improvement. Vethathriyam provides the following Yogic practices to improve the Hand-Eye co-ordination.

Simplified Kundalini Yoga's Hand & Eye Exercises are also a part of yoga to prevent mal-circulation of air, blood and magnetic force in the body. Proper protecting our physical body or care the mind in peace and balance state is also essential for maintaining better health. If the mind is in a peaceful state it will be coming back to the balanced state then and there even when there is a disorder.

Benefits of Hand Exercise:

Blood, Air, Heat, and Bio-magnetism in hands and Arms develop normal and regular. Arthritis, Numbness, trembling of hands, Soreness in the joints, etc. are decreased and probably cured. Hands and shoulders are strengthened; increase the action of the lungs.

Benefits of Eye Exercise:

It prevents eye strain, burning sensation and other eye diseases. By regular practice, one can reduce the use of spectacles. Eye Exercises help to improve defective eyesight by toning the nerves and tissues around the eyes [3]

Benefits of Pranayama:

Pranayama have the skill to influence the flow of air or the prana (life energy) in the respiratory system, conferring to the yogic convention. This practice is gift for building a person bright, happy, confident, stable, joyful and healthy. "Ujjayi" is, therefore, the Pranayama which provides liberty from bondage. It is a portion of the eight Kumbhakas of Hathayoga. From the

word, 'Jaya' derives ujjayi, which means success – victorious. Ujjayi Pranayama or the Ocean breath means to be winning or to conquer. Ujjayi Pranayama is a training that can support get intelligence of freedom from some constraint or bondage. In this pranayama, the pressure is functional at the back of the throat so whereas inhaling the air into the lungs a sound is generated. This pranayama benefits to practicing a great level of concentration and improves the focus.



Benefits of Mudras:

'Mudra', a Sanskrit word, means a figurative hand gesture that has the influence of creating peace and happiness. The sign of the fingers has the ability to influence the energy of the physical, astral and causal bodies. These practices can benefit from connecting the brain to the body, to reduce the pain, stimulate

endorphins, modification the mood and grow our vitality.

- GYAN MUDRA – “The gesture of Wisdom or Knowledge”: Gyan mudra supports to increase memory, attentiveness, helps to decrease anxiety and stress, reduce sleep disorders, reliefs from depression and headache. This mudra has been used widely for thousands of years by yogis as it carries calm, peace and spiritual progress.
- VAYU MUDRA – “The gesture of the Air” Vayu Mudra reliefs in diseases like arthritis, neck pain, cervical spondylitis, paralysis and trembling in Parkinson’s disease.
- PRITHVI MUDRA – “The gesture of the Earth” The Earth element is a vibrant component of cartilage, bones, hair, skin, nails, tendons, muscles, internal organs, etc. The practice of Prithvi mudra constructs and strengthens the bones, stimulates the tissues. It improves confidence, strength, and agility.
- SURYA MUDRA – “The gesture of the Fire” It reduces excess fat in the body, burn cholesterol, and smooth digestion, develop immune system & increases metabolism & controls the thyroid gland. It is a very powerful mudra with substantial healing capacity.
- PRANA MUDRA – “The gesture of Life” It is considered beneficial for all kinds of diseases and is also supposed to impart special power to the eyes. This mudra cleanses our aura due to its inherent ability to regulate the subtle energies of our aura.

Methodology:

The study was subject to 5 Intellectual Impaired children who were selected from Edayar Palayam Govt. School, Coimbatore Dist., between the age group ranged from 8 to 13. Pre-tests were conducted before the commencement of the Training. After 6 weeks of the training program, Post-tests were conducted. To find out the effect of SKY yoga practice for Hand-Eye co-ordination measured by “Insert Pegs Task” & “Threading Beads” task speed levels by dependent variables [6,8].

Training Program:

The following Yoga practices were carried out to complete the study. The duration of the study was 6weeks, 5dys a week (Monday to Friday), 1 hour a day.

Training Programme Schedule		
S/No	Name of Practices	Duration
1	Prayer Song	5 mins.
2	Nadi Soolam & Ujjai Pranayama	10 mins.
3	Mudra practices	15 mins.
4	Meditation	5 mins.
4	SKY Hand Exercise	15 mins.
4	SKY Eye Exercise	15 mins.
6	Relaxation	15 mins.
	Total	60 mins.

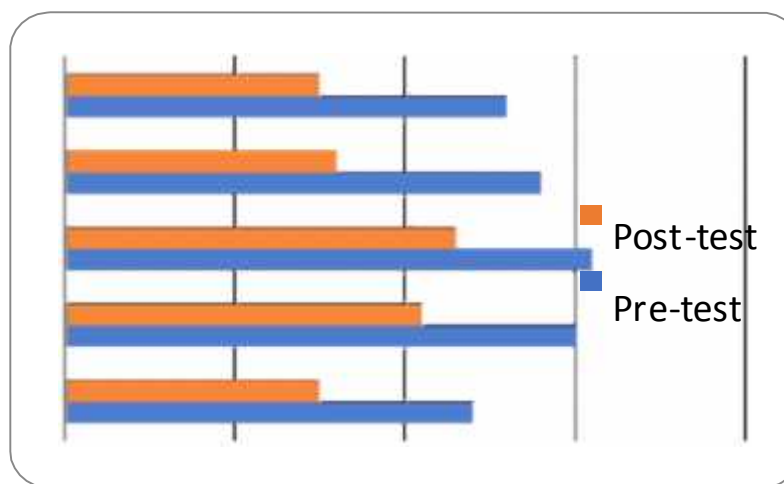


Analysis and Interpretation:

Pre & Post “ANCOVA” paired Correlations for effects of subjects Fine Motor Skills (inserting “Pegs Board” task) There has been no significant difference between the effects of subjects. The above table shows the output of the ANCOVA analysis and whether there is statistically significant difference between the effects of subjects. We can see that the significant values are 0.144, 0.388, 0.2 and 0.234 which are above 0.05 and there is statistically significant difference in the effects of subjects. It is clear that the covariate significantly predicts the dependent variable, so the Fine Motor Skills after post-test depend on the pre-test. p value (.234) is more than the significant value (.005), hence it is statistically significant. So, we can infer that Simplified Kundalini Yoga’s Hand exercise with Mudras practices will increase the Fine Motor Skills irrespective of subjects. There has been no significant difference between the effects of subjects. The above table shows the output of the ANCOVA analysis and whether there is statistically significant difference between the effects of subjects.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected Model	1559.775 ^a	3	519.925	25.707	0.144	0.987
Intercept	41.382	1	41.382	2.046	0.388	0.672
VAR00003	192.275	1	192.275	9.507	0.2	0.905
VAR00002	348.244	2	174.122	8.609	0.234	0.945
Error	20.225	1	20.225			
Total	205600	5				
Corrected Total	1580	4				

Dependent Variable: VAR00006
 (Source: Primary Data) S: Significant NS: Not Significant
 a. R squared = .987 (adjusted R squared = .949)



Pre & Post Mean Values of the students for Fine Motor Skills & Hand-Eye Co-ordination

We can see that the significant values are 0.116, 0.336, 0.108 and 0.218 which are above 0.05 and there is statistically significant difference in the effects of subjects. It is clear that the covariate significantly predicts the dependent variable, so the Hand-Eye co-ordination after posttest depends on the pretest. p value (.218) is more than the significant value (.005), hence it is statistically significant.

So, we can infer that Simplified Kundalini Yoga’s Eye exercise with Pranayama practices will increase the Hand-Eye Co-ordination irrespective of subjects. Similar study can be done for various age group and the study may be conducted for the same age group to compare other dependent variables.

Same study may be done by selecting a large sample. This study mainly focus on the boys of 8 to 13 years. The same study may be done on Girls of same age group. Parents should monitor their children, whether they are practicing the SKY yoga every day at home. Social organizations and NGO’s is to identify the socio-economic backward children’s for giving special classes and motivate their unique skills for supporting the financial background. Conducting motivational programmes to the Mentally retarded children. Showing the live examples of noble persons who have become successful after having many disabilities. SKY Yoga Practice may be recommended for the improvement of students having Learning Disabilities, Physically challenged, Visually impaired and Deaf & Dump children. SKY

Practices may be recommended for all the Students for the better academic results [8].

Conclusion

In the present world Eye deficiency is a very complex one for the Intellectual Impaired children. Yoga practices and healthy nutrition improves vision of the subject. The benefits of Pranayama practice have decreased stress and anxiety. Increases concentration, boosts a healthy lifestyle, and creates you happier, benefits you focus, and gives you internal strength, rises blood flow, improves the immune system. Meditation will improve the volume of energy we could supply in the body [5]. The energy will be a divine vitality. Regular Meditation will regulate the sleep patterns.

Vethathriyam enthuses and guides more and more people to live the correct way and development. Yogiraj Vethathiri Maharishi has set us a wide-ranging and combined expose of the presence and roles of the one's Reality; his description of the origin of the cosmos and the laws of perceived natural potent encompasses the Vethathiriam Model of Universe and Beyond. Considering the results found and the following conclusion was drawn: SKY Yoga and Mudras with Pranayama practices are identified as the greatest training methods for the development of Physical wellness, Muscle power & Self Confident of intellectual impaired children.

It was concluded that the Fine Motor Skills and Hand-Eye co-ordination significantly improved due to the influence of Simplified Kundalini Yoga practice[6].

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Effect of Plyometric Training on Selected Fitness Components among College Volleyball Players

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Abstract

The purpose of the study was to find out the effect of plyometric training on selected fitness components among college volleyball players. To achieve the purpose of the present study, thirty college volleyball players from affiliated colleges from Madurai Kamaraj University, Tamil Nadu were selected as subjects at random and their ages ranged from 19 to 25 years. The subjects were divided into two equal groups of fifteen students each. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=30) were randomly assigned to two equal groups of fifteen students each. The groups were assigned as plyometric training and control group in an equivalent manner. The group I underwent plyometric exercises and group II acted as a control group. The experimental group were participated the training for a period of six weeks to find out the outcome of the training packages and the control group did not participated in any training programme. The following statistical techniques were adopted to treat the collected data in connection with established hypothesis and objectives of this study. Initially 't' test was applied to test the significance of mean gains made in each of the variables by the experimental group. To test the obtained results on variables, level of significance 0.05 was chosen and considered as sufficient for the study.

Keywords: Plyometric, Leg explosive power, Speed, College volleyball players.

1. Introduction

Training is a systematic process of respective, progressive exercise or work involving also learning process and acclimatization. Training means preparing for something. It may be an event, a season or athletic competition, a nursing carrier an operatic performance or military combat. Much growth and change occur during training. It usually involves learning or polishing skills, changing attitudes, developing and strengthening organ and their functions [1]. The subjects are preparing to meet increased demands of some kind of training on the current mental and physical resources. The subject seeks in some way to change and better the present status, to improve on the previous level of performance [2, 3].

Plyometrics have been shown to have benefits for reducing lower-extremity injuries in team sports while combined with other neuromuscular training (i.e. strength training,

balance training, and stretching). Plyometric exercises involve an increased risk of injury due to the large forces generated during training and performance, and should only be performed by well-conditioned individuals who are under supervision. Good levels of physical strength, flexibility, and proprioception should be achieved before commencement of plyometric training.

In the eccentric contraction, the muscles are involuntarily lengthened, while in the concentric contraction, the muscles are shortened after being tensed [4]. Most of the stretching and shortening takes place in the tendons that attach to the muscles involved rather than in the muscles. To execute the depth jump, the athlete stands on a raised platform, usually not greater than 20–30 inches (51–76 cm) high, and then steps out and drops down in a vertical pathway to make contact with the floor. The height used by most athletes is usually quite low in the early

stages of training. The key is how high the athlete jumps in relation to the height of the takeoff platform. Technique and jump height are most important at this time. While the body is dropping, the athlete consciously prepares the muscles for the impact by tensing the muscles. The flooring upon which the athlete drops down on should be somewhat resilient, mainly for prevention of injury. Upon making contact with the floor, the athletes then goes into slight leg flex to absorb some of the force for safety. However, the main role played by the muscles and tendons is to withstand the force that is experienced in the landing. This force is withstood in eccentric contraction. When muscle contraction is sufficiently great, it is able to stop the downward movement very quickly. The purpose of this study was to find out the effect of plyometric training on selected fitness components among college volleyball players.

Methodology

To achieve the purpose of the present study, thirty college volleyball players from affiliated colleges from Madurai Kamaraj University, Madurai, Tamil Nadu were selected as subjects at random and their age ranged from 19 to 25 years. The subjects were divided into two equal groups of fifteen students each. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (N=30) were randomly assigned to two equal groups of fifteen students each. The groups were assigned as plyometric training and control group in an equivalent manner. The group I underwent plyometric exercises and group II acted as a control group. The experimental group was participated the training for a period of six weeks to find out the outcome of the training packages and the control group did not participated in any training programme.

Based on the literature available and the opinion of the experts the following training details were determined on the plyometric training. Duration of the training-6 weeks Number of days per week - 5 days Number of session per day-1 session Duration of session-60minutes [7,8].

The collected data on selected variables were statistically examined to the test. The various hypotheses formulated by the researcher for dependent ‘t’ ratio was used).

Results and Discussion

Table I shows the obtained „t“ ratios for pre and post-test mean difference in the selected variable of Explosive Power (9.75), and Speed (5.01). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post-test were significantly improved in Explosive Power and Speed.

Table II shows the obtained „t“ ratios for pre and post-test mean difference in the selected variable of Explosive Power (4.10) and Speed (12.85). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be insignificant at 0.05 level of confidence.

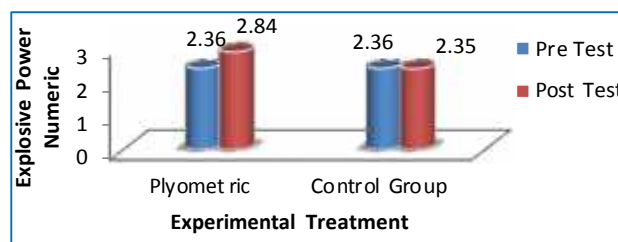


Figure I Shows the Pre and Post Mean Values on Explosive Power.

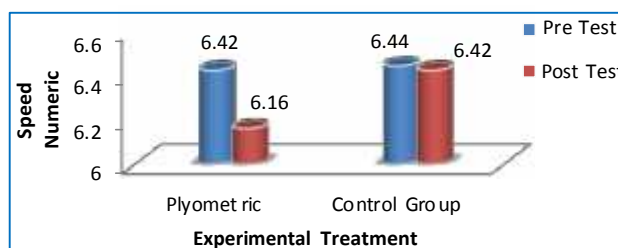


Figure II Shows the Pre and Post Mean Values on Speed.

According to the study stated that there may be significant improvement due to the plyometric training on selected fitness components of volleyball players among their baseline to post treatment and also the control group may be insignificant improvement on

selected fitness components of volleyball players among their baseline to post treatment.

Table I Significance of Mean Gains & Losses Between Pre and Post Test Scores on Selected Variables of Plyometric Training (PT)						
S. No	Variables	Pre-test Mean	Post-test Mean	Mean Diff	Std. Dev	't' Ratio
1.	Explosive power	2.36	2.84	0.48	0.03	9.75*
2.	Speed	6.42	6.16	0.26	0.05	5.01*

* Significant at 0.05 level

Table II Significance of Mean Gains & Losses Between Pre and Post Test Scores on Selected Variables of Control Group (CG)						
S. No	Variables	Pre- test Mean	Post-test Mean	Mean Diff	Std. Dev	't' Ratio
1.	Explosive power	2.36	2.35	0.01	0.03	0.69
2.	Speed	6.44	6.42	0.02	0.05	0.94

The obtained results may be because of the hypertrophic effects obtained due to plyometric training [2, 8].

Conclusion

It was concluded that the plyometric group produced significant improvement on selected fitness components among College Volleyball players. It was concluded that the control group hasn't produced significant improvement on selected fitness components among College Volleyball players. Thus it is inferred that plyometric training is ideal for the development of fitness among volleyball players. Thus itsinferred that the improvised development was evident due to plyometric training as both speed and strength enhancing the total explosive power.

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Conflict of interest

None of the authors have any conflicts of interest to declare.

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