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IMPACT OF SELECTED YOGIC PRACTICES AND AEROBIC DANCE ON CARDIORESPIRATORY ENDURANCE AND FLEXIBILITY AMONG JUVENILE MALE

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ABSTRACT:

The purpose of the study was to examine the Impact of selected yogic practices and aerobic dance on cardiorespiratory endurance and flexibility among juvenile male. To achieve the purpose of the study forty five (N=45) male students were selected from different colleges in Chennai. The age of the subjects ranged from 18 to 22 years. The selected subjects were randomly divided into two experimental groups and one control group. Group I underwent selected Yogic practices; Group II underwent Aerobic dance and Group III acted as Control Group for three alternate days in a week for a period of 12 weeks. The dependent variables selected for this study were Cardiorespiratory Endurance and Flexibility. The dependent variables namely Cardiorespiratory Endurance assessed by Cooper's 12 min run/walk test and Flexibility measured by Sit and Reach Test. The data were collected from each subject before

and after the training period statistically analyzed by using dependent 't' test and analysis of covariance (ANCOVA). The level of significance was set at 0.05 level of confidence. It was found that Aerobic dance group was found to be better in improving cardiorespiratory endurance when compared to the yogic practices group. Yogic practices group was found to be better in improving flexibility when compared to the aerobic dance training group.

Key Words: Yogic practices, Aerobic Dance, Cardiorespiratory Endurance and Flexibility.

INTRODUCTION

The science of yoga works on physical, mental, emotional, psychic and spiritual aspects person. When imbalance is experienced at this level, the organs, muscles and nerves no longer function in harmony, rather they act in position to each other. Therefore, yoga aims at bringing the different bodily functions into perfect coordination so that they work for the good at the whole body. Yoga is also blissful contact with the supreme element, higher than the highest of the known elements, through the process of absorption or dissolution, the process called Laya. It is establishing ecstatic oneness between the finite and the infinite, between the microcosm and the macrocosm, between the inner being and the Supreme Being (Swami Rajarishi Muni, 1999).

Aerobic dance is an activity which produces more complex impacts on one's ability and health. Aerobic dance constitutes a group of exercise accompanied music of a certain tempo, rhythm and dynamics. It is one of the workouts used to create cardiovascular wellness. Wellbeing related physical wellness is characterized as wellness



identified with some part of wellbeing. This kind of physical wellness is fundamentally affected by an individual's practice propensities; along these lines, it is a dynamic state and may change. Physical qualities that constitute wellbeing related physical wellness incorporate quality and perseverance of skeletal muscles, joint adaptability, body synthesis, and cardiorespiratory continuance. Every one of these ascribes change in light of suitable physical molding projects, and all are identified with wellbeing. In view of the proposals of the American College of Sports Medicine, issued for individuals who might want to keep up or permit the further advancement of their capacities, it is adequate to practice three to five days a week at a force of 55/65% to 90% of the maximal heart rate, for a time of 20 to a hour of consistent preparing or preparing in sessions utilizing a cadenced, oxygen consuming action which initiates substantial muscle gathers in the human body (ACSM, 1998).

METHODOLOGY

Forty five juvenile male were randomly selected from Chennai city. The age of the subjects ranged from 18 to 22 years. The selected subjects were divided into two experimental groups and one control group by random. During the training period the experimental groups underwent their respective training program in addition to their regular program of the course of study. Group I underwent Yogic practices in selected Asanas and Pranayama; Group II underwent Aerobic dance and Group III acted as Control Group for three alternate days in a week for a period of 12 weeks. The dependent variables selected for this study were cardiorespiratory endurance and Flexibility. The instrument used to measure cardiorespiratory endurance assessed by Cooper's 12 min run/walk test and Flexibility measured by Sit and Reach Test. The duration of training session in the 12 weeks was between 30 to 60 minutes approximately, including warming up and cooling down. Group III acted as control. They did not participate in any specific training on par with experimental group.

YOGIC PRACTICES INTERVENTION

The subjects were included in Yogic works on amid the morning hours somewhere around 6 and 7 am, comprising of yogic asana for 40 min, pranayamas for 15 min, and last 5 min of Shavasana/unwinding, for 1 h day by day, for 12 weeks (3 days a week).

Yogic practice consisting of 12 weekly 60-minute sessions, participants were taught the breathing technique and commonly loosening exercises and yogic poses taught in including (1) standing poses which include Chair Pose (Utkatasana), Mountain Pose (Tadasana), Standing Forward Bend (Uttanasana), Tree Pose (Vrkshasana), Triangle Pose (Trikonasana), (2) sitting poses which include Half Lotus Posture (Ardha Padmasana), Thunderbolt Posture (Vajrasana), Cow-Face Pose (Gomukhasana), Seated Forward Bend (Paschimottanasana) and Sitting Sideward Twist Posture (Vakrasana) (3) kneeling poses which include Camel Pose (Ushtrasana) (4) supine which include the All-Parts Pose (Sarvangasana), Corpse Pose (Shavasana), Preparation exercise for Plow Pose, Plow Pose (Halasana) (5) prone poses which include Bow (Dhanurasana), Cobra (Bhujangasana), Locust (Shalabhasana), and The Plough Pose (Halasana) (6) Pranayama which include Surya Anuloma Viloma - Right Nostril, Chandra Anuloma Viloma-Left Nostril Yoga Breathing, Brahmari -Bumble Bee Breathing, Kapalabhati-Stimulating The Brain Cells and Bhastrika Pranayama.

The subjects were told to play out these asanas in a casual perspective, without undue constrain, in a smooth, composed, cadenced controlled way, being completely aware of the physical developments with all around facilitated breathing example. Pranayama comprised of both moderate and quick pace breathing moves without honing breath holding (Kumbhaka).

AEROBIC DANCE INTERVENTION

Aerobic Dance Group was included in one hour programme of aerobic exercise for 3 to 5 minutes each with the help of western music. The exercises are basic Warm up stepping, basic V step, basic L step, basic A step, straddle step Jump and turn Jump and bend forward Climbing action with a right leg and raising hands above head Climbing action with a left leg and raising hands above head climbing action with right leg and clap Climbing action with left leg and clap. Duration of training intervention was 60 minutes per day for 3 days in a week for total period of 12 weeks. Intensity: 60%-80% of HRmax. The number of beats was calculated on the basis of the

well-known formula: from 220 subtract one's age and then multiply that number by 60% to 65%, 65% to 70%, 70% to 75% and 75% to 80%. The duration of an individual training session: 60 min. The duration of an individual aerobic dance: 40 min. The structure of each individual workout encompassed: The warm-up lasted for 10 minutes. The cool-down part of the workout lasted for 10 minutes.

Results

Table – I
Summary of Mean and Dependent “t” Test for the Pre and Post Test
on Selected Variables of Experimental and Control Groups

Variables	Mean	Yogic practices Group	Aerobic Dance Group	Control Group
Cardiorespiratory Endurance	Pre test Mean	1813.33 ± 130.98	1733.33 ± 181.35	1753.33 ± 132.25
	Post test Mean	2063.33 ± 139.60	2153.33 ± 135.97	1770.00 ± 115.18
	‘t’ Test	34.11*	29.48*	2.15
Flexibility	Pre test Mean	25.76 ± 1.92	25.20 ± 2.75	25.72 ± 3.19
	Post test Mean	29.72 ± 2.64	27.40 ± 3.11	25.76 ± 3.14
	‘t’ Test	10.23*	11.00*	0.137

*Significant at .05 level.

The obtained “t” ratio value of experimental groups was higher than the required table value and it was understood that both yogic practice and aerobic dance had significantly improved the cardiorespiratory endurance and flexibility in male. During yoga practice and aerobic dance, one consistently and willfully override the stimuli to respiratory centers, thus acquiring control over the respiration, this improved cardiorespiratory performance. The analysis of covariance on the data obtained on selected criterion variables due to the both the practices have been analysed and presented in Table II.

Table –II
Analysis of Covariance of Yogic Practices, Aerobic Dance and Control Groups on Selected Variables

Variable	Source of Variance	Sum of Squares	df	Mean Square	Obtained F ratio
Cardiorespiratory Endurance	Pre Test	52000.00	2	26000.00	1.08
		1013000.00	42	24119.05	
	Post Test	1205444.44	2	602722.22	32.93*
		768666.67	42	18301.59	
	Adjusted Post Test	1203518.82	2	601759.41	43.53*
566835.77	41	13825.26			
Flexibility	Pre Test	9.24	2	4.62	1.33
		145.73	42	3.47	
	Post Test	380.31	2	190.16	22.77*
		350.80	42	8.35	
	Adjusted Post Test	371.76	2	185.88	21.76*
350.31		41	8.54		

*Significant. (The table value required for significance at .05 level with df 2 & 42 and 2 & 41 are 3.22 and 3.23 respectively).

Table II shows that the obtained F-ratio value was higher than the table value of 3.22 with df 2 and 42 required for significance at .05 level. Since the value of F-ratio is higher than the table value, it indicates that there was significant difference among the adjusted post-test means of yogic practices, aerobic dance and control groups. To find out which of the three paired means had a significant difference, the Scheffe’s post-hoc test was applied and the results are presented in Table III.

Table – III
Scheffe’s Test for the Differences between the Adjusted Post Test Paired Means of Selected Criterion Variables

Variables	Adjusted Post Mean values			MD	C. I
	Yogic practices Group	Aerobic Dance Group	Control Group		
Cardiorespiratory Endurance	2042.50	2168.21	-	125.71*	109.12
	2042.50	-	1775.95	266.55*	109.12
		2168.21	1775.95	392.26*	109.12
Flexibility	30.34	28.50	-	1.85	2.71
	30.34	-	23.49	6.85*	2.71
		28.50	23.49	5.00*	2.71

*Significant at .05 level.

Table III shows that the adjusted post test means differences on cardiorespiratory endurance was between the yogic practices and aerobic dance groups; the values are greater than the confidence interval value 109.12. When compared between the treatment groups aerobic dance group had greater improvement in cardiorespiratory endurance. Further, the mean difference between the yogic practices and control groups was 6.85 and it was greater than 2.71, which shows significant difference at .05 level of confidence.

CONCLUSION

It is a known fact that the yogic practice and aerobic exercises is best suited for developing physical fitness and mainly improving the cardiorespiratory endurance and flexibility. The reason may be due to the regular, long time practice of Asanas, pranayama and aerobic exercises. The present study also revealed that the above findings of the study were supported by Bera and Rajapurkar (1993), Ray et al (2001), Bharatha Priya and Gopinath, (2001), Selvakumar, Chandrasekar and Pushparaj,(2001), & Tran et.al.,(2001).

The results proved that Yogic techniques and aerobic dance involve isometric contraction which is known to increase skeletal muscle strength. Aerobic dance group was found to be better in improving cardiorespiratory endurance when compared to the yogic practices group. Yogic practices group was found to be better in improving flexibility when compared to the aerobic dance group.

REFERENCES

- 1.Alves, (2008), Is Aerobic Dance Good for You, Medical Journal, Vol.18.No.2, P.183-183.
- 2.American College of Sports Medicine, (1998), The recommended quantity and quality of exercise for developing and maintaining cardiorespiratory and muscular fitness in healthy adults, Medicine Science and Sports Exercise, 30, 975-91.
- 3.Bera TK and Rajapurkar MV.(1993), Body composition, cardiovascular endurance and anaerobic power of yogic practitioner, Indian Journal of Physiology and Pharmacology, 37: 225-228.
- 4.Bharatha Priya.K and R. Gopinath,(2001), “Effect of Yogic Practice on Flexibility among School Boys”, Recent Trends in Yoga and Physical Education, Vol. I, p.24.
- 5.Ray US, Mukhopadhyaya S, Purkayastha SS, Asnani V, Tomer OS, Prashad R, Thakur L and Selvamurthy W.(2001), Effect of exercises on physical and mental health of young fellowship trainees, Indian Journal of Physiology and Pharmacology, 45: 37-53.
- 6.Selvakumar. R, Chandrasekar and T.Pushparaj,(2001), “Effect of Selected Yogic Practices on Cardio Vascular Endurance of College Student”, Recent Trends in Yoga and Physical Education, Vol. I, p.72.
- 7.Tran et.al.,(2001), “Effects of Hatha Yoga Practice on the Health-Related Aspects of Physical Fitness,” Preventive cardiology, Vol. II, p.165.



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